

---

**From:** LIA07 Hoc  
**Sent:** Tuesday, March 15, 2011 7:40 PM  
**To:** OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update.031511.1930EDT  
**Attachments:** USNRC Earthquake-Tsunami Update.031511.1930EDT.pdf

CA/1

---

**From:** LIA07 Hoc  
**Sent:** Thursday, March 17, 2011 7:06 AM  
**To:** OST04 Hoc  
**Subject:** 0700 Correction/Update  
**Attachments:** USNRC Earthquake-Tsunami Update.031711.0700EDT.docx

CA/2

---

**From:** LIA07 Hoc  
**Sent:** Friday, March 18, 2011 6:33 PM  
**To:** OST04 Hoc  
**Subject:** FW: USNRC Earthquake-Tsunami Update.031811.1800EDT  
**Attachments:** USNRC Earthquake-Tsunami Update.031811.1800EDT.pdf

Status update

---

**From:** LIA07 Hoc  
**Sent:** Friday, March 18, 2011 6:31 PM  
**To:** LIA07 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update.031811.1800EDT

CA/3

---

**From:** OST04 Hoc  
**Sent:** Friday, March 18, 2011 6:10 AM  
**To:** LIA07 Hoc  
**Subject:** status Update  
**Attachments:** NRC Status Update 3-18.11--0600am.pdf

CA/4

---

**From:** LIA07 Hoc  
**Sent:** Friday, March 18, 2011 6:06 AM  
**To:** OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update.031811.0600EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update.031811.0600EDT.docx

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

CA/5

---

**From:** LIA07 Hoc  
**Sent:** Sunday, March 20, 2011 6:11 AM  
**To:** OST04 Hoc  
**Subject:** 0600 Status Update  
**Attachments:** USNRC Earthquake-Tsunami Update.032011.0600EDT.docx

CA/6

---

**From:** LIA07 Hoc  
**Sent:** Sunday, March 20, 2011 6:03 AM  
**To:** OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update.032011.0600EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update.032011.0600EDT.docx

CA/7

---

**From:** LIA07 Hoc  
**Sent:** Sunday, March 20, 2011 6:02 AM  
**To:** OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update.032011.0600EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update.032011.0600EDT.docx

CA/8

---

**From:** LIA07 Hoc  
**Sent:** Monday, March 21, 2011 6:05 AM  
**To:** OST04 Hoc  
**Subject:** status update for pdf  
**Attachments:** USNRC Earthquake-Tsunami Update.032111.0600EDT.docx

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

CA/9

---

**From:** OST04 Hoc  
**Sent:** Tuesday, March 22, 2011 3:42 PM  
**To:** LIA07 Hoc  
**Subject:** FW: Daily Status Updates from Ops Center

**From:** Thomas, Eric  
**Sent:** Tuesday, March 22, 2011 3:30 PM  
**To:** OST04 Hoc  
**Cc:** Sigmon, Rebecca; Garmon-Candelaria, David  
**Subject:** RE: Daily Status Updates from Ops Center

Thanks. Please add the 2 cc'd individuals to distro as well if you can.

Thanks again, Eric

Eric Thomas  
U.S. Nuclear Regulatory Commission  
NRR/DIRS/IOEB  
OWFN-7E24  
[eric.thomas@nrc.gov](mailto:eric.thomas@nrc.gov)  
301-415-6772 (office)  
(b)(6) (mobile)

**From:** OST04 Hoc  
**Sent:** Tuesday, March 22, 2011 1:34 PM  
**To:** Thomas, Eric  
**Cc:** LIA07 Hoc  
**Subject:** RE: Daily Status Updates from Ops Center

Here is the rest...

**From:** OST04 Hoc  
**Sent:** Tuesday, March 22, 2011 1:31 PM  
**To:** Thomas, Eric  
**Cc:** LIA07 Hoc  
**Subject:** RE: Daily Status Updates from Ops Center

Eric, please see attached Status Updates to date. Also, we are adding you to the distribution list as well.

Thanks,

Sapna Hurd

**From:** HOO Hoc  
**Sent:** Tuesday, March 22, 2011 1:07 PM  
**To:** OST04 Hoc; LIA07 Hoc  
**Subject:** FW: Daily Status Updates from Ops Center

CA/10

**From:** Thomas, Eric  
**Sent:** Tuesday, March 22, 2011 11:52 AM  
**To:** HOO Hoc  
**Cc:** Sigmon, Rebecca  
**Subject:** Daily Status Updates from Ops Center

Can you please forward all Status Updates that have been issued to date? NRR Ops Experience is trying to put together timelines for each site since the earthquake.

If you can add me and Rebecca Sigmon to daily distro that would be helpful as well.

Thanks, Eric

Eric Thomas  
U.S. Nuclear Regulatory Commission  
NRR/DIRS/IOEB  
OWFN-7E24  
[eric.thomas@nrc.gov](mailto:eric.thomas@nrc.gov)  
301-415-6772 (office)  

(b)(6)	(mobile)
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**From:** LIA07 Hoc  
**Sent:** Wednesday, March 23, 2011 3:21 PM  
**To:** OST04 Hoc  
**Subject:** March 23 1500EDT one pager.docx  
**Attachments:** March 23 1500EDT one pager.docx

1500 EDT One Pager

CA/11

---

**From:** McDermott, Brian  
**Sent:** Wednesday, March 23, 2011 3:17 PM  
**To:** OST02 HOC; OST04 Hoc; LIA07 Hoc  
**Cc:** Giitter, Joseph  
**Subject:** March 23 1500EDT one pager (2).docx  
**Attachments:** March 23 1500EDT one pager (2).docx

Final

CA/12

---

**From:** LIA07 Hoc  
**Sent:** Wednesday, March 23, 2011 6:31 AM  
**To:** OST04 Hoc  
**Subject:** FW:  
**Attachments:** March 23 0600EDT one pager (2).docx

New One pager.

---

**From:** McGinty, Tim  
**Sent:** Wednesday, March 23, 2011 6:07 AM  
**To:** LIA07 Hoc  
**Cc:** McDermott, Brian; Miller, Chris  
**Subject:**

Jim – please dispatch as per process.

Brian/Chris – this is the morning update for your use in modifying the next one. Tim

CA/13

---

**From:** OST04 Hoc  
**Sent:** Wednesday, March 23, 2011 6:15 AM  
**To:** LIA07 Hoc  
**Subject:** RE: 3/23/11 0600 status update  
**Attachments:** NRC Status Update 3.23.11--0600 EDT.pdf

Saved to M: Drive and added to Web EOC.

---

**From:** LIA07 Hoc  
**Sent:** Wednesday, March 23, 2011 6:10 AM  
**To:** OST04 Hoc  
**Subject:** 3/23/11 0600 status update

Please .pdf and save to m drive.

Thanks,

Jim

CA/14

---

**From:** LIA07 Hoc  
**Sent:** Wednesday, March 23, 2011 9:59 AM  
**To:** OST04 Hoc  
**Subject:** Please pdf  
**Attachments:** USNRC Japan Plant Condition Updates March23 0700EDT.doc

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Please pdf and save it in "Congressional Notes" folder. Thanks.

CA/15

---

**From:** Giitter, Joseph  
**Sent:** Thursday, March 24, 2011 8:03 PM  
**To:** PMT11 Hoc  
**Subject:** FW: revised! One-Pager 1515 March 24  
**Attachments:** March 24 1515EDT one pager (3).doc  
  
**Importance:** High

Cyndi—Here it is.

---

**From:** Ross-Lee, MaryJane  
**Sent:** Thursday, March 24, 2011 2:58 PM  
**To:** Ross-Lee, MaryJane; McGinty, Tim; LIA07 Hoc  
**Cc:** Giitter, Joseph; Miller, Chris; McDermott, Brian  
**Subject:** revised! One-Pager 1515 March 24  
**Importance:** High

---

**From:** Ross-Lee, MaryJane  
**Sent:** Thursday, March 24, 2011 2:32 PM  
**To:** McGinty, Tim; LIA07 Hoc  
**Cc:** Giitter, Joseph; Miller, Chris; McDermott, Brian  
**Subject:** One-Pager 1515 March 24

EBT Coordinator – Please see the attached one pager for 1500 distribution. Thanks, MJ

CA/16

---

**From:** LIA07 Hoc  
**Sent:** Thursday, March 24, 2011 5:58 AM  
**To:** OST04 Hoc  
**Subject:** FW: One-Pager 0600 March 24  
**Attachments:** March 24 0600EDT one pager (2).docx

Please .pdf and save to m drive.

Thank you

---

**From:** McGinty, Tim  
**Sent:** Thursday, March 24, 2011 5:52 AM  
**To:** LIA07 Hoc  
**Cc:** Ross-Lee, MaryJane; Giitter, Joseph; Miller, Chris; McDermott, Brian  
**Subject:** One-Pager 0600 March 24

EBT Coordinator – Please see the attached one pager for 0600 distribution. Thanks, Tim

CA/17

---

**From:** LIA07 Hoc  
**Sent:** Thursday, March 24, 2011 6:19 AM  
**To:** OST04 Hoc  
**Subject:** status update  
**Attachments:** USNRC Earthquake-Tsunami Update.032411.0600EDT.docx

Please .pdf, save to m, and upload to web eoc.

Thanks,

CA/18

---

**From:** LIA07 Hoc  
**Sent:** Thursday, March 24, 2011 5:55 PM  
**To:** LIA07 Hoc; OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update.032411.1800EDT  
**Attachments:** USNRC Earthquake-Tsunami Update.032411.1800EDT.pdf

CA/19

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**From:** OST04 Hoc  
**Sent:** Friday, March 25, 2011 5:01 AM  
**To:** LIA07 Hoc  
**Subject:** Status Update  
**Attachments:** NRC Status Update 3.25.11--0430.pdf

Saved to the M: Drive and uploaded to Web EOC

CA/so

---

**From:** OST04 Hoc  
**Sent:** Friday, March 25, 2011 5:15 AM  
**To:** LIA07 Hoc  
**Subject:** Emailing: USNRC Japan Plant Condition Update March25 0430EDT.pdf  
**Attachments:** USNRC Japan Plant Condition Update March25 0430EDT.pdf

The message is ready to be sent with the following file or link attachments:

USNRC Japan Plant Condition Update March25 0430EDT.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

CA/21

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**From:** OST04 Hoc  
**Sent:** Friday, March 25, 2011 5:56 AM  
**To:** LIA07 Hoc  
**Subject:** 0430 Status Update 3/25/2011  
**Attachments:** NRC Status Update 3.25.11--0430.pdf

Document replaced on the M: drive and in Web EOC.

CA/22

---

**From:** LIA07 Hoc  
**Sent:** Friday, March 25, 2011 6:49 PM  
**To:** LIA07 Hoc; OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update 032511 1800EDT  
**Attachments:** USNRC Earthquake-Tsunami Update 032511 1800EDT.pdf

CA/23

---

**From:** LIA07 Hoc  
**Sent:** Friday, March 25, 2011 7:05 PM  
**To:** LIA07 Hoc; OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update 032511 1800EDT  
**Attachments:** USNRC Earthquake-Tsunami Update 032511 1800EDT.pdf

CA/24

---

**From:** LIA07 Hoc  
**Sent:** Friday, March 25, 2011 7:07 PM  
**To:** LIA07 Hoc; OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update 032511 1800EDT(rev)  
**Attachments:** USNRC Earthquake-Tsunami Update 032511 1800EDT(rev).pdf

CA/25

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**From:** LIA07 Hoc  
**Sent:** Friday, March 25, 2011 7:54 PM  
**To:** LIA07 Hoc; OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update 032511 1800EDT(rev2)  
**Attachments:** USNRC Earthquake-Tsunami Update 032511 1800EDT(rev2).pdf

CA/26

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**From:** LIA07 Hoc  
**Sent:** Saturday, March 26, 2011 4:41 AM  
**To:** OST04 Hoc  
**Attachments:** USNRC Earthquake-Tsunami Update 032611 0430EDT.docx

CA/27

---

**From:** OST04 Hoc  
**Sent:** Saturday, March 26, 2011 4:42 AM  
**To:** LIA07 Hoc  
**Subject:** RE:  
**Attachments:** NRC Status Update 3.26.11--0430.pdf

---

**From:** LIA07 Hoc  
**Sent:** Saturday, March 26, 2011 4:41 AM  
**To:** OST04 Hoc  
**Subject:**

CA/28

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**From:** LIA07 Hoc  
**Sent:** Saturday, March 26, 2011 7:24 AM  
**To:** OST04 Hoc  
**Subject:** March 26 0700 EDT one pager (3).doc  
**Attachments:** March 26 0700 EDT one pager (3).doc

Pls pdf and save it in one page folder.

CA/29

---

**From:** LIA07 Hoc  
**Sent:** Saturday, March 26, 2011 5:05 AM  
**To:** OST04 Hoc  
**Subject:** Emailing: USNRC Japan Plant Condition Update March 26 0430EDT.doc  
**Attachments:** USNRC Japan Plant Condition Update March 26 0430EDT.doc

Carolyn,

Please .pdf and save to the congressional notes folder.

Thank you,

Jim

The message is ready to be sent with the following file or link attachments:

USNRC Japan Plant Condition Update March 26 0430EDT.doc

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

CA/30

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**From:** LIA07 Hoc  
**Sent:** Sunday, March 27, 2011 6:55 AM  
**To:** OST04 Hoc  
**Subject:** March 27 0600 EDT one pager  
**Attachments:** March 27 0600 EDT one pager.docx

CA/31

---

**From:** LIA07 Hoc  
**Sent:** Sunday, March 27, 2011 4:47 AM  
**To:** OST04 Hoc  
**Subject:** Emailing: USNRC Earthquake-Tsunami Update.032711.0430EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update.032711.0430EDT.docx

Please .pdf, save to m, and upload to WebEOC.

Thanks,

Jim

The message is ready to be sent with the following file or link attachments:

USNRC Earthquake-Tsunami Update.032711.0430EDT.docx

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

CA/32

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**From:** LIA07 Hoc  
**Sent:** Sunday, March 27, 2011 5:18 PM  
**To:** OST04 Hoc  
**Subject:** Update 032711.1800EDT For PDF  
**Attachments:** DRAFT USNRC Earthquake-Tsunami Update.032711.1800EDT.docx

CA/33

---

**From:** OST04 Hoc  
**Sent:** Sunday, March 27, 2011 5:19 PM  
**To:** LIA07 Hoc  
**Subject:** RE: Update 032711.1800EDT For PDF  
**Attachments:** NRC Status Update 3.27.11--1800.pdf

**From:** LIA07 Hoc  
**Sent:** Sunday, March 27, 2011 5:18 PM  
**To:** OST04 Hoc  
**Subject:** Update 032711.1800EDT For PDF

CA/34

---

**From:** LIA07 Hoc  
**Sent:** Monday, March 28, 2011 4:53 AM  
**To:** OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update.032811.0430EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update.032811.0430EDT.docx

Updated to be NSS

CA/35

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**From:** LIA07 Hoc  
**Sent:** Monday, March 28, 2011 5:34 AM  
**To:** OST04 Hoc  
**Subject:** FW: March 28 0600 EDT one pager (2).docx  
**Attachments:** March 28 0600 EDT one pager (2).docx

---

**From:** Miller, Chris  
**Sent:** Monday, March 28, 2011 5:34 AM  
**To:** LIA07 Hoc  
**Cc:** Miller, Chris; Blount, Tom; McDermott, Brian; FOIA Response.hoc Resource  
**Subject:** March 28 0600 EDT one pager (2).docx

Final version of 1 pager. Please process.  
Thx  
chris

CA/36

---

**From:** LIA07 Hoc  
**Sent:** Tuesday, March 29, 2011 4:32 AM  
**To:** OST04 Hoc  
**Subject:** Emailing: USNRC Earthquake-Tsunami Update 032911 0430EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update 032911 0430EDT.docx

Latest Status update for .pdf, save to m, and upload to WebEOC.

Thanks,

Jim

The message is ready to be sent with the following file or link attachments:

USNRC Earthquake-Tsunami Update 032911 0430EDT.docx

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

CA/37

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**From:** LIA07 Hoc  
**Sent:** Tuesday, March 29, 2011 6:08 AM  
**To:** OST04 Hoc  
**Subject:** FW: March 29 0600 EDT one pager  
**Attachments:** March 29 0600 EDT one pager.pdf

**From:** Morris, Scott  
**Sent:** Tuesday, March 29, 2011 6:06 AM  
**To:** LIA07 Hoc  
**Subject:** March 29 0600 EDT one pager

Here you go ...

CA/38

---

**From:** LIA07 Hoc  
**Sent:** Tuesday, March 29, 2011 6:20 AM  
**To:** OST04 Hoc  
**Subject:** FW: March 29 0600 EDT one pager  
**Attachments:** March 29 0600 EDT one pager.pdf

**From:** Morris, Scott  
**Sent:** Tuesday, March 29, 2011 6:17 AM  
**To:** LIA07 Hoc  
**Subject:** March 29 0600 EDT one pager

UPDATED .... SORRY

EA/39

---

**From:** LIA07 Hoc  
**Sent:** Wednesday, March 30, 2011 4:35 AM  
**To:** OST04 Hoc  
**Subject:** Emailing: USNRC Earthquake-Tsunami Update 033011 0430EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update 033011 0430EDT.docx

The message is ready to be sent with the following file or link attachments:

USNRC Earthquake-Tsunami Update 033011 0430EDT.docx

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

CA/40

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**From:** LIA07 Hoc  
**Sent:** Thursday, March 31, 2011 4:28 AM  
**To:** OST04 Hoc  
**Subject:** Emailing: USNRC Earthquake-Tsunami Update.033111.0430EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update.033111.0430EDT.docx

The message is ready to be sent with the following file or link attachments:

USNRC Earthquake-Tsunami Update.033111.0430EDT.docx

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

CA/41

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**From:** LIA07 Hoc  
**Sent:** Thursday, March 31, 2011 6:17 PM  
**To:** OST04 Hoc  
**Subject:** Status Update  
**Attachments:** USNRC Earthquake-Tsunami Update.033111.1800EDT.pdf

For books, etc.  
Thanks!  
-Sara

CA/42

---

**From:** LIA07 Hoc  
**Sent:** Saturday, April 02, 2011 6:43 PM  
**To:** OST04 Hoc  
**Subject:** Emailing: April 2 1500 EDT CA Brief one pager.pdf  
**Attachments:** April 2 1500 EDT CA Brief one pager.pdf

The message is ready to be sent with the following file or link attachments:

April 2 1500 EDT CA Brief one pager.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

CA/43

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**From:** LIA07 Hoc  
**Sent:** Saturday, April 02, 2011 6:43 PM  
**To:** OST04 Hoc  
**Subject:** Emailing: April 2 1500 EDT CA Brief one pager.pdf  
**Attachments:** April 2 1500 EDT CA Brief one pager.pdf

The message is ready to be sent with the following file or link attachments:

April 2 1500 EDT CA Brief one pager.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

CA/44

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**From:** LIA07 Hoc  
**Sent:** Sunday, April 03, 2011 5:35 PM  
**To:** OST04 Hoc  
**Subject:** USNRC Earthquake-Tsunami Update.040311 1800EDT.docx  
**Attachments:** USNRC Earthquake-Tsunami Update.040311 1800EDT.docx

For PDF

CA/45

---

**From:** LIA07 Hoc  
**Sent:** Sunday, April 03, 2011 10:08 PM  
**To:** OST04 Hoc  
**Subject:** FW: April 3 2300 EDT CA Brief one pager .docx  
**Attachments:** April 3 2300 EDT CA Brief one pager .docx

---

**From:** Miller, Chris  
**Sent:** Sunday, April 03, 2011 10:08 PM  
**To:** LIA07 Hoc; McDermott, Brian; Miller, Chris; Thaggard, Mark; FOIA Response.hoc Resource  
**Subject:** April 3 2300 EDT CA Brief one pager .docx

Please distribute.  
Thx  
chris

CA/46

---

**From:** LIA07 Hoc  
**Sent:** Wednesday, April 06, 2011 4:42 AM  
**To:** OST04 Hoc  
**Attachments:** USNRC Earthquake-Tsunami Update.040611.0430EDT.docx

CA/47

---

**From:** LIA07 Hoc  
**Sent:** Thursday, April 07, 2011 3:45 PM  
**To:** OST04 Hoc  
**Subject:** FW: One Pager: 1500 EDT April 7  
**Attachments:** April7 1500 EDT one pager.doc

Please add to WebEOC. Thanks.

CA/48

---

**From:** Blount, Tom  
**Sent:** Friday, April 08, 2011 3:54 PM  
**To:** LIA07 Hoc; OST04 Hoc  
**Cc:** Thaggard, Mark  
**Subject:** FW: Tom, here is the file for today's one pager. Joe (EOM)  
**Attachments:** April 8.docx

Here's the 1500 briefing sheet for distribution...

Thanks,  
Tom

---

**From:** Holonich, Joseph  
**Sent:** Friday, April 08, 2011 3:39 PM  
**To:** Blount, Tom  
**Subject:** Tom, here is the file for today's one pager. Joe (EOM)

CA/49

---

**From:** LIA07 Hoc  
**Sent:** Friday, April 08, 2011 6:01 PM  
**To:** OST04 Hoc  
**Subject:** RE: 1500 EDT One Pager

Perfect!  
Thanks!

---

**From:** OST04 Hoc  
**Sent:** Friday, April 08, 2011 5:58 PM  
**To:** LIA07 Hoc  
**Subject:** RE: 1500 EDT One Pager

Sara,  
I had already done this. I uploaded on Sharepoint 2 files of Japan One pagers for April 8; 0600 and 1500.  
One pager was updated in ET and Go Books.  
Louise

---

**From:** LIA07 Hoc  
**Sent:** Friday, April 08, 2011 4:26 PM  
**To:** OST04 Hoc  
**Subject:** 1500 EDT One Pager

Please put this in Go Books and Share Point (already on M Drive)  
Thanks!

CA/50

---

**From:** LIA07 Hoc  
**Sent:** Saturday, April 09, 2011 3:03 PM  
**To:** OST04 Hoc  
**Subject:** FW: April 9 1500hrs.docx  
**Attachments:** April 9 1500hrs.docx

Please pdf the attached one pager.

---

**From:** Miller, Chris  
**Sent:** Saturday, April 09, 2011 2:41 PM  
**To:** LIA07 Hoc; Evans, Michele; Zimmerman, Roy; Blount, Tom  
**Cc:** FOIA Response.hoc Resource  
**Subject:** April 9 1500hrs.docx

CA/51

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**From:** LIA07 Hoc  
**Sent:** Sunday, April 10, 2011 4:36 AM  
**To:** OST04 Hoc  
**Attachments:** USNRC Earthquake-Tsunami Update.041011.0430EDT.docx

CA/52

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**From:** LIA08 Hoc  
**Sent:** Wednesday, April 20, 2011 8:27 PM  
**To:** OST02 HOC  
**Subject:** Ops Status/Congressional Report/3 pager  
**Attachments:** USNRC Emergency Operations Center Status 4 20 11 (congressional report).pdf;  
USNRC Emergency Operations Center Status Update

Attached is the updated 3 pager or Congressional report that was sent to OCA on this shift. This document is an abbreviated version of today's Status update.

Specifically, it was sent to Tim Riley and Spiros Droggiitis both of OCA (attached is the email that was sent to them).

Liaison Team Coordinator  
US Nuclear Regulatory Commission  
email: [lia08.hoc@nrc.gov](mailto:lia08.hoc@nrc.gov)  
Desk Ph: 301-816-5185

CA/53

---

**From:** Jaczko, Gregory <Gregory.Jaczko@nrc.gov>  
**Sent:** Tuesday, April 12, 2011 7:04 AM  
**To:** Coggins, Angela; Batkin, Joshua; Pace, Patti  
**Subject:** FW: NRC News Summary for Tuesday, April 12, 2011  
**Attachments:** NRCSummary110412.doc; NRCSummary110412.pdf; NRCClips110412.doc; NRCClips110412.pdf

---

**From:** Bulletin News[SMTP:NRC-EDITORS@BULLETINNEWS.COM]  
**Sent:** Tuesday, April 12, 2011 7:03:12 AM  
**To:** [NRC-editors@bulletinnews.com](mailto:NRC-editors@bulletinnews.com)  
**Subject:** NRC News Summary for Tuesday, April 12, 2011  
**Auto forwarded by a Rule**

This morning's Nuclear Regulatory Commission News Summary and Clips are attached.

**Website:** You can also read today's briefing, including searchable archive of past editions, at <http://www.BulletinNews.com/nrc>.

**Full-text Links:** Clicking the hypertext links in our write-ups will take you to the newspapers' original full-text articles.

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CA/54



# NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

TUESDAY, APRIL 12, 2011 7:00 AM EDT

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## NRC NEWS:

**NRC Chairman Says Fukushima Situation Is Static But Not Stable.** The AP (4/12, Daly) reports, "The top US nuclear regulator said Monday he will not change

a recommendation that US citizens stay at least 50 miles away from Japan's crippled nuclear power plant, even as he declared that the crisis in that country remains 'static.'" NRC Chairman Gregory Jaczko said that while the "month-old crisis had not yet stabilized," conditions at the Fukushima Dai-ichi plant have not "changed significantly for several days."

Jaczko called the situation "static but not yet stable," and suggested that while not much has changed in recent days, it will many weeks or months before the plant is stabilized. The NRC Chairman called his March 16 recommendation of a 50-mile evacuation zone for US citizens in Japan, "prudent," noting projections for continued deterioration at the stricken facility.

In an abbreviated version of its report, the AP (4/12) noted that Jaczko "said he personally made the decision to recommend that 50 miles was a safe distance from the crippled reactors." Jaczko's "recommendation raised questions about US confidence in Tokyo's risk assessments."

**NRC Leaked Memo Says Aftershocks Will "Continue To Be A Concern."** In continuing coverage of Japan's damaged Fukushima nuclear plant, CNN's "Anderson Cooper 360" (4/12, 2:06 a.m. EDT) notes criticism of Japanese officials' response. CNN's Jim Walsh refers to an NRC memo "that was leaked. It was a memo from late March that expressed concern about aftershocks because these plants have already been stressed," in predicting that continuing seismic aftershocks "are going to continue to be a concern."

**Feinstein Urges NRC To Require Faster Move To Dry Cask Storage.** Reuters (4/12, Rascoe) reports Sen. Dianne Feinstein (D-CA) called on the NRC Monday to require nuclear power plants to accelerate the move of radioactive waste from pools to dry cask storage. In a letter to NRC Chairman Gregory Jaczko, Feinstein wrote, "The lesson from Japan's disaster is that we must be prepared to respond to unanticipated threats," adding, "Therefore, any policy changes that further reduce risks of an unsafe situation catching the industry off-guard should be implemented." In her argument that dry cask storage was safer, Feinstein cited a 2006 study by the National Research Council that said an accident or terrorist attack involving used fuel in dry cask storage would be easier to contain and to recover from than if waste stored in pools was compromised.

E&E News PM (4/12, Northey) adds that Jaczko, when Feinstein raised this issue at a Senate hearing last month, said "that spent fuel can be stored safely in wet pools for up to 100 years and that wet storage is just as safe as dry storage systems."

**Vulnerabilities Seen In Spent Fuel Pool Storage.** The Tennessean (4/12, Paine, 129K) reports, "Tons of radioactive waste are piling up at the Tennessee Valley Authority's nuclear power plants and others around the country in water-filled pools that in many cases were not intended to hold so much." At TVA's Browns Ferry plant, some spent fuel has sat in the cooling pool for decades, and while TVA insists such pools are safe, traces of "radioactive

iodine linked to the damaged Fukushima plant were detected in the air and rainwater last week in Tennessee and other states," while the spent fuel "stored in dry casks at the Japanese nuclear plant remained secure." According to the NRC, 75 percent of spent fuel is stored in cooling pools designed to serve as a "temporary rest stop" to partially cool spent fuel before transport to a permanent repository.

**Whitman Says US Reactors Are "Enormously Safe."** Appearing on CNN Newsroom (4/11, 12:13pm EDT), former EPA Administrator Christine Todd Whitman spoke on nuclear safety in the wake of the Fukushima Daiichi plant crisis. She was asked whether US plants are safe from earthquake, tsunami and strategic attack. Todd Whitman said; "Well, I mean you can never say you're prepared for everything. Obviously you just can't predicate and predict everything that might happen. But certainly ours are enormously safe."

**NRC Investigating Workers Exposed To Radiation At Cooper Station.** In its "On Deadline" blog, USA Today (4/12, Eversley, 1.83M) reports that according to MSNBC, "Three workers have been exposed to radiation" at the Cooper Nuclear Station, near Brownsville, Nebraska. Monday the NRC announced "it was looking into the 'unplanned radiation exposures' on April 3" at Cooper Station, which "took place during a maintenance procedure during which the workers removed a tube contaminated with radioactive material through the bottom of the reactor vessel as opposed to through the top, which would normally be the procedure." When radiation alarms were triggered, the "workers set the tube down and immediately left the area, according to the NRC."

Bloomberg News (4/12, Lomax) reports, "The Nebraska Public Power District, which operates the Cooper Nuclear Station, doesn't believe the workers received higher doses than allowed under NRC regulations in the April 3 incident," but NRC Regional Administrator, Elmo Collins said the agency wants "to understand why normal work practices were not followed." NPPD spokesman Mark Becker said the company would "cooperate fully with the investigation."

According to CNN (4/12) NRC inspectors "began their work Monday," and "will 'look at the circumstances and decision-making by NPPD officials that led to the exposures, review the licensee's response to the event, calculate the exposures the workers received and review corrective actions taken to prevent a recurrence,' the commission statement said."

MSNBC (4/12, Dedman) notes that the "Cooper plant has a single boiling-water reactor of General Electric design."

The Wall Street Journal (4/12, Tracy, Subscription Publication, 2.02M) notes NPPD's Becker added, "We're not

happy with what transpired and we're doing a complete root-cause investigation." Reuters (4/12, Rampton, McCune) also reported on the incident and investigation.

KMTV-TV Omaha, NE (4/11, 10:17 p.m. CDT) reports that three workers in Nebraska "were exposed to higher than expected levels of radiation. The Nuclear Regulatory Commission says the incident happened a week ago Sunday at the Cooper nuclear station near Brownville. Regulators say the workers removed a contaminated tube from the bottom of a reactor vessel, instead of the top. A spokesman says the level of radiation did not exceed safety limits." KLKN-TV Lincoln, NE (4/11, Nicole, 10:05 p.m. CDT) also includes a phone interview with a Nebraska Public Power Distribution spokesman, and KETV-TV Omaha, NE (4/11, 6:06 p.m. CDT) notes that the Cooper plant is temporarily closed for maintenance, while the Fort Calhoun nuclear plant is closed for refueling.

**NRC Approves Power Uprate At Limerick Station.** The Philadelphia Inquirer (4/11, Maykuth, 357K) reports, "The Nuclear Regulatory Commission on Monday announced it has approved a 1.65 percent-power increase by the two units of the Limerick Generating Station in Montgomery County." Exelon had requested the increase so "it could more accurately measure feedwater flow into the reactors. The 'uprate' will allow the two boiling water reactors to increase output from 1,189 to 1,205 megawatts of electricity."

The Lansdale (PA) Reporter (4/11, 10K) adds that the "NRC staff's careful evaluation determined that Exelon could safely increase the reactors' power output primarily through more accurate means of measuring feedwater flow. As part of its evaluation, NRC staff reviewed the company's analysis showing the plant's design can accommodate the increased power level." The "NRC's safety evaluation of the plant's proposed power uprate focused on several areas, including the nuclear steam supply systems, instrumentation and control systems, electrical systems, accident evaluations, radiological consequences, fire protection, operations and training, testing, and technical specification changes." Power-Gen Worldwide (4/12) also covers the uprate.

**House Panel To Probe US Readiness For A Tsunami.** E&E Daily (4/12, Yehle) reports, "The House Oversight and Government Reform subcommittee on national security plans to meet Thursday to discuss whether the federal government is prepared to 'warn, respond and assist' state and local governments in the event of a tsunami, according to a committee staffer." The "Japanese earthquake -- and resulting tsunami -- has incited concerns over the United States' warning system in recent weeks. Such a disaster would necessitate the cooperation of several

agencies, including NOAA, the Federal Emergency Management Agency and local law enforcement agencies."

**Analyst: Investors Should Not Treat Nuclear-Related Stocks As Radioactive.** In an investment analysis on CNBC's (4/12) "Fast Money: Behind the Money" page, Executive Producer, John Melloy writes, "Nuclear power-related shares are taking a hit, Germany may abolish nuclear power altogether in 12 years and iodine tablets are selling fast on the US West Coast as radiation fears reach new heights." The "global overreaction" from the "rare 9.0 magnitude earthquake and massive tsunami" may "set back the safest and easiest way for this country to solve its energy crisis, investors said." Melloy points to John Downs of Euro Pacific Capital, who said investors "should not treat nuclear-related stocks as if they were radioactive," because eventually, "reason prevails," and "nuclear power is hands down the best option available for powering the 21st century."

**Senate Panel To Examine Safety Of US Nuclear Industry.** E&E Daily (4/11, Northey) reported, "Senators this week will delve into the implications of Japan's nuclear crisis for the safety and future" US nuclear plants as the "full Senate Environment and Public Works Committee and the committee's subpanel on clean air and nuclear safety [hears] from a host of top energy regulators tomorrow about the role nuclear energy will play in the country's energy portfolio going forward." NRC Chairman Gregory Jaczko and EPA Administrator Lisa Jackson will provide opening statements before the committee hears "from a host of state regulators and lawmakers, especially from California, as well as Exelon Generation Chief Operating Officer Charles Pardee."

**Senate Committee To Vote On Lyons Nomination To DOE Position April 12.** On its website, AllGov (4/11, Wallechinsky, Brinkerhoff) profiles Peter B. Lyons, "physicist and longtime member of the nation's premier research laboratory," who was "nominated to be the Department of Energy's assistant secretary for nuclear energy" in December 2010. The Senate Energy and Natural Resources Committee is to vote on his nomination April 12. AllGov notes that the "mission of the Office of Nuclear Energy is to promote nuclear power as an energy source" with an "annual budget of more than \$850 million."

**PG&E Asks NRC To Table Diablo Canyon Relicensing Review Pending Seismic Study.** The AP (4/12, Blood) reports, "The owner of the Diablo Canyon nuclear power complex asked federal regulators to delay issuing extended operating permits until comprehensive studies are completed on earthquake faults in the area,

officials said Monday." Pacific Gas and Electric Company's move came "after a public outcry over possible safety risks at the California plant, which were heightened by the huge earthquake and tsunami that plunged Japan into a nuclear crisis." Last month at a legislative meeting, PG&E officials said Diablo Canyon was safe and "gave no hint" that it would "agree to complete three-dimensional seismic studies before a renewal of the licenses." But, Monday, PG&E Senior Vice President John Conway issued a statement saying the company would be "responsive" to concerns many in the public have that the research to be completed prior to relicensing. The AP (4/12) also published an abbreviated version of its report.

The Los Angeles Times (4/12, Sarno, 657K) adds that the utility's decision came in light of "recent events at the Fukushima Daiichi Power Plant, and the considerable public concern regarding the need to assure the seismic safety at DCCP." The Times adds that Republican state Sen. Sam Blakeslee commended PG&E for "taking the responsible action of delaying relicensing" and added, "We respect that this is a difficult decision that demonstrates their willingness to prioritize the safety of Californians."

The San Luis Obispo (CA) Tribune (4/12, Sneed) reports, PG&E sent a letter to the NRC "asking it to delay final implementation of license renewal at Diablo Canyon" until the advanced seismic studies can be completed, an effort that "could delay license renewal through 2015."

The San Francisco Chronicle (4/12, Baker, 232K) reports, "Little is known about the fault, first identified in 2008" and since the earthquake and tsunami in Japan, "a growing number of California officials have demanded that PG&E conduct further studies on the Shoreline Fault before pressing ahead with license renewal. Diablo Canyon sits on a seismically active stretch of the Central California coast near San Luis Obispo."

The Santa Maria (CA) Times (4/12, Charlton, 16K) reports that the announcement came "less than 24 hours before the San Luis Obispo County Board of Supervisors was expected to hold a public hearing on the issue." Board Chairman Adam Hill said the board was still likely to meet and will probably still send a letter to PG&E. Hill "said he believes that PG&E should completely pull back from the relicensing process and focus all of its efforts on the safety of Diablo Canyon. 'I think it's a step in the right direction,'" he said, but said "they could do more."

The Wall Street Journal (4/12, Casselman, Power, Subscription Publication, 2.02M) adds that PG&E spokesman Paul Flake insisted the company had heard the concerns of the public, while Reuters (4/12, O'Grady) notes that an NRC official said the agency is reviewing PG&E's letter. More specifically, Bloomberg News (4/12, Chediak) says the NRC "is considering the potential impact PG&E's request might

have on the timing of the license renewal, Eliot Brenner, a spokesman for the commission, said in an e-mail statement."

US Rep. Lois Capps, D-Santa Barbara, welcomed the delay, according to the Pacific Coast Business Times (4/12, 3K), "but said a voluntary pause in the licensing proceedings wasn't enough. She said she was seeking a suspension of the relicensing by the Nuclear Regulatory Commission until a full range of earthquake risks are assessed. ... Republican State Sen. Sam Blakeslee and Capps have been vocal in calling for PG&E to complete extensive studies of seismic risk prior to any relicensing by the NRC."

Also covering the announcement were, among other sources, Santa Maria (CA) Times (4/11, 16K), Power-Gen Worldwide (4/12) and

KCOY-TV Santa Barbara, CA (4/11, Sanchez, 11:01 p.m. EDT) reports that PG&E "is asking the Nuclear Regulatory Commission to delay its license renewal application for the Diablo Canyon nuclear power plant." The plant operator "wants to submit 3-D seismic studies before the licensing process is completed."

KSBY-TV (4/11, 11:02 p.m. PDT) reports the story. It shows a PG&E spokesman saying that the company has "heard our customers' concerns and the concerns of our government partners" on the need for seismic research before action on the license renewal. But an opponent says that, "Three years after the state asked them to do these studies, and a month after a tragedy in Japan made the need terribly obvious, PG&E has finally agreed to do a small part of what's been required of them by the state." KSBY-TV San Luis Obispo, California (4/11) also ran the story on its website.

KBFXCD Santa Barbara, CA (4/11, 10:16 p.m. PDT) also reports the story.

***Coastal Commission Report Says Most California Faults Could Not Produce 9.0 Magnitude Quake.*** The Capitol Weekly (4/12, Howard) reports, "Despite 1,100 miles of coastline and a history of powerful earthquakes, most of California is not susceptible to the kind of temblor and tsunami that devastated Japan, according to a report by the California Coastal Commission." However, the Cascadia Subduction Zone is a "jumble" of tectonic plates that "meet deep below the earth's continental crust," and "could produce a quake – and tsunami – on the scale of Japan's Tohoku Quake." But, according to a 21-page study by staff geologist Mark Johnsson, "the majority of faults in California, including the San Andreas fault, could not produce a magnitude 9.0 earthquake and that most of the state 'is not susceptible to an event on the scale' of the quake that struck Japan."

**Officials To Conduct Drill Of San Onofre Station's Emergency Response.** On its website, KGTU-TV San Diego, CA (4/11) reported, "Southern

California radiation experts and emergency workers will take part in a drill on Tuesday to test responses to an emergency at the San Onofre Nuclear Generating Station, an exercise that is done every other year but has taken on added significance because of the disaster in Japan." Edison spokesman Gil Alexander said, "drills are conducted at the San Onofre plant a few times a year, but this biennial one is a much more extensive test that is monitored by the Federal Emergency Management Agency." The "main difference this year is the interest from the media, according Tina Walker, a spokesman for the California Emergency Management Agency."

The Los Angeles Daily News (4/12, 91K) reports, "Radiation experts and emergency workers from Los Angeles to the Mexican border will pretend that a major radioactive gas leak has occurred at the San Onofre Nuclear Generating Station starting Tuesday." The "California Emergency Management Agency will coordinate the test at the two nuclear reactors starting Tuesday, and concluding Thursday." SCE spokesman Gil Alexander said there "are a total of about 200 of us associated with the plant that will drill." Half of those "will drill on plant procedures, and the other half will work on a pretend radiation leak with government officials, the news media and the general public."

On its website, KCBS-TV (4/11) noted that the "secret drill exercise" will "simulate a radioactive leak that goes beyond the plant's boundaries and into the community. Workers will test emergency shut-down procedures and practice securing radioactive fuel rods." The San Juan Capistrano Patch (4/11) also covers the exercise, as does the Encinitas Patch (4/11, Reed) and XETV-TV San Diego (4/10).

**NRC To Discuss San Onofre Station Performance At April 28 Meeting.** The San Clemente (CA) Times (4/12, 20K) runs an NRC news release in its entirety on the upcoming San Juan Capistrano meeting April 28 with Southern California Edison Co. "to discuss the agency's 2010 assessment of safety performance at the San Onofre Nuclear Generating Station."

**Massachusetts' Court Rules State May Regulate Pilgrim's Water Intake.** The AP (4/12) reports Massachusetts' Supreme Judicial Court has ruled that the state's environmental officials "have the power to regulate a water intake system used by the Pilgrim nuclear power plant in Plymouth," reversing a lower court ruling that the state Department of Environment lacked such authority. "Pilgrim employs a cooling system that pulls in water from Cape Cod Bay and later discharges heated water through outflow pipes. While the discharges are regulated by the state and federal governments, Entergy Corp., which owns Pilgrim, challenged whether the state also has the power to regulate the intake process."

The Boston Globe (4/12, Daley, 244K) explains that "environmental studies show the heated water can harm aquatic life. The state and environmentalists have also long argued that the sucking in of water can kill vast amounts of fish larvae, eggs, shellfish, and other aquatic organisms – larger creatures become trapped on screens covering the intake pipes, and smaller ones are sucked into the cooling system." Kenneth L. Kimmell, commissioner of the state DEP, said in response to the ruling, "This is great news for the Massachusetts environment," adding, "It clearly gives us the ability to protect our aquatic resources from the potential harms (of intake)."

The Boston Herald (4/12, 117K) adds that "officials for Entergy declined immediate comment on the ruling," saying that they "have received the decision and our attorneys are studying it." The Brockton, Massachusetts' Enterprise News (4/12) and Water World (4/12), a water and wastewater industry website, also cover this story.

**Safety, Tax Bill Discussed At Millstone Public Meeting.** The Norwich Bulletin (4/12, Mosher) reports, "Millstone Nuclear Power Station executives publicly reiterated their case against two tax bills being considered by the General Assembly." Around "100 people attended a meeting at Waterford Town Hall Monday night which featured presentations by executives of Dominion Resources Inc." According to Dominion's Daniel Weekley "a \$335 million tax on the plant's electricity output contained in Senate Bill 1176 would be a first nationally." He said, "Once this production tax starts it will never stop. ... It will hit every one of us."

Also at the meeting, the Greenwich Time (4/12, Cummings, 3.31M) reports, "the operators of the Millstone Nuclear Power Station on Monday attempted to assure nervous residents that the disaster now unfolding at a nuclear facility in Japan cannot happen here." Millstone's Skip Jordan told the audience, "Every meeting at Millstone station starts with a message about safety. Our number one priority is to protect the health and safety of the public."

The New London Day (4/12) adds, "Millstone's two operating reactors, which are pressurized water reactors, are safer, Jordan said, because they have primary and secondary cooling systems to keep the plants cool." Mystic resident Nancy Burton "wanted to know why Dominion isn't moving the spent fuel from Unit 1 immediately into an alternate type of storage known as dry cask storage." According to Jordan "the company is evaluating moving that fuel so that it is no longer housed above the reactor, where it is more vulnerable, but he and Weekley noted that if the tax is approved it will make it more difficult to invest in safety improvements like that." A separate New London Day (4/12, Daddona) article also reports on the meeting.

## **NRC Says UniStar Not Eligible To Build A New Calvert Cliffs Reactor.**

The Calvert Recorder (4/12, Russell) reports the NRC "released a report on Friday stating it could not issue UniStar Nuclear Energy a license for the proposed third reactor in Calvert County on the basis of foreign ownership." The company "submitted a combined license application and 'negation action plan' in January in an attempt to address the issue, citing U.S. individuals who would oversee the operations of Calvert Cliffs Nuclear Power Plant's third unit, since French company Electricite de France acquired Constellation Energy's 50 percent interest in UniStar, their joint U.S. nuclear venture." But the NRC ruled "that UniStar's plan is unsuitable for obtaining a license for CC3, on the grounds that: '1) UniStar is 100 percent owned by a foreign corporation (EDF), which is 85 percent owned by the French government; 2) EDF has the power to exercise foreign ownership, control, or domination over UniStar; and 3) the Negation Action Plan submitted by UniStar does not negate the foreign ownership, control or domination issues discussed above,' the report states."

The website World Nuclear News (4/11) and Nuclear Street (4/11) are also covering this story.

## **FEMA To Oversee Emergency Response Exercises At Three Mile Island.**

On its website, WHTM-TV Harrisburg, Pennsylvania (4/11) adds that the "week-long exercises are required by the federal government every two years. FEMA specifically will evaluate the response of state and local emergency agencies within the 10-mile emergency-planning zone of the nuclear plant." Preliminary findings of the "exercise will be presented during a public meeting Friday at 11:00 a.m. at the Hilton Garden Inn, at 3943 TecPort Drive, in Harrisburg."

On its website, WTAJ-TV Altoona, Pennsylvania (4/11) reports, "Emergency crews at and around Three Mile Island will be evaluated starting Monday. FEMA will be looking at how prepared state and local responders are to protect public health and safety. Preliminary findings of the emergency preparedness drills will be revealed on Friday." WFMZ-TV Allentown, Pennsylvania (4/11) also reported on its website.

## **Athens Seeks Grant To Improve Browns Ferry Evacuation Route.**

The Decatur (AL) Daily (4/12, Hollman) reports, "A multi-million project at Browns Ferry Nuclear Plant could help the city and county get a grant to improve one of the plant's evacuation routes." According to the article, "On Monday, the Athens City Council approved spending up to \$250,000 from its general reserve fund toward the project, contingent on it receiving a \$2 million grant." James Rich, the Public Works Director, indicated that the grant is "through the Alabama Industrial Access Road and

Bridge Corp." The city plans to make its request for the grant at the corporation's meeting in June.

## **AARP Faults New Reactor Plan For Iowa.**

According to the Cedar Rapids (IA) Gazette (4/12, Lynch, 51K), "AARP is firing back in a war of words over legislation it says would stick Iowans with the cost of developing future nuclear power generation even if the plants are never built." The group said at a Statehouse press conference Monday, that "it doesn't oppose the development of new power generation, including MidAmerican Energy's proposed nuclear plant, but objects to a pair of bills that would change the rules at the expense of Iowans, including its 370,000 50-and-older Iowa members." Bruce Koeppel, AARP state director, said that instead of relying on "shareholders and investors" to finance a new reactor, "the proposed legislation 'shifts the billion-dollar plus costs to ratepayers for a possible nuclear plant, years before the plant is built, or the plant design has even been approved.'"

The AP (4/12) notes that AARP "ads claim residents and businesses would pay more if the Legislature approves a bill backed by MidAmerican Energy that would let the utility charge customers in advance for the construction of a nuclear power plant. Democratic Sen. Swati Dandekar of Marion and others have called the ad misleading."

Radio Iowa (4/12) added Bruce Koeppel said the "proposal allows utility companies to force customers to continue paying accumulated costs to the utility even if the plant is cancelled."

The Des Moines Register (4/11, Petroski, 111K) also reports the story.

## **Shumlin Wants Lawmakers To Pass Tax On Vermont Yankee's Spent Fuel.**

The AP (4/12, Gram) reports, "Vermont Gov. Pete Shumlin on Monday unveiled his plan to pay for promoting renewable energy development without relying on a surcharge to customers." Shumlin said Monday "he still hoped to get money for the fund from Vermont Yankee's owner," Entergy and urged "lawmakers to pass a new tax on spent nuclear fuel being stored in the state. Vermont Yankee's spent fuel storage pool is nearly full and the plant has begun storing some of its spent fuel in concrete cask outside its reactor building in Vernon. Like other nuclear plants around the country, Vermont Yankee has been hard-pressed to find a place to send its highly radioactive waste."

On its website, WCAX-TV Burlington, Vermont (4/11, Thurston) reported, "Vermont now has a little more than \$8.5 million in its Clean Energy Development Fund," but "since the Vermont Yankee nuclear plant pays into the program, and since Yankee is scheduled to close next year, the Shumlin administration had to come up with a way to keep the

development money flowing." Shumlin says "switching the way the state handles its Clean Energy Development Fund will ensure money's in the pot to entice other projects to break ground."

**Peace Walk Protestors Marching From Indian Point To Vermont Yankee.** Mid-Hudson (NY) News (4/12) reports, "Some two dozen people started their Peace Walk in Croton Sunday, stopped to pray outside the Indian Point nuclear power plant in Buchanan, before they set out for the 206-mile walk to the Vermont Yankee nuclear power plant." Leading the walk, Japanese Buddhist nun Jun Yasuda of the Grafton Peace Pagoda, said, "People have been suffering from the earthquake; so many people died by the earthquake and also so many people are suffering under the nuclear situations."

**Riverkeeper Says Tsunami Not Necessary To Damage Indian Point.** Westchester (NY) Journal News (4/12, Fitz-Gibbon) reports that Riverkeeper representative Paul Gallay also told the Westchester County board committee that it "wouldn't take a tsunami to dangerously damage the Indian Point nuclear reactors." Gallay also "told a county board committee that radioactive spent fuel pools at the Buchanan reactors are Indian Point's 'Achilles' heel." Gallay said, "All of these issues do not require a tsunami, which is one of the things that Indian Point says, and says that we should be easy in our minds because we won't have a tsunami." He suggested corroded piping, metal fatigue in the containment dome and embrittlement of the containment dome, could cause problems.

**Entergy, Riverkeeper Invited To Brief County Board On Indian Point Safety.** The Westchester (NY) Journal News (4/11, Fitz-Gibbon) reported, "The Westchester County Board of Legislators will hold its latest in a series of public meetings on the Indian Point nuclear power plants today at 3 p.m., seeking to shed light on safety issues at the Buchanan plant in the wake of the crisis facing Japan's Fukushima nuclear plant." The "county board's committees on environment and energy, and public safety and security, which have hosted the meetings, said they have invited officials from the environmental group Riverkeeper as well as officials from Entergy Northeast, which owns the Indian Point reactors."

**Plant Farley Unit 2 Reactor Reduces Output.** According to a Bloomberg News (4/12, McClelland) reactor output status story, "Southern Co. (SO) slowed the 860-megawatt Farley 2 reactor in Alabama to 56 percent of capacity from 100 percent on April 8." Another unit at the site 18 miles east of Dothan, "the 851-megawatt Farley 1, is operating at full power."

## **Decision On Plant Vogtle Overruns Awaited.**

ABC affiliate WSB-TV Atlanta (4/11, 4:57 am EDT) reported that this week "we may find out whether taxpayers or Georgia Power would pay if costs run over on a proposed expansion at Plant Vogtle. A state committee could resolve on Thursday and could resolve the two-year-old dispute. The utility said it should not lose profits if the project exceeds its \$6.4 billion budget."

## **Shimkus Plans To Proceed With Yucca Trip Despite Waxman's Criticisms.**

The St. Louis Post-Dispatch (4/12, Lambrecht, 232K) reports Rep. John Shimkus (R-IL) said in response to concerns raised by Rep. Harry Waxman (D-CA) that a trip to Yucca Mountain and its \$200,000 price tag was wasteful that "he is undeterred -- and 'appalled' at the suggestion that the delegation would be wasting money." Shimkus said, "We spent \$14 billion or \$15 billion to prepare this site for long-term storage. What are they trying to hide?" He went on to say that the DOE "is distorting the cost" of the trip, explaining that "the delegation is willing to ride a bus to the site and doesn't need helicopters, he said. Nor is it a must that they see inside the mountain, meaning that expensive safety tests and other preparation is unnecessary."

The Las Vegas Review-Journal (4/12, Tetreault, 178K) adds that Shimkus spokesman Steven Tomaszewski said the cost-cutting measures were decided upon before Waxman voiced his concerns. Said Tomaszewski, "Prior to Mr. Waxman's letter on Friday, the decision was made to use buses and not require the opening of the underground portion." Meanwhile, Senate Majority Leader Harry Reid (D-NV) also expressed concerns about the cost of the trip, saying that "taxpayers are getting ripped off." He added, "What in the world could be accomplished by that?...The only thing that might be a good idea would be if they all traveled to Las Vegas and stayed in our hotels."

**Shimkus Explains Support For Yucca Project.** In an op-ed for The Hill (4/12, 21K), Shimkus discusses his support for the Yucca Mountain nuclear waste repository project, writing, "While I agree with the government following its own law and taking control of nuclear waste, I question why we should throw away the \$14.5 billion already spent on Yucca Mountain. We don't need regional sites; we already have designated a consolidated government storage site!" And because he believes "the administration is failing to carry out the current federal law," referring to the Nuclear Waste Policy Act, he adds that he has joined with House Energy and Commerce Committee Chairman Fred Upton (R-MI) to investigate why the Administration has chosen to abandon the plans for the project.

**Reid Confident Yucca Is Dead After Rider Fails.** Under the headline, "Despite House GOP Push, Harry Reid Declares 'Yucca Is Dead,'" the Las Vegas Sun (4/12, Demirjian, 41K) reports that "Yucca Mountain, which hasn't received funding under any federal budget that's been passed since Obama came to office, came back on the agenda this past winter, when Republican House leaders included funding and a directive about the projected nuclear waste storage site in their budget bill, H.R. 1." But it was "one rider that fell off the table quietly that will likely resonate strongest for Nevada." When asked Monday whether "he was at all concerned that it might still be funded," Reid responded, "H.R. 1's history, man." Platts (4/12, Hiruo) also reports this story.

**Analyst Questions Safety Of Spent Fuel Storage.** The AP (4/11) reported that the TVA "stores spent fuel and fuel rods at its plants, just like other nuclear plant operators, but an industry analyst is questioning the safety of that storage." The utility has over "2,544 metric tons of radioactive spent fuel in cooling ponds at its Sequoyah and Watts Bar nuclear plants in Tennessee and Browns Ferry plant in Athens." The Union of Concerned Scientists' Edwin Lyman "said the amount of fuel from TVA's reactors represents about '100 reactor-years worth of discharges.'"

**Murkowski Talks Up Small Modular Reactors.** Politico (4/12, Goode, 25K) reports Sen. Lisa Murkowski (R-AK), the Senate Energy and Natural Resources Committee's ranking Republican, "thinks Congress will have more success taking a 'graduated' approach to energy legislation while keeping up the pressure to respond to last year's Gulf of Mexico spill." She "cited legislation increasing hydropower and addressing small-modular nuclear reactors as examples," saying that "there is 'probably much greater likelihood' of something like the latter bill moving 'than a full-on expanded nuclear piece, particularly in view of just the uncertainty that we're seeing after the earthquake in Japan.'"

**Higher MOX Fuel Concentration Weighed for US Reactors.** The Global Security Newswire (4/11), citing a New York Times article on Sunday, reported that "the federal Tennessee Valley Authority and Energy Department have conducted talks on potentially substituting mixed-oxide fuel derived from nuclear-weapon material for one-third of the low-enriched uranium in several US power reactors, a substantially higher proportion of MOX fuel than a crippled Japanese nuclear plant had used." However, "any TVA move on the proposal has been put off pending a review of the behavior of MOX fuel at Japan's Fukushima Daiichi nuclear power plant," the article said. "We are studying the ongoing events in Japan very closely," TVA spokesman Ray Golden

said. The National Review (4/11, Pollowitz, 193K) "Planet Gore – The hot blog" also cited the New York Times report.

**Shaw Group, Babcock & Wilcox Aim To Help Dismantle Japanese Reactors.** The Charlotte (NC) Business Journal (4/11, Downey, 14K), citing the New York Times, reported that "Babcock & Wilcox and the Shaw Power Group are working with Toshiba and Westinghouse on plans to dismantle the badly damaged nuclear reactors in northern Japan." The Journal said "Toshiba, the lead company involved in the work, has assembled a team of experts from the other companies to help with the plans."

**Shaw Group Profit Declines, Shares Fall.** The CNBC's Squawk on the Street (4/11) reported that "shares of Shaw Group have fallen after missing earnings expectations" and that "the company was banking on an expanding nuclear industry for growth." D. A. Davidson analyst John Rogers, who downgraded the engineering and construction firm, said on TV that Shaw hasn't "talked about loss of orders, but I think more they're talking about the strength of the new designs for nuclear power plants and the ability to continue to operate even if they" lose "backup power." Rogers said: "I think at this point they have not seen a significant change in the outlook for their market, but I think investors are concerned the whole process of new nuclear power plants in the US may be delayed."

The AP (4/12) reports, "Shaw Group Inc., an engineering and construction company whose projects include nuclear power, said on Monday that its second-quarter profit tumbled sharply mainly due to charges to cover big swings in the value of the dollar versus the yen." The company disclosed "a profit of \$1.2 million, or a penny a share, for the quarter that ended Feb. 28, compared with net income of \$61.5 million, or 72 cents per share, for the same period last year," AP adds.

**South Carolina House Speaker Briefed On SRNL, SRS' H Canyon.** The Augusta (GA) Chronicle (4/12) reports, "South Carolina House Speaker Bobby Harrell met with Savannah River Site managers and officials and members of the Aiken County legislative delegation Monday for a briefing on the Savannah River National Laboratory and the uncertain future of the site's plutonium-processing H Canyon." Cliff Webb, the vice president of public affairs for Savannah River Nuclear Solutions, said, "The purpose of the meeting wasn't to create or ask for next steps but to inform." The article explains that "last month, the nine members of the Aiken County legislative delegation wrote to US Energy Secretary Steven Chu to lay out concerns about the effects of shifting funding away from H Canyon, as is proposed in the federal budget." A spokesman for the speaker said that he also planned to send a letter to Chu.

## Former Joint Chiefs Chairman Says US Unprepared For Cyberattack.

Marine Gen. Peter Pace, former chairman of the Joint Chiefs of Staff, told a cybersecurity conference in Colorado yesterday that the US is "hugely vulnerable" to cyberattacks and is "way late" in responding to the new threat, the AP (4/11) reported. Pace said the federal government should impose security regulations on private sector networks, including the banking and finance industries. Pace said a set of uniform regulations would prevent some firms from skirting the requirements in order to gain an advantage over their competitors. He "also said it would encourage innovation by creating demand for security measures."

**Alexander, Lawmakers Stress Importance Of Cybersecurity.** The Providence Journal (4/12, McKinney, 106K) reports NSA Director Gen. Keith Alexander "headlined a cyber-security conference at the University of Rhode Island on Monday that highlighted student and faculty research into such challenges as defending the power grid from cyber-attackers." Alexander told attendees that cybersecurity "is one of the most important issues facing our nation today." Also addressing the forum, Rhode Island Sen. Sheldon Whitehouse "said more legislation on cyber-security issues is expected," while Rep. James Langevin said that the nation "still stands largely unprepared to deal with various potential cyber-security threats."

Also reporting on yesterday's conference, NextGov (4/12, Sternstein) says Alexander "reaffirmed" that the US Cyber Command, which he commands, "cannot monitor civilian networks, noting its powerlessness over systems outside the .mil domain might require congressional action." Said the general, "I do not have the authority to look at what's going on in other government sectors, nor what would happen to critical infrastructures. That means that I can't stop [an assault on nonmilitary networks]." He noted that the Pentagon and DHS "are sharing information, security equipment and staff at an NSA office, under the guidance of legal counsel and privacy officers."

## IN THE BLOGS:

**Blog: Alternatives To Containing Nuclear Disaster Discussed.** On a blog entry for Energy Collective (4/11) Charles Barton wrote that "avoiding and mitigating nuclear accidents is not terribly expensive, nor does it make nuclear power impractical, but does require the nuclear industry to change the way it does business." The article said in case of a nuclear accident, "a better safety approach" is "to capture some nuclear materials and remove them to safe places outside the core, rather than preventing their escape." The writer noted, "The GE/Hitachi ESBWR

offers significant advances in passive safety." For instance, "coolant flow no longer relies on pumps. Rather the boiling water reactor design allows for the natural circulation of coolant water through the core."

## INTERNATIONAL NUCLEAR NEWS:

### Japan Puts Nuclear Crisis On Par With Chernobyl Disaster.

The AP (4/12) reports, "Japan's nuclear safety agency has raised the severity rating of the crisis at its nuclear plant to the highest level, on par with the 1986 Chernobyl disaster." The Washington Post (4/12, Harlan, 572K) notes that the reassessment came from "officials with Japan's Nuclear Safety Commission," which reclassified the crisis from "an 'accident with off-site risk,' to... a 'major accident.'"

The Wall Street Journal (4/12, A1, Dvorak, Osawa, Hayashi, Subscription Publication) reports despite the decision to raise the level, Japanese officials stressed that the crisis was not comparable to the Chernobyl disaster.

According to the New York Times (4/12, Tabuchi, Bradsher, Subscription Publication), Japan's Nuclear and Industrial Safety Agency said the elevated rating "resulted from new estimates that suggest that 'tens of thousands of terabecquerels' of radioactive material per hour were released from the plant in the aftermath" of last month's earthquake and tsunami. Still, the "total amount of radioactive material released so far is equal to about 10 percent of that released in the Chernobyl accident," the agency said.

Also yesterday, the CBS Evening News (4/11, story 10, 2:25, Couric, 6.1M) reported, "the evacuation zone around that crippled nuclear plant was expanded to include four towns some 30 miles away."

**Another "Strong Earthquake" Hits Japan.** The AP (4/12) reports, "A strong earthquake with a preliminary magnitude of 6.3 has jolted in Tokyo and its environs. ... The epicenter of the quake was located just off the coast of Chiba, east of Tokyo." There were no immediate reports of damage or injuries.

The New York Times (4/12, Tabuchi, Bradsher, Subscription Publication), meanwhile, reports that the "strong aftershock...briefly set off a tsunami warning and knocked out cooling at the crippled Fukushima Daiichi nuclear power plant for almost an hour, underscoring the vulnerability of the plant's reactors to continuing seismic activity along the coast a month after the devastating March 11 earthquake and tsunami."

ABC World News (4/11, story 4, 2:20, Stephanopoulos, 8.2M) reported, "A six minute aftershock struck the country not long after the Japanese observed a moment of silence for

the victims. Even rescuers searching for the more than 28,000 dead and missing paused to remember." ABC (Woodruff) added, "Fourteen thousand US troops" are still in Japan "to help speed up the recovery...clearing mud and debris from schools." Army Gen. Michael Harrison cautioned, "This is not going to be complete in another week or another month. The devastation in this area, it will take years to get it totally cleaned out."

NBC Nightly News (4/11, story 6, 2:45, Williams, 8.37M) reported, "The official death toll stands at more than 13,000," and "nearly 150,000 people are still without homes, living in evacuation centers."

**Clinton To Visit Japan In Show Of Support.** AFP (4/12) reports Secretary Clinton will visit Japan "in a show of support for the US ally as it recovers from a devastating earthquake, the State Department announced Monday." The Secretary, said spokesman Mark Toner, "will travel to Tokyo on Sunday, after stops in South Korea and in Germany where she is attending a NATO conference." Also reporting the Secretary's trip are the AP (4/12) and Reuters (4/12, Mohammed), which it calls a symbol of US support.

**Daunting Challenges Await Cleanup Of Fukushima Plant Disaster.** On its website, NPR (4/12) reports, "Nuclear engineers in Japan are dealing with two problems at the same time: They are working to fully stabilize the reactors at the Fukushima Dai-ichi plant, and they are trying to control the release of radioactive material." Containment and cleanup of the "radioactive material could take at least 10 years, at a cost of more than \$10 billion." According to nuclear engineer Lake Barrett, who coordinated cleanup at Three Mile Island for the NRC, the cleanup challenge can be broken down to energy, air, water and solids. NPR concludes that while engineers can "break the problem down to the basics, and they know how to do each individual step" nobody's "ever tried a nuclear cleanup on this scale before."

**Japan-Based Nuclear Hardware Companies Face Challenging Times.** The Wall Street Journal (4/12, 2.02M) reports that Japan's nuclear reactor industry faces challenging times because the country's reputation for quality products has taken a beating in view of the ongoing nuclear problems at the Fukushima Daiichi plant. The journal, citing several examples, says foreign interest in buying nuclear industry hardware from Japan has decreased significantly following the atomic plant disaster.

**Siemens, Areva Terminate Nuclear Joint Venture.** Reuters (4/11) reported that German industrial giant Siemens and French group Areva have terminated their nuclear joint venture. Siemens sold its 34 percent stake in Areva NP to Areva for 1.62 billion euros (\$2.34 billion). Reuters said the legal battle whether Siemens has broken its contract with Areva will, however, continue.

**Anti-Nuclear Activists Barricade Road Outside London Offices Of EDF.** Bloomberg News (4/11, Spillane) reported, "Activists barricaded a road outside the London offices of Electricite de France SA today to protest plans by Europe's biggest power producer to build a new generation of UK nuclear power plants." Bella Benson, a spokeswoman for Boycott EDF group said: "EDF has spent a massive amount of money marketing as an environment-friendly company." She added, "But the truth is that it's planning to lumber us with an outdated form of energy that is incredibly dangerous, extremely expensive and completely unnecessary."

**Iran Touts Gains In Nuclear Program, Announces Plans To Build More Reactors.** The Washington Post (4/12, Warrick, 572K) reports Iran is "proclaiming significant gains in its nuclear program, progress that Western officials and experts say could effectively erase setbacks from recent cyber attacks and shorten the timeline for acquiring nuclear weapons." In announcements "over the past three days," Iranian scientists "said they have successfully tested advanced centrifuges for enriching uranium and are less than a month away from starting the country's first commercial nuclear reactor." The announcements, says the Post, "underscore recent assessments by intelligence officials and Western nuclear experts suggesting that Iran is preparing to speed up its production of enriched uranium."

The AP (4/12) reports nuclear chief Fereidoun Abbasi announced Monday that Iran "will need more enriched uranium to fuel the 'four or five' new research reactors it is planning on building." Abbasi said Iran is planning to build the new research reactors "in the next few years" to produce medical radioisotopes.

**Germany Rejects Requests To Shutter Iranian Bank.** The Wall Street Journal (4/12, A6, Crawford, Subscription Publication, 2.02M) reports that despite international pressure, Germany is resisting calls to shutter the European-Iranian Trade Bank AG, arguing the bank is not engaged in illicit activities. The US, however, maintains that the sanctioned bank is a financial conduit for Iranian firms involved in weapons proliferation.

**Iranian Lawmaker Blames Western "Enemies" For Pipeline Explosion.** The New York Times (4/12, Yong, Subscription Publication, 950K) reports, "A member of the Iranian parliament has blamed Western 'enemies' for a blast on Friday that hit a major gas pipeline" near the city of Qom. The head of the parliament's national security committee, Parviz Sorouri, "told reporters on Sunday that Western-backed 'terrorists' were aiming to bring insecurity to Iran's national energy transfer routes."

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# NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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## NRC NEWS:

### **NRC Chairman Says No Change In 50-mile Evacuation Zone For Japanese Nuclear Crisis (AP)**

By Matthew Daly

Associated Press, April 12, 2011

WASHINGTON - The top US nuclear regulator said Monday he will not change a recommendation that US citizens stay at least 50 miles away from Japan's crippled nuclear power plant, even as he declared that the crisis in that country remains "static."

Gregory Jaczko, the chairman of the Nuclear Regulatory Commission, acknowledged in an interview with The Associated Press that the month-old crisis in Japan has not yet stabilized. But he said conditions at the Fukushima Dai-ichi plant have not changed significantly for several days.

"We describe the situation as static but not yet stable," Jaczko said.

"It hasn't really changed too much in the last few days," he added, but it will be weeks or even months before the plant is stabilized.

The March 11 earthquake and tsunami knocked out power at the Fukushima plant and reactors have been overheating ever since. In Japan on Tuesday, the Nuclear Safety Commission of Japan raised the severity rating of the crisis from 5 to 7, the highest level and on par with the 1986 Chernobyl disaster.

Progress in stabilizing the complex comes slowly most days, or not at all, as new tremors and radiation repeatedly halt work. A new aftershock Monday briefly cut electricity to the plant and halted work while technicians took cover, but did not endanger operations, according to Japanese officials.

The Japanese government, meanwhile, added five communities Monday to a list of places people should leave to avoid long-term radiation exposure. A 12-mile radius has been cleared around the plant already.

Jaczkowski said the most important job at the plant still is keeping water in the spent fuel pools to cool the highly radioactive fuel rods, reducing the threat of a meltdown and a catastrophic release of radiation.

Jaczkowski, who traveled to Japan last month, said the NRC has begun a two-pronged approach to review the safety of the 104 commercial US nuclear reactors in the wake of the Japanese crisis. A 90-day review should be completed in June, with another report expected by the end of the year.

"We want this to be a very systematic and methodical review and make sure we identify all the important issues, and that we work with a sense of urgency and speed to address those issues in the appropriate way," he said, adding that he expects the reviews to result in recommendations for significant regulatory changes.

"Fundamentally, I expect that there will be some things we will want to change and need to change as a result of what comes out of this 90-day review and longer-term review, based on events in Japan," he said.

A task force made up of high-ranking NRC staff is conducting the two reviews, and the five-member commission will act quickly once the reports are released, Jaczkowski said.

On the 50-mile evacuation zone for US citizens in Japan, Jaczkowski called his March 16 recommendation "prudent" and said it was based on projections for continued deterioration at the plant. The Japanese government had set a 12-mile evacuation zone, and the US decision raised questions about US officials' confidence in Tokyo's risk assessments.

"I'm still very comfortable" with the decision, Jaczkowski said.

Asked whether he set up a double standard — one for nuclear plants in foreign countries and another for US plants, where a 10-mile evacuation zone is the current standard — Jaczkowski said no.

"I wouldn't say that's a contradiction," he said, noting that the 10-mile US evacuation zone refers to emergency planning prior to a nuclear disaster. If events warrant, a larger evacuation zone can be created.

"Ultimately, decisions about protective actions (in the event of a nuclear disaster) are made by state and local authorities," he said, not the NRC.

On another topic, Jaczkowski said he believes spent fuel can be stored safely either in pools or in dry cask storage. Sen. Dianne Feinstein, D-Calif., sent Jaczkowski a letter Monday urging the NRC to establish regulations that would encourage plant operators to move more quickly to store spent fuel in dry casks, rather than in pools that must be kept cooled.

Feinstein cited a 2006 study by the National Research Council indicating that dry cask storage systems have inherent safety advantages over spent fuel pools.

Jaczkowski disputed that, saying both methods are safe.

The United States has not had an accident involving spent fuel in decades, and spent fuel at commercial US reactors "continues to be safe and secure," even without a designated site to store nuclear waste, Jaczkowski said. The Obama administration has abandoned plans for a nuclear waste dump in Nevada, prompting sharp criticism from some lawmakers in both parties.

Jaczkowski declined to speculate on whether the Japanese crisis would cause a slowdown in a planned expansion of US nuclear reactors backed by President Barack Obama. Jaczkowski said the NRC has "a very robust system" to license reactors that takes into account a wide range of factors.

"Ultimately safety rests with the (plant operator)," he said. "It's our job to make sure they get there."

If the NRC considers plants unsafe, it will take corrective action, up to and including shutting down plants if necessary, Jaczkowski said.

Three US nuclear power plants — in South Carolina, Kansas and Nebraska — need increased oversight from federal regulators because of safety problems or unplanned shutdowns. But Jaczkowski said all 65 US nuclear plants in 31 states are operating safely.

## **Japan Nuke Crisis Not Yet Stable (AP)**

Associated Press, April 12, 2011

— The top US nuclear regulator says he will not change a recommendation that US citizens stay at least 50 miles away from Japan's crippled nuclear power plant, even as he declared that the crisis in that country remains "static."

Gregory Jaczko, who is chairman of the Nuclear Regulatory Commission, acknowledged in an interview with The Associated Press today that the month-old crisis in Japan has not yet stabilized. But he said conditions at the Fukushima Dai-ichi plant have not changed significantly for several days.

Jaczko said he personally made the decision to recommend that 50 miles was a safe distance from the crippled reactors. The Japanese government had set a 12-mile evacuation zone.

Jaczko's recommendation raised questions about US confidence in Tokyo's risk assessments.

## **US Lawmaker Calls For New Nuclear Waste Rules (REU)**

By Ayesha Rascoe

Reuters, April 12, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Feinstein Urges NRC To Revamp Wet-storage Waste Policy (EPPM)**

By Hannah Northey

E&ENews PM, April 12, 2011

Federal policies regarding the storing of spent nuclear fuel are flawed because they do not encourage reactor operators to move spent fuel rods from wet pools to dry storage systems, the chairwoman of a Senate Appropriations subcommittee told the Nuclear Regulatory Commission chairman.

In a letter sent Friday, Sen. Dianne Feinstein (D-Calif.) told NRC Chairman Gregory Jaczko that the commission should initiate a rulemaking to spur a "more rapid shift of spent fuel to dry casks."

NRC rules are out of step with 2006 safety recommendations from the National Academy of Sciences' National Research Council, said Feinstein, who leads the Subcommittee on Energy and Water Development.

The council issued a report that found moving spent fuel from wet pools to dry cask storage systems once they are sufficiently cool decreases the amount of fuel at risk during an accident or attack and increases operators' ability to safeguard the material, Feinstein said.

The dispersion of radioactive material is also more likely to be contained if the spent fuel rods are in dry storage casks, the council found, and radioactive material can be more easily recovered because the casks can be plugged temporarily with "radiation-absorbing materials" until permanent fixes are available.

"Containing radiation from a compromised spent fuel pool is likely to be much more difficult, particularly if the overlying building collapsed preventing workers from reaching the pool," the council's report says.

Jaczko told Feinstein at a hearing last month that spent fuel can be stored safely in wet pools for up to 100 years and that wet storage is just as safe as dry storage systems (Greenwire, March 31).

In the United States, the bulk of spent nuclear fuel rods are stored in pools under at least 20 feet of water, which provides a radiation shield, NRC says. Current NRC regulations allow fuel to be re-racked within the pool and consolidated, depending on the size of the pool. Operators can move cooled fuel into dry storage systems or casks, which are steel cylinders that are either welded or bolted shut and placed into concrete structures.

Concern over spent fuel storage has grown since the March 11 earthquake and tsunami crippled Japan's Fukushima Daiichi nuclear complex and spent fuel pool and caused radiation leaks.

Feinstein said the events in Japan show the United States must be prepared for any "unanticipated threats" and that spent fuel should be kept in smaller, easier to manage containers that are "distributed intelligently on a secure site."

## **Storage Of Used Nuclear Fuel Rods At TVA Plants, Elsewhere Stir Concern (TENN)**

By Anne Paine

Tennessean, April 12, 2011

Tons of radioactive waste are piling up at the Tennessee Valley Authority's nuclear power plants and others around the country in water-filled pools that in many cases were not intended to hold so much.

At TVA's Browns Ferry plant, 100 miles south of Nashville in Athens, Ala., some of the used fuel rods have been steeping in water for decades.

While industry officials say it's safe and that operations in the US have extra safeguards, similar pools of spent fuel have released radioactive materials to the air after last month's earthquake and tsunami in Japan. Traces of radioactive iodine linked to the damaged Fukushima plant were detected in the air and rainwater last week in Tennessee and other states.

In contrast, the radioactive waste stored in dry casks at the Japanese nuclear plant remained secure.

In the United States, more than 75 percent of the radioactive waste at the nation's 104 commercial nuclear reactors sits in pools, according to the Nuclear Regulatory Commission. The rest is in dry storage casks, mainly on site.

The pools nationwide were intended as a temporary rest stop where used fuel rods would partially cool before transport to a central location in the country for reprocessing or disposal.

With no such sites available, the used rods, which are in bundles called assemblies, have been placed closer together than planned and largely left in the pools.

The Nuclear Regulatory Commission permits such packing. Still, TVA, for one, is considering a change.

"We're likely to do more dry cask storage now," TVA spokesman Ray Golden said. "Exactly how much I think still needs to be determined."

Critics, including the Union of Concerned Scientists, have said for years that the pools were a vulnerable part of a nuclear plant, and that the fuller one is, the greater the risk.

The NRC should require the transfer to dry storage casks made of concrete and steel when the waste rods are cool enough, not when pools are nearly full, they say.

TVA has transferred some waste to dry storage, but the public power producer will give little information on how much, saying it's a security matter.

"Every year we do at least five to 10 canisters to catch up, to get even more room in there because we are somewhat filled," said Preston Swafford, TVA's chief nuclear officer, as he stood 30 feet from a pool at Browns Ferry during a tour last month. He was referring to the plant's three cooling pools.

About two dozen casks, each holding 68 used fuel assemblies, sat outside the building. That's a considerably smaller number than those in the pool nearby. It could hold an estimated 2,500 old assemblies, and it had 1,800-1,900.

It's unclear how many of the bundles of used fuel assemblies in pools nationwide are older than the five to eight years it takes to cool off enough to move.

NRC and Nuclear Energy Institute spokesmen said they did not have that information. TVA officials would not release the specific data on its plants.

Golden gave only the totals for each of TVA's plants. Browns Ferry has 1,771 metric tons of radioactive waste in pools and casks combined. Sequoyah, about 20 miles northeast of Chattanooga, has a combined 1,174 metric tons.

At Watts Barr, about 60 miles southwest of Knoxville, 317 metric tons of waste are on site, all in the one pool there, where there's plenty of room. The one reactor there opened in 1996, with enough pool space to handle fuel from two reactors. A second reactor is due for completion next year. Storage plan scrapped

The nuclear industry had been waiting at least two decades for the federal government to build a long-term repository inside Yucca Mountain in Nevada. Nuclear wastes, hauled there from around the country, could be held for hundreds of thousands of years.

There are no nuclear power plants in Nevada, and strong opposition came from that state as well as elsewhere. Plans were abandoned, with President Barack Obama cutting funding for the project.

Over the years, dry cask storage has been developed as an option.

The containers can run \$800,000 to \$1.5 million apiece, though some say the price is relatively insignificant to the expense of generating electricity.

A 2003 paper, "Reducing the Hazards from Stored Spent Power-Reactor Fuel in the United States," published in Science and Global Security, advised that dense packing in pools makes it possible in case of water loss for the newer fuel rods to heat up and catch fire. That could spew radioactivity and start a chain-reaction fire to the older rods, resulting in extensive land contamination.

The possibilities also could make the pools an attractive target for terrorists, it said.

The NRC disputed the report, saying it overestimated the potential danger as well as the cost-benefits of moving more waste to dry storage sooner.

A 2006 report that Congress, the NRC and the Department of Homeland Security requested from the National Academies of Sciences found inherent security advantages in cask storage. They don't need water, pumps or electricity. They are sturdy and give off heat slowly.

Some today are licensed for 60 years but are generally thought to be good for at least 100.

NRC Commissioner Gregory B. Jaczko, who told Congress last month that the nuclear plants and pools in this country are safe, also sees advantages. He said during a Nuclear Energy Institute Dry Storage Information Forum in 2008:

"The most clear-cut example of an area where additional safety margins can be gained involves additional efforts to move spent nuclear fuel from pools to dry cask storage. ... I believe the NRC should develop new regulations which require spent fuel be moved to dry cask storage after it has been allowed to cool for five years."

That has not happened, but the situation in Japan may spur it.

"The fact that we saw the problems we did with spent fuel pools at Fukushima, I think, will cause people to look at that and the cost-benefit analysis to see if there's more benefit than they might have seen in the past," said Steven L. Krahn, Vanderbilt University professor of nuclear environmental engineering.

Cask sales are looking up, too. It can take a year or two from ordering to receipt, but companies say they believe they could keep up — even with a rush.

Joy Russell with Holtec International, one of the country's few cask manufacturers, said her firm has received new inquiries since the crisis in Japan. The company has a contract with TVA.

Tara Neider, former head of Transnuclear Inc. and now with Areva Federal Services, said demand was already good.

"I anticipate there's going to be a lot more business with what's going on in Japan," she said.

Fukushima's reactors are of the same General Electric design as those at several plants in this country, including Browns Ferry.

Officials say the US plants have extra safeguards, and the main issue in Japan was a total loss of power, so pumps failed to keep cooling water moving. Water began heating up to extreme temperatures and evaporating, leaving fuel rods exposed.

At Browns Ferry a series of backup systems would keep water pumping around the waste, Swafford said during the media tour.

In the nearby 384,000-gallon pool, the tops of bundles of 12-foot-long rods could be seen sunken in square, metal cubbyholes to keep them separated.

They lay 27 feet below the surface of the water, which stops radioactive isotopes from poisoning those nearby. An industrial-style tin roof covers this part of the plant, the kind blown to pieces in an explosion in Japan.

The thick concrete and steel sides and bottom of a cooling pool make it strong, Swafford said, even if the roof gives way.

A pool must temporarily hold a reactor's entire fuel supply every couple of years during refueling, so extremely hot, fresh fuel rods are sometimes in the pool. That was the case at one of the problem Fukushima pools.

The spent fuel rods stay in the pool and the rest, which can be used for four to six years, go back in the reactor. Dry casks do the job

Of all the updates since March 11 on the website of the Tokyo Electric Power Co., which owns Fukushima, one hopeful note was about its dry storage casks:

"On March 17th, we patrolled buildings for dry casks and found no signs of abnormal situation for the casks."

The crisis in Japan, in fact, showed that a highly dangerous pool accident is possible, said Arjun Makhijani with the Institute for Energy and Environmental Research.

"The vast majority of spent fuel, 60, 70, 80 percent, can be moved to dry casks," he said.

"TVA can lead the way. TVA can do this for the public in its region, make it a lot safer. I think it will get enormous credit if it does, even from critics like me."

## **On Deadline: NRC: 3 Workers Exposed To Radiation At Neb. Nuclear Plant (USAT)**

By Melanie Eversley

USA Today, April 12, 2011

Three workers have been exposed to radiation at a nuclear plant near Brownsville, Neb., MSNBC is reporting.

The US Nuclear Regulatory Commission announced Monday it was looking into the "unplanned radiation exposures" on April 3 at Cooper Nuclear Station, the news organization reported.

According to a news release on the NRC website, the exposures took place during a maintenance procedure during which the workers removed a tube contaminated with radioactive material through the bottom of the reactor vessel as opposed to through the top, which would normally be the procedure. As a result, radiation alarms were triggered, the release said.

The workers set the tube down and immediately left the area, according to the NRC.

"We want to understand why normal work practices were not followed," said Elmo Collins, NRC Region IV administrator.

"We want to take a look at the decision making that contributed to this event."

MSNBC posted a link to a map of the plant, which is south of Omaha.

## **US Inspects Cooper Nuclear Plant After Radiation Exposures (BLOOM)**

By Simon Lomax

Bloomberg News, April 12, 2011

The US Nuclear Regulatory Commission is inspecting a reactor at a Nebraska power plant after three workers received "unplanned radiation exposures" last week, the agency said.

The Nebraska Public Power District, which operates the Cooper Nuclear Station, doesn't believe the workers received higher doses than allowed under NRC regulations in the April 3 incident, the agency said today in a statement on its website.

The workers were exposed while removing a radioactive tube from the bottom of the reactor, rather than following procedure and taking it from the top, the NRC said. When radiation alarms were triggered, the workers set down the tube and immediately left the reactor area, the regulator said.

"We want to understand why normal work practices were not followed," Elmo Collins, a regional administrator for the NRC in Arlington, Texas, said in the statement.

The NRC announced the inspection at the Cooper plant, 23 miles south of Nebraska City, while conducting a 90-day safety review of all US reactors. The examination was prompted by a partial meltdown at Tokyo Electric Power Co.'s Fukushima Dai-ichi plant in Japan, which was damaged by a March 11 earthquake and tsunami.

The Nebraska Public Power District will cooperate fully with the investigation, Mark Becker, a spokesman for the utility, said in an interview.

The plant was shut down on March 13 for refueling, Becker said. The plant is to restart later this month, he said. No radiation was released "external to the plant," he said.

## **3 Nuclear Plant Workers Exposed To Radiation; Feds Investigating (CNN)**

CNN, April 12, 2011

(CNN) -- The Nuclear Regulatory Commission will investigate an incident at a Nebraska nuclear plant in which three workers were accidentally exposed to radiation, it said in a statement Monday.

The incident occurred April 3, when workers at the Cooper Nuclear Station near Brownville, Nebraska, "removed a long tube contaminated with highly radioactive material through the bottom of the reactor vessel, rather than through the top as is usually done, triggering radiation alarms." The workers put down the tube and immediately left the area, the statement said.

Officials at the facility do not believe the workers received radiation exposures over limits set by the NRC, the commission said.

The facility is operated by the Nebraska Public Power District. Commission inspectors, who began their work Monday, "will look at the circumstances and decision-making by NPPD officials that led to the exposures, review the licensee's response to the event, calculate the exposures the workers received and review corrective actions taken to prevent a recurrence," the commission statement said.

A report will be issued within 45 days, according to the commission.

A nuclear crisis at Japan's Fukushima Daiichi plant, triggered by a March 11 magnitude-9.0 earthquake and subsequent tsunami, has led to a renewed focus on nuclear power in the United States and abroad.

## **Blog: Open Channel: Three Workers Exposed To Radiation At Nebraska Nuclear Plant (MSNBC)**

By Bill Dedman

MSNBC, April 12, 2011

The US Nuclear Regulatory Commission announced Monday afternoon that it was investigating the "unplanned radiation exposures" of three workers on April 3, a week earlier, at the Cooper Nuclear Station near Brownville, Neb.

The NRC said it did not believe the exposure exceeded its limits.

"Workers removed a long tube contaminated with highly radioactive material through the bottom of the reactor vessel, rather than through the top as is usually done, triggering radiation alarms," the NRC reported. "The workers set the tube down and immediately left the area."

The Cooper plant has a single boiling-water reactor of General Electric design. (GE is a part owner of NBCUniversal, which owns half of msnbc.com.)

Here's a map of the plant, which is about 25 miles from Nebraska City, Neb., and south of Omaha.

The full release from the NRC:

NRC SENDS SPECIAL INSPECTION TEAM TO COOPER NUCLEAR STATION

The US Nuclear Regulatory Commission has begun a special inspection at the Cooper Nuclear Station to review the circumstances surrounding a maintenance procedure that led to unplanned radiation exposures to three workers. The plant, located near Brownville, Neb., is operated by the Nebraska Public Power District (NPPD).

Inspectors, who began their work Monday, will look at the circumstances and decision-making by NPPD officials that led to the exposures, review the licensee's response to the event, calculate the exposures the workers received and review corrective actions taken to prevent a recurrence.

The incident occurred on April 3, when workers removed a long tube contaminated with highly radioactive material through the bottom of the reactor vessel, rather than through the top as is usually done, triggering radiation alarms. The workers set the tube down and immediately left the area. The licensee does not believe the workers received radiation exposures in excess of NRC limits.

"We want to understand why normal work practices were not followed, resulting in unplanned radiation exposures to three workers," said Region IV Administrator Elmo E. Collins. "We want to take a look at the decision-making that contributed to this event."

The team consisting of two NRC inspectors, began work Monday and will probably spend several days at the plant. They will write an inspection report on their findings within 45 days of the end of the inspection that will be made publicly available.

### **Three Workers At Nebraska Plant Exposed To Radiation (WSJ)**

By Tennille Tracy

Wall Street Journal, April 12, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

### **Three Nebraska Nuclear Workers Exposed To Radiation (REU)**

By Roberta Rampton, Greg McCune

Reuters, April 12, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

### **NRC Approves Power Increase At Limerick (PHILLY)**

By Andrew Maykuth

Philadelphia (PA) Inquirer, April 11, 2011

The Nuclear Regulatory Commission on Monday announced it has approved a 1.65 percent-power increase by the two units of the Limerick Generating Station in Montgomery County.

The NRC approved Exelon Generation Co.'s request to increase the output because it could more accurately measure feedwater flow into the reactors. The "uprate" will allow the two boiling water reactors to increase output from 1,189 to 1,205 megawatts of electricity.

### **Increased Power Output At Limerick Approved By NRC (LANREP)**

Lansdale (PA) Reporter, April 11, 2011

The Nuclear Regulatory Commission has approved a request by Exelon Generation Company to increase the power generating capacity of Limerick Generating Station, Units 1 and 2, by 1.65 percent each.

The NRC staff's careful evaluation determined that Exelon could safely increase thereactors' power output primarily through more accurate means of measuring feedwater flow. As part of its evaluation, NRC staff reviewed the company's analysis showing the plant's design can accommodate the increased power level.

The NRC's safety evaluation of the plant's proposed power uprate focused on several areas, including the nuclear steam supply systems, instrumentation and control systems, electrical systems, accident evaluations, radiological consequences, fire protection, operations and training, testing, and technical specification changes.

The power uprate for Limerick's boiling-water reactors, located approximately 21 miles northwest of Philadelphia, will increase each unit's power generating capacity from approximately 1,189 to 1,205 megawatts electric. Exelon intends to implement Unit 1's uprate within 90 days, and Unit 2's uprate within 90 days of the completion of its 2011 spring refueling outage.

The NRC previously published a notice about the power uprate application in the Federal Register (<http://edocket.access.gpo.gov/2010/pdf/2010-13617.pdf>, page 32512). The agency's Evaluation of the Limerick power uprate will be available through the NRC's ADAMS electronic document database by entering ML110691095 under the "Simple Search" tab on this Web page:

## **Nuclear Power Plant Uprate Project Approved (POWGENWLD)**

Power-Gen Worldwide, April 12, 2011

The Nuclear Regulatory Commission (NRC) has approved a request by Exelon Generation Co. to increase the power generating capacity of Limerick Generating Station, Units 1 and 2, by 1.65 percent each.

The NRC staff's evaluation determined that Exelon could safely increase the reactors' power output primarily through more accurate means of measuring feedwater flow. As part of its evaluation, NRC staff reviewed the company's analysis showing the plant's design can accommodate the increased power level.

The NRC's safety evaluation of the plant's proposed power uprate focused on several areas, including the nuclear steam supply systems, instrumentation and control systems, electrical systems, accident evaluations, radiological consequences, fire protection, operations and training, testing, and technical specification changes.

The power uprate for Limerick's GE boiling water reactors will increase each unit's power generating capacity from approximately 1,189 to 1,205 MWe. Exelon intends to implement Unit 1's uprate within 90 days and Unit 2's uprate within 90 days of the completion of its 2011 spring refueling outage.

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## **Panel To Probe US Readiness For A Disaster Like Japan's (EED)**

By Emily Yehle

E&E Daily, April 12, 2011

Lawmakers will discuss the lessons learned from the recent tsunami in Japan at a hearing this week on tsunami preparedness and interagency cooperation.

The House Oversight and Government Reform subcommittee on national security plans to meet Thursday to discuss whether the federal government is prepared to "warn, respond and assist" state and local governments in the event of a tsunami, according to a committee staffer. The witness list was not available by publication time.

The Japanese earthquake -- and resulting tsunami -- has incited concerns over the United States' warning system in recent weeks. Such a disaster would necessitate the cooperation of several agencies, including NOAA, the Federal Emergency Management Agency and local law enforcement agencies.

Earlier this month, Rep. Frank Wolf (R-Va.), the chairman of the House Appropriations subcommittee that oversees NOAA, asked the agency to hold conferences on tsunami preparedness on both the Pacific and Atlantic coasts.

"The tragic events in Japan over the last month have made clear that we cannot afford to be unprepared for a tsunami," he wrote in a letter to NOAA Administrator Jane Lubchenco.

NOAA scientists, meanwhile, have pushed for a new tsunami warning center in Puerto Rico. The country's two existing centers -- in Hawaii and Alaska -- could be wiped out in the same natural disaster, they say, and they argue that the Caribbean is ripe for major seismic activity and deserves a closer facility.

Last July, Puerto Rico Gov. Luis Fortuño (R) offered \$6 million toward the construction of a facility at the University of Puerto Rico's Mayagüez campus. But NOAA would have to commit to staffing the center and contributing an additional \$5 million for its construction.

Schedule: The hearing is Thursday, April 14, at 1:30 p.m. in 2154 Rayburn.

Witnesses: TBA.

## **CNBC's Fast Money: Nuclear Power Fears At New Heights Despite Safety, Viability (CNBC)**

By John Melloy

CNBC, April 12, 2011

Japan may raise its nuclear crisis to a level seven from a level five, according to the Kyodo news agency. That level would equal Russia's Chernobyl disaster as the earthquake-plagued nation desperately tries to contain the amount of radiation admitted. The Three Mile Island accident in 1979 was a level 5.

Nuclear power-related shares are taking a hit, Germany may abolish nuclear power altogether in 12 years and iodine tablets are selling fast on the US West Coast as radiation fears reach new heights. The global overreaction from this rare 9.0 magnitude earthquake and massive tsunami that followed may set back the safest and easiest way for this country to solve its energy crisis, investors said.

"The Fukushima meltdown may mark a high point in anti-nuclear hysteria," said John Downs of Euro Pacific Capital, in a note to clients Monday. "As a result, investors should not treat nuclear-related stocks as if they were radioactive. Eventually, reason prevails, and the truth is that nuclear power is hands down the best option available for powering the 21st century."

Downs goes on to cite the rarity of these kinds of events in the 60-year history of the commercial nuclear energy, especially ones that cause civilian casualties.

"Although there may very well be deaths associated with the Japanese meltdown in the months and years to come, the only reactor incident to cause civilian deaths to date was Chernobyl, a poorly run facility in the bankrupt late-Soviet Union (amazingly built with no containment vessel)," said Downs.

But among the most intriguing stats that Downs includes in his report is that "the average coal plant releases 100 times more annual radiation than a comparable nuclear plant."

The analyst likely got this statistic from an article in "Scientific American" from three years ago, which used a similar statistic citing work from the Oak Ridge National Laboratory and a 1978 paper in the "Science" journal.

"The fly ash emitted by a power plant -- a by-product from burning coal for electricity -- carries into the surrounding environment 100 times more radiation than a nuclear power plant producing the same amount of energy," according to the article from the magazine.

An article in today's New York Times, gives a bad name to the supposed other "clean" alternative, natural gas. While this fuel burns cleaner than other fossil fuels, the article states that the "planet-warming" methane gas released during the unconventional drilling process used today offsets that eventual benefit.

Shares of Shaw Group [SHAW Loading... () ], which builds power plants including nuclear ones, have taken a hit since the Japan disaster on concern global demand will decrease. It said Monday that revenue this year may miss the company's previous guidance. Still the CEO sounded hopeful in the press release.

"While the devastating events in Japan have drawn significant attention to the nuclear power industry, work on our nuclear power units currently under construction continues as planned," said J.M. Bernhard, chairman and chief executive officer of Shaw. "Additionally, Shaw's experience in performing construction services at nuclear power plants and emergency response services after natural disasters, positions us to assist with the recovery efforts in Japan and any future modification needs to existing power plants in the US and internationally."

Flour and Babcock & Wilcox, two other power infrastructure companies, are due to report in early May and early June respectively. Both have taken a hit from the Japan disaster and the subsequent not-in-my-backyard attitude. Still, these companies may have one champion still left: a pragmatic President.

"Nuclear energy doesn't emit carbon dioxide into the atmosphere," said President Obama in a March 30th speech on clean energy following the Japan disaster. "To those of us concerned about climate change, we've got to recognize that nuclear power, if it's safe, can make a significant contribution to the climate change question. And I'm determined to ensure that it's safe."

For the best market insight, catch 'Fast Money' each night at 5pm ET, and the 'Halftime Report' each afternoon at 12:30 ET on CNBC.

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John Melloy is the Executive Producer of Fast Money. Before joining CNBC, he was an editor for Bloomberg News, overseeing the US Stock Market coverage team.

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Got something to say? Send us an e-mail at [comment@cnbc.com](mailto:comment@cnbc.com) and your comment might be posted on the Rapid Recap! If you'd prefer to make a comment, but not have it published on our Web site, send your message to [comment@cnbc.com](mailto:comment@cnbc.com).

Trader disclosure: On April 11, 2011, the following stocks and commodities mentioned or intended to be mentioned on CNBC's "Fast Money" were owned by the "Fast Money" traders; Adami owns (AGU); Adami owns (C); Adami owns (GS); Adami owns (INTC); Adami owns (MSFT); Adami owns (NUE); Adami owns (BTU); Weiss is short (X); Weiss is short (RTH); Weiss is short (IWM); Weiss owns (VZ); Weiss owns (QCOM); Weiss owns (DVN); Weiss owns (COP); Weiss owns (BTU); Weiss owns (JPM); Weiss owns (MSFT); Terranova owns (JPM); Terranova owns (C); Terranova owns (VRTS); Terranova owns (UPL); Terranova owns (TCK); Terranova owns (BAX); Terranova owns (XOM); Terranova owns (AKAM); Karabell owns (AAPL); Karabell owns (BHP); Karabell owns (BIDU); Karabell is long (GOOG); Karabell owns (GS); Karabell owns (MRVL); Karabell Owns (SINA); Seymour owns (AA); Seymour owns (AAPL); Seymour owns (F); Seymour owns (INTC)

For Tim Seymour:

Seygem Asset Management Is Short (FCX) Weiss Owns (VZ)

For Anthony Scaramucci

SkyBridge Is A Fund Of Funds Manager

Funds Held May Or May Not Own The Recommended Securities

For Mike Khouw

Cantor Fitzgerald is a market maker in (CLX)

For Zach Karabell:

Karabell and River Twice Capital are long (CSCO)

Karabell and River Twice Capital are long (MON)

River Twice Capital is long (AMSC)

River Twice Capital is long (EXPE)

River Twice Capital is short (GS) puts

River Twice Capital is short (QQQQ)

River Twice Capital is short (XLF)

River Twice Capital is short (AA)

Karabell And River Twice Capital Own (MON), (NTES)

For Willie Williams

Societe Genarale Facilitates Transactions In Tradable Currencies For Dennis Gartman

Funds Managed by Dennis Gartman are long Canadian Dollars

Funds Managed By Dennis Gartman are long crude

Funds Managed by Dennis Gartman are long nat gas

Funds Managed by Dennis Gartman are shot 10 yr canadian bonds

Funds Managed by Dennis Gartman are short 10 yr US treas. Notes

Funds Managed by Dennis GArtman are short euros.

For Joe Terranova

Terranova is Chief Market Strategist of Virtus Investment Partners, LTD

Virtus Investment Partners Owns More Than 1% Of (ABAX)

Virtus Investment Partners Owns More Than 1% Of (AMKR)

Virtus Investment Partners Owns More Than 1% Of (CCG)

Virtus Investment Partners Owns More Than 1% Of (CASS)

Virtus Investment Partners Owns More Than 1% Of (CSVI)

Virtus Investment Partners Owns More Than 1% Of (EXR)

Virtus Investment Partners Owns More Than 1% Of (FCFS)

Virtus Investment Partners Owns More Than 1% Of (IGE)

Virtus Investment Partners Owns More Than 1% Of (KRC)

Virtus Investment Partners Owns More Than 1% Of (LDR)

Virtus Investment Partners Owns More Than 1% Of (NCRI)

Virtus Investment Partners Owns More Than 1% Of (DBV)

Virtus Investment Partners Owns More Than 1% Of (XLB)

Virtus Investment Partners Owns More Than 1% Of (XLV)

Virtus Investment Partners Owns More Than 1% Of (XLP)

Virtus Investment Partners Owns More Than 1% Of (XLY)

Virtus Investment Partners Owns More Than 1% Of (XLE)

Virtus Investment Partners Owns More Than 1% Of (XLF)

Virtus Investment Partners Owns More Than 1% Of (XLI)

Virtus Investment Partners Owns More Than 1% Of (XLK)

Virtus Investment Partners Owns More Than 1% Of (XLU)

Virtus Investment Partners Owns More Than 1% Of (WDFC)

Virtus Investment Partners Owns More Than 1% Of (YDNT)

Virtus Investment Partners Owns More Than 1% Of DOMINO'S PIZZA UK & IRL PLC

For Jon Najarian:

I own AA Call Spreads, no positions in DRRX, but moving in post & I am posting about it.

DRRX Primary endpoint was not met in ELADUR Phase II Study for Chronic Low Back Pain- In this study of 263 patients suffering from chronic low back pain, the primary efficacy endpoint

For Brian Sozzi

\*\*No Disclosures

Stephen Weiss SOT from 3/22/11

\*\*No Disclosures  
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## **Future Of Energy Source Under Scrutiny (EED)**

By Hannah Northey  
E&E Daily, April 12, 2011

Senators this week will delve into the implications of Japan's nuclear crisis for the safety and future of nuclear power in the United States.

The full Senate Environment and Public Works Committee and the committee's subpanel on clean air and nuclear safety will hear from a host of top energy regulators tomorrow about the role nuclear energy will play in the country's energy portfolio going forward.

US EPA Administrator Lisa Jackson and Nuclear Regulatory Commission Chairman Gregory Jaczko will provide opening statements. The committee will then hear from a host of state regulators and lawmakers, especially from California, as well as Exelon Generation Chief Operating Officer Charles Pardee.

Although nuclear energy is seen as key to striking a balance between producing power and curbing greenhouse gases, regulators must now address heightened anxiety surrounding the operation and oversight of the reactors.

NRC has taken the lead role in reviewing the United States' fleet of 104 reactors following the March 11 earthquake and tsunami that crippled Japan's Fukushima Daiichi nuclear complex. Japanese officials are still struggling to gain control of the reactors on the country's east coast and US officials are trying to determine the status of the complex.

NRC is conducting a review of US reactors' safety systems, backup power and emergency response procedures through the coming summer. The commission has said lessons from the Japanese disaster will be incorporated into the safety of reactors across the nation.

Schedule: The hearing is tomorrow at 2:45 p.m. in the EPW Hearing Room, 406 Dirksen.

Witnesses: EPA Administrator Lisa Jackson; NRC Chairman Gregory Jaczko; California state Sen. Sam Blakeslee (R); James Boyd, vice chairman of the California Energy Commission; Lewis Schiliro, Cabinet secretary of the Delaware Department of Safety and Homeland Security; Curtis Sommerhoff, director of the Miami-Dade County Department of Emergency Management, Exelon Generation Chief Operating Officer Charles Pardee; and Thomas Cochran, a senior scientist for the Natural Resources Defense Council's nuclear program.

## **Assistant Secretary For Nuclear Energy: Who Is Peter Lyons? (AGOV)**

By David Wallechinsky  
AllGov, April 12, 2011

A physicist and longtime member of the nation's premier research laboratory, Peter B. Lyons was nominated to be the Department of Energy

's assistant secretary for nuclear energy in December 2010. The Senate Energy and Natural Resources Committee is scheduled to vote on his nomination on April 12. The mission of the Office of Nuclear Energy is to promote nuclear power as an energy source. It does this with an annual budget of more than \$850 million.

Raised in Nevada, Lyons attended college in neighboring Arizona, receiving his bachelor's degree in physics and mathematics from the University of Arizona in 1964. Five years later, he earned his PhD in nuclear astrophysics from the California Institute of Technology.

After receiving his PhD, Lyons began his career at Los Alamos National Laboratory, and wound up spending 27 years at the renowned lab. He spent his first 15 years working on nuclear testing and other defense-related projects, and his next 10 years as a manager. Among the positions he led were group leader for transient plasma diagnostics, program director for nuclear defense research, deputy associate director for defense research and applications and deputy associate director for energy and environment.

In late 1993 he was put in charge of the Industrial Partnership Office, which coordinated research between Los Alamos and private corporations.

In January 1997, Lyons was assigned by Los Alamos to take a leave of absence and serve as science advisor on the staff of US Senator Pete Domenici (R-New Mexico) and the Senate Energy and Natural Resources Committee, where, for six years,

he focused on military and civilian uses of nuclear technology, national science policy and nuclear non-proliferation. He continued in this capacity after leaving the laboratory and officially joining the Senate staff in 2003.

President George W. Bush gave Lyons a recess appointment to serve as a commissioner of the Nuclear Regulatory Commission

(NRC). In May 2006, the Senate confirmed him for a full term, and he eventually served from January 25, 2005, until June 30, 2009. During this time he focused on the safety of operating reactors as new reactor licensing and possible construction emerged.

After his NRC term ended, Lyons worked briefly as a consultant to nuclear energy assistant secretary Warren "Pete" Miller . On September 14, 2009, Lyons was appointed to the position of principal deputy assistant secretary of the Office of Nuclear Energy

and served as acting assistant secretary upon Miller's retirement in November 2010. Miller and Lyons worked so closely together that Secretary of Energy Steven Chu referred to them as "Pete and Re-Pete."

Lyons has published more than 100 technical papers, holds three patents related to fiber optics and plasma diagnostics, and served as chairman of the NATO Nuclear Effects Task Group for five years. While at Los Alamos, Lyons served for 16 years on the Los Alamos School Board.

-David Wallechinsky, Noel Brinkerhoff

## **PG&E Wants Diablo Canyon Nuclear Plant License Delay For Seismic Study (AP)**

By Michael R. Blood

Associated Press, April 12, 2011

LOS ANGELES -- The owner of the Diablo Canyon nuclear power complex asked federal regulators to delay issuing extended operating permits until comprehensive studies are completed on earthquake faults in the area, officials said Monday.

The move by Pacific Gas and Electric Co. came after a public outcry over possible safety risks at the California plant, which were heightened by the huge earthquake and tsunami that plunged Japan into a nuclear crisis.

Diablo Canyon, perched on an 85-foot bluff above the Pacific Ocean, sits within three miles of two earthquake faults. Lawmakers have been pushing the company to perform more thorough testing to assess earthquake risks before new licenses are granted.

More than 400,000 people live within 50 miles of the site, located midway between Los Angeles and San Francisco.

At a legislative hearing last month, company officials said the plant was safe and gave no hint that PG&E would agree to complete three-dimensional seismic studies before a renewal of the licenses.

But in a statement Monday, PG&E Senior Vice President John Conway referred to the Japanese crisis and said, "we recognize that many in the public have called for this research to be completed before the NRC renews the plants' licenses. We are being responsive to this concern." The company wants the NRC to extend the life of the complex for 20 years after its permits expire in 2024 and 2025.

In a letter to the NRC dated Sunday, PG&E said it would be prudent to complete the studies prior to granting new licenses. The company said it wanted the NRC to hold off issuing new licenses, even if approved by the agency, until the three-dimensional studies are finished.

State Sen. Sam Blakeslee, a Republican whose district includes the site, commended the decision and said in a statement that "it's our duty to learn and apply the lessons of Japan." Senate Majority Leader Ellen M. Corbett, D-San Leandro, said "it is unfortunate that it took a major catastrophe in Japan and a (legislative) hearing to prompt quicker action." NRC spokeswoman Lara Uselding said the agency will consider the company's request to see what, if any, impact it would have on the agency's review schedule.

In its letter, the company said it wanted to complete the research no later than December 2015, which would be long before the current licenses expire.

Diablo Canyon, where reactors began operating in the mid-1980s, has a long history of seismic issues.

The discovery of the offshore Hosgri Fault in 1971, after the plant was mostly completed, forced a major, costly redesign. Then, about two years ago, a geologic fault was discovered about a half-mile from the seaside reactor, raising new concerns about safety.

At issue at Diablo Canyon is not what is known, but what is not. Preliminary research at the site found its twin reactors could withstand a potential earthquake generated by the recently identified Shoreline Fault, just off the coast.

But California regulators say more study is needed on the new fault system. The fear is the two faults could begin shaking in tandem, creating a larger quake than either fault would be capable of producing on its own.

PG&E says the plant is built to withstand a magnitude-7.5 earthquake, the maximum considered possible for the site.

## **PG&E Wants Diablo Canyon Nuclear Plant License Delay For Seismic Study (AP)**

By Michael R. Blood

Associated Press, April 12, 2011

LOS ANGELES-- The owner of California's Diablo Canyon nuclear power complex has asked federal regulators to delay issuing extended operating permits until comprehensive studies are completed on earthquake faults in the area.

There has been an outcry over possible safety risks since a fault was discovered less than a half-mile from the coastal site near San Luis Obispo, a concern heightened by the Japanese nuclear crisis.

Pacific Gas and Electric Co. wants the Nuclear Regulatory Commission to renew its license for 20 years to operate the twin reactors. The permits expire in 2024 and 2025. The company says the plants are safe.

In a letter to the NRC dated Sunday, the company says it would be "prudent" to complete the studies prior to granting new licenses for the site along the Central Coast.

## **PG&E Wants Diablo Canyon Nuclear Plant's Relicensing To Be Delayed For Seismic Testing (LAT)**

By David Sarno

Los Angeles Times, April 12, 2011

Pacific Gas & Electric Co. has asked federal authorities to delay the license renewal proceedings for its Diablo Canyon nuclear power plant until more thorough seismic testing of the area around the plant can be performed.

In the wake of the earthquake and nuclear crisis in Japan, people have been calling for advanced seismic testing around California's nuclear plants.

In 2009, PG&E applied to renew the licenses for its two nuclear reactors in San Luis Obispo County, which expire in 2024 and 2025. The renewal application process can take years.

"In light of recent events at the Fukushima Daiichi Power Plant, and the considerable public concern regarding the need to assure the seismic safety at DCPP, PG&E has decided it is most prudent to have completed certain seismic studies at [Diablo Canyon] prior to issuance" of the renewed federal operating licenses," the utility said in a statement.

Though Diablo Canyon's engineers assured public officials in the late 1960s that the area around the plant had only "insignificant faults," at least two faults have been discovered since its construction, including one in 2008 less than a mile away.

That fault, called Shoreline, is thought by geologists to be capable of producing a magnitude 6.5 quake. The other fault, called Hosgri, is rated up to 7.3.

California energy authorities and legislators have asked PG&E to perform thorough studies of the seismic risks near the plant before it seeks a 20-year renewal of the licenses for its nuclear reactors.

"I commend PG&E for taking the responsible action of delaying relicensing until critical seismic questions are answered," said state Sen. Sam Blakeslee (R-San Luis Obispo). "We respect that this is a difficult decision that demonstrates their willingness to prioritize the safety of Californians."

## **PG&E Asks For Delay In License Renewal For Diablo Canyon Nuclear Power Plant (SLOT)**

By David Sneed

San Luis Obispo (CA) Tribune, April 12, 2011

Pacific Gas and Electric Co. has sent a letter to the federal Nuclear Regulatory Commission asking it to delay final implementation of license renewal at Diablo Canyon nuclear power plant until the utility can complete advanced seismic studies of the plant.

That could delay license renewal through 2015.

The California Public Utilities Commission has joined a chorus of agencies and elected officials who are calling for a closer look at the seismic safety of Diablo Canyon nuclear power plant after the nuclear emergency in Japan.

But the commission is different than other state and local government agencies. It wields indirect authority over Diablo Canyon because it controls PG&E's purse strings.

The federal Nuclear Regulatory Commission holds preemptive authority over all aspects of safety and operation of the nation's 104 nuclear reactors.

SLO County supervisors raise Diablo concerns

SLO County supervisors raise Diablo concerns

Three of five county supervisors Tuesday called on PG&E to voluntarily suspend its drive to renew operating licenses for Diablo Canyon nuclear power plant until extensive earthquake safety studies can be completed.

The decision came after hours of public testimony by nearly 50 people about the safety of Diablo Canyon in light of the recent earthquake and tsunami in Japan that caused radiation leaks from several crippled nuclear reactors.

Supervisor Adam Hill, whose district includes the nuclear plant, said the recent tragedy in Japan has sharpened the public's concern about earthquake safety and reduced the public's trust of PG&E's assurances of the plant's safety. He will draft a letter to be brought back for the board's approval asking PG&E for peer-reviewed seismic studies before the utility proceeds with license renewal.

Officials may seek Diablo license delay

Officials may seek Diablo license delay

As promised, county supervisors Tuesday will vote whether to send a letter to PG&E asking it to suspend the relicensing of Diablo Canyon nuclear power plant until seismic studies have been completed and verified.

The letter was put on the agenda by Supervisor Adam Hill, whose district includes the power plant. Approval of the letter is considered all but certain given that a majority of the board has already expressed support for it.

Addressed to PG&E President Chris Johns, the letter says that staying license renewal would be a good way for the utility to restore the trust of the community. The letter cites an interview Johns gave The Tribune shortly after the earthquake and nuclear disaster in Japan in which he admitted that the company needs to "earn its customers' trust."

The letter, dated Sunday, cites the nuclear accident in Japan as well as an outpouring of public concern over earthquake safety at Diablo Canyon as the reasons for the request. This is the first time the NRC has received such a request.

"PG&E therefore requests that the commission delay the final processing of the LRA (license renewal application) such that the renewed operating licenses, if approved, would not be issued until after PG&E has completed the 3-D seismic studies and submitted a report to the NRC addressing the results of those studies," wrote John Conway, PG&E's chief nuclear officer.

## **PG&E Delays Licensing To Study Diablo Canyon Fault (SFC)**

By David R. Baker, Chronicle Staff Writer

San Francisco Chronicle, April 12, 2011

Bowing to pressure from government officials, Pacific Gas and Electric Co. has asked federal regulators to delay relicensing the Diablo Canyon nuclear plant until the company finishes in-depth studies of a recently discovered earthquake fault.

The utility, California's largest, has asked the US Nuclear Regulatory Commission to postpone making a final decision on the company's request to extend the licenses of Diablo's two reactors.

The company plans to conduct advanced seismic studies of the nearby Shoreline Fault, studies that may take until December 2015 to complete.

Little is known about the fault, first identified in 2008. Ever since an earthquake and tsunami crippled a nuclear plant in Japan last month, a growing number of California officials have demanded that PG&E conduct further studies on the Shoreline Fault before pressing ahead with license renewal. Diablo Canyon sits on a seismically active stretch of the Central California coast near San Luis Obispo.

"We recognize that many in the public have called for this research to be completed before the NRC renews the plant's licenses," said John Conway, the San Francisco company's chief nuclear officer.

He said the studies would help assure regulators and the plant's neighbors that the facility is safe.

California state Sen. Sam Blakeslee, who trained as a geophysicist, had demanded that PG&E perform those studies before Diablo's operating licenses could be renewed. He wrote a bill in 2009 that would have forced PG&E to conduct the studies, but it was vetoed by then-Gov. Arnold Schwarzenegger.

"I commend PG&E for taking the responsible action of delaying relicensing until critical seismic questions are answered," said Blakeslee, R-San Luis Obispo.

The Diablo reactors' current licenses expire in 2024 and 2025.

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## **PG&E Puts Off Licensing To Study Faults (SANTAMAR)**

By April Charlton

Santa Maria (CA) Times, April 12, 2011

Pacific Gas and Electric Co. has agreed to undertake advanced 3-D seismic studies of the ocean's floor and earthquake faults near its Diablo Canyon nuclear power plant, delaying the relicensing process until completion of those studies.

Officials made the announcement late Monday afternoon, less than 24 hours before the San Luis Obispo County Board of Supervisors was expected to hold a public hearing on the issue.

"We are still going to do so and probably still going to send the letter," said board Chairman Adam Hill.

Hill, whose district includes the plant, said he believes that PG&E should completely pull back from the relicensing process and focus all of its efforts on the safety of Diablo Canyon.

"I think it's a step in the right direction," Hill said about PG&E's announcement. "But they could do more."

The supervisors agreed March 29 to hold a public hearing today to discuss sending a letter to PG&E requesting the electric company stop the relicensing process until the 3-D seismic studies are complete.

PG&E has applied to the NRC to extend the power plant's current operating licenses for an additional 20 years. One of Diablo's reactor's license expires in 2024 and the other in 2025.

Hill said "focusing solely on the seismic studies" is the most credible way for PG&E to move forward in its quest to extend the life of Diablo Canyon and show the public it is committed to safety at the plant.

"It's still about the message that you are sending to your people," Hill said.

PG&E officials have said publicly that they want to restore the public's trust in the company.

In a letter to the NRC dated Sunday, PG&E said it would be prudent to complete the studies prior to granting new licenses. The company said it wanted the NRC to hold off issuing new licenses, even if approved by the agency, until the three-dimensional studies are finished.

"We recognize that many in the public have called for this research to be completed before the NRC renews the plant's licenses," John Conway, PG&E's senior vice president of energy supply and chief nuclear officer, said in a statement issued Monday.

"We are being responsive to this concern by seeking to expeditiously complete the 3-D seismic studies and provide those findings to the commission and other interested parties so that they may have added assurance of the plant's seismic integrity," he added.

The county is willing to work with PG&E to expedite the permitting process for the seismic studies, Hill said.

"We want them to move forward," he added.

State Sen. Sam Blakeslee, a Republican whose district includes Diablo Canyon, commended the decision, and said in a statement that "it's our duty to learn and apply the lessons of Japan."

NRC spokeswoman Lara Uselding said the agency will consider PG&E's request to see what, if any, impact it would have on the agency's review schedule.

In its letter, the utility company said it wanted to complete the research no later than December 2015, which would be long before the current licenses expire.

At issue at Diablo Canyon is not what is known but what is not. Preliminary research at the site found its twin reactors could withstand a potential earthquake generated by the recently identified Shoreline Fault, just off the coast.

The Associated Press contributed to this report.

## **Diablo Plant Delays License Bid For Quake Study (WSJ)**

By Ben Casselman And Stephen Power

Wall Street Journal, April 12, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **PG&E Seeks Delay In Diablo Canyon Nuclear Renewal (REU)**

By Eileen O'Grady

Reuters, April 12, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **PG&E Continuing Its Nuclear License Renewal Application (BLOOM)**

By Mark Chediak

Bloomberg News, April 12, 2011

PG&E Corp. (PCG), owner of California's largest utility, is continuing to seek license renewals for its Diablo Canyon nuclear plant while it conducts a study of the earthquake risks at the site.

If its application is approved, PG&E asked the US Nuclear Regulatory Commission to hold off issuing the final licenses until the company has received the results of the seismic analysis, the company said in a statement today. The utility will not suspend the renewal process as part of its request, spokesman Paul Flake said in a telephone interview.

PG&E applied in November 2009 to renew the reactor licenses, which expire in 2024 and 2025, according to the commission's website.

After a March 11 earthquake and tsunami knocked out power to a nuclear plant in Japan, triggering radiation releases and a partial meltdown, California lawmakers have called on PG&E to suspend its request to extend the life of its Diablo Canyon reactors until seismic studies can assess the risks. One reactor is 25 years old and the other 26 years. In August 2010, PG&E received funding from state regulators to conduct the risk analysis, which was recommended by the state in 2008, according to an April 10 letter sent by the company to the commission.

"We recognize that many in the public have called for this research to be completed before the NRC renews the plant's licenses," PG&E's Chief Nuclear Officer John Conway said in the statement.

PG&E expects to complete its seismic report no later than December 2015, the company said in its letter to the commission. The commission is considering the potential impact PG&E's request might have on the timing of the license renewal, Eliot Brenner, a spokesman for the commission, said in an e-mail statement.

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## **PG&E Halts Diablo Canyon Relicensing (PACBT)**

Pacific Coast Business Times, April 12, 2011

Moving quickly to short-circuit a potential conflict with political and business leaders, Pacific Gas & Electric on April 11 abruptly asked federal regulators to pause the relicensing of the Diablo Canyon nuclear plant near San Luis Obispo.

In seeking the delay, PG&E said it would not go forward with its effort to extend the life of the plant for an additional 20 years to 2045 until an assessment of seismic risk is completed.

US Rep. Lois Capps, D-Santa Barbara, welcomed the delay but said a voluntary pause in the licensing proceedings wasn't enough. She said she was seeking a suspension of the relicensing by the Nuclear Regulatory Commission until a full range of earthquake risks are assessed.

The Fukushima Daiichi earthquake-tsunami disaster in northeastern Japan has rocked what looked like a relatively smooth relicensing process for Diablo Canyon.

Republican State Sen. Sam Blakeslee and Capps have been vocal in calling for PG&E to complete extensive studies of seismic risk prior to any relicensing by the NRC. The discovery of a new fault less than a mile from the plant several years ago has raised fresh questions about earthquake risks in the vicinity of the plant.

PG&E officials have maintained they can operate the plant in a safe and sound manner despite the presence of earthquake faults. But some business leaders have questioned the wisdom of relicensing the facility before a risk assessment is made public. PG&E has outlined a plan to address them.

## **PG&E Will Do 3-D Seismic Studies Before Finalizing Nuclear Relicensing (SANTAMAR)**

Santa Maria (CA) Times, April 12, 2011

Pacific Gas & Electric Co. plans to undertake advanced 3-D seismic studies related to Diablo Canyon Power Plant before relicensing at the nuclear facility is finalized, the company announced today.

PG&E officials asked the Nuclear Regulatory Commission (NRC) today to delay final action on the utility's on-going license renewal application until the seismic studies findings are submitted to the commission.

"In the wake of the tragic accident at Japan's Fukushima Daiichi nuclear plant, we know that many of our customers and government partners are concerned and want to know more about the seismic characteristics surrounding the Diablo Canyon Power Plant," John Conway, PG&E's Senior Vice President of Energy Supply and Chief Nuclear Officer, said in a statement.

PG&E plans to undertake high-energy, offshore 3-D studies of the Shoreline fault's deeper regions as soon as the electric company obtains necessary permits from various regulatory agencies, including the state Lands Commission, California Coastal Commission and San Luis Obispo County.

"As PG&E works toward this objective, we are asking the Nuclear Regulatory Commission to withhold issuance of (the) renewed operating licenses, if approved, until after this research is completed and the findings are submitted to the commission," Conway added.

To address public concern regarding the seismicity of the area surrounding Diablo Canyon, PG&E is seeking to expedite the permitting process. PG&E also plans to conduct significant research of the faults in Los Osos Valley and in the Irish Hills.

## **Diablo Canyon Nuclear Reactor License Extension Delayed (POWGENWLD)**

Power-Gen Worldwide, April 12, 2011

Pacific Gas & Electric Co. has asked the US Nuclear Regulatory Commission to delay a license extension for its Diablo Canyon nuclear power plant until studies are complete on nearby earthquake faults.

Concern has been heightened following the March 11 earthquake and subsequent nuclear crisis in Japan, according to the Associated Press.

PG&E asked the NRC for a 20-year license renewal for the Diablo Canyon nuclear power plant near San Luis Obispo, where a fault was discovered less than a half-mile away. Licenses for both reactors expire in 2024 and 2025.

The company said the reactors are safe, but told the NRC it would be "prudent" to complete the studies.

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## **PG&E Addresses Community Concerns About Diablo Canyon (KSBY)**

By Bill Halter

KSBY-TV San Luis Obispo (CA), April 12, 2011

The nuclear crisis in Japan has many worried about the safety of Diablo Canyon Nuclear Power Plant. On Monday, PG&E responded to community concerns. PG&E has asked the Nuclear Regulatory Commission (NRC) to delay final action on the utility's license renewal application. It says it wants to complete a high energy, 3-D seismic study around Diablo Canyon before the license request is looked at. The power plant's current license runs through 2024.

"We've heard our customers concerns and the concerns of our government partners regarding PG&E conducting the seismic research prior to receiving the license renewal at Diablo Canyon. Now we've taken action to address those concerns" says PG&E spokesperson Kory Raftery.

David Weisman from the Alliance for Nuclear Responsibility says advanced seismic testing is a step in the right direction but not far enough. Weisman says they need more thorough testing to determine the areas safety and that the NRC can't be trusted to judge the safety of Diablo Canyon. "The last time that we allowed PG&E and the NRC to be the ones who determined the seismic fate of Diablo Canyon, in the 60's and the 70's and the 80's, it ended up costing us over \$4.5 billion. That's a mistake California can't afford to make this time around. There past history in this county shows that when they work together with PG&E alone and there was no independent monitoring of that, there were many seismic miscalculations" says Weisman.

PG&E geoscientists will conduct the seismic studies, the 3-D studies will help them better understand the topography underneath the ocean water.

## **Coastal Commission Eyes Implications Of Japanese Quake On California (CapWeekly)**

By John Howard

Capitol Weekly, April 12, 2011

Despite 1,100 miles of coastline and a history of powerful earthquakes, most of California is not susceptible to the kind of temblor and tsunami that devastated Japan, according to a report by the California Coastal Commission.

But there is a cautionary note: The area known as the Cascadia Subduction Zone, which runs from about 25 miles off Eureka to north of Vancouver, B.C. That zone, where a jumble of tectonic plates meet deep below the earth's continental crust, could produce a quake – and tsunami – on the scale of Japan's Tohoku Quake.

The 21-page study by staff geologist Mark Johnsson, released March 24 and presented to the commission members, noted that the majority of faults in California, including the San Andreas fault, could not produce a magnitude 9.0 earthquake and that most of the state "is not susceptible to an event on the scale of the Tohoku Earthquake" that struck Japan on March 11.

To produce a magnitude 9 quake, faults must be deep and wide, the study noted, and California's seismic faults are shallow.

"A magnitude 9 earthquake requires rupturing a fault surface thousands of square miles in area. The shallow faults making up most of California's fault systems, including the San Andreas, simply do not have sufficient area to generate such an earthquake."

"Nevertheless, " the report noted, "it is important not to become complacent; large earthquakes are inevitable throughout coastal California, and could be devastating in their own right. There is a large population and much infrastructure at risk in central and southern coastal California."

But while most faults are shallow, the crucial exception is along the 800-mile-long Cascadia Subduction Zone, where a number of plates are moving and being thrust under the North America plate under the continental crust. There are two sets of fracture zones in the Cascadia Subduction Zone that are zones of weakness. "Most seismologists agree that a megathrust earthquake involving any of these plates would be in the magnitude 9 range, similar to the Tohoku quake," the report said.

The Japanese quake and tsunami killed about 13,000 people, a figure that includes a dozen people killed last week in a 7.4 magnitude aftershock. Much of the loss of life and property damage occurred when the quake-spawned tsunami averaging about 30-foot-high struck the northern Japanese coast and pushed inland about six miles.

The quake also damaged nuclear power plants at the Japan's Fukushima Daichi Nuclear Power Station, leading to explosions and radioactive leakage.

In California, that nuclear scenario appeared "extremely unlikely," according to the report.

"The combination of strong ground motion and massive tsunami that occurred in Japan cannot be generated by faults near the San Onofre Nuclear Generating Station and the Diablo Canyon Power Plant," the study said. "Nevertheless, the geologic conditions near those plants are very likely different than previously believed and ongoing study is warranted. This has been understood for at least the past three years, and some of these studies, and the environmental planning process for other such studies, are under way."

## **San Onofre Nuclear Plant To Hold Meltdown Drill (KGTV)**

KGTV-TV San Diego (CA), April 12, 2011

SAN ONOFRE, Calif. --

Southern California radiation experts and emergency workers will take part in a drill on Tuesday to test responses to an emergency at the San Onofre Nuclear Generating Station, an exercise that is done every other year but has taken on added significance because of the disaster in Japan.

The drills on site at the San Onofre plant will be done in secret, but other officials will gather at a Joint Information Center, where they will simulate news conferences as they practice how to disseminate information in case of a disaster.

Drills are conducted at the San Onofre plant a few times a year, but this biennial one is a much more extensive test that is monitored by the Federal Emergency Management Agency, Edison spokesman Gil Alexander said.

Alexander also said everyone is ready for both the drill and for a real emergency.

"We've worked hard at it. We have a plan. We work the plan. I think we're ready to swing into action," he said. "We drill constantly... three or four times a year. We meet every month. We've done that since 1982."

The main difference this year is the interest from the media, according Tina Walker, a spokesman for the California Emergency Management Agency. She said that is a positive change, because Southern California residents should know how to be prepared for an emergency.

"One of the key steps is to know the resources in your local jurisdiction," Walker said. "The best way someone can protect themselves and their family is to know your local resources. Speak to your local officials on emergency planning and once you get that information under your belt you'll be prepared for anything."

Alexander said Edison hopes the increased coverage of the drills will help calm some fears as the earthquake-crippled Fukushima reactor in Japan continues to stoke anxiety about radioactive leaks.

"We're hopeful the news stories this week will show our extensive planning efforts," Alexander said. "We hope the reports on all of this will be reassuring to the public."

The drill at San Onofre will simulate a radioactive leak that goes beyond the plant's boundaries and into the community, Alexander said. San Onofre has never had a radioactive gas leak in its 42 year history.

FEMA officials will hold a meeting at 4 p.m. Friday at the Capistrano Unified School District offices in San Juan Capistrano to give the public a "snapshot" view of how the drills went, said FEMA spokesman John Hamill.

In about three months, FEMA will issue its "report card" on the drill, Hamill said.

The California Emergency Management Agency will coordinate the test at the two nuclear reactors starting Tuesday, and concluding Thursday.

Workers will test emergency shut-down procedures and practice securing radioactive fuel rods.

San Onofre's two reactors generate 2.1 billion watts of electricity when operating at full capacity. Both units were returned to 99 percent operations this year, after extensive rebuilding projects.

Emergency and public health workers from Los Angeles, Orange, Riverside and San Diego counties will participate in the drill.

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## **Radioactive Gas Leak Drill Set For San Onofre Nuclear Plant This Week (LADN)**

Los Angeles Daily News, April 12, 2011

SANTA ANA - Radiation experts and emergency workers from Los Angeles to the Mexican border will pretend that a major radioactive gas leak has occurred at the San Onofre Nuclear Generating Station starting Tuesday.

The test is regularly-scheduled, but occurs as a major meltdown is threatened at an earthquake-crippled reactor complex in Japan, 5,500 miles across the sea.

The California Emergency Management Agency will coordinate the test at the two nuclear reactors starting Tuesday, and concluding Thursday.

Southern California Edison spokesman Gil Alexander told the San Diego Union-Tribune that workers will test emergency shut-down procedures, and practice securing radioactive fuel rods.

"There are a total of about 200 of us associated with the plant that will drill," Alexander told the San Diego newspaper. Half of those will drill on plant procedures, and the other half will work on a pretend radiation leak with government officials, the news media and the general public.

San Onofre's two reactors generate 2.1 billion watts of electricity when operating at full capacity. Both units were returned to 99 percent operations this year, after extensive rebuilding projects.

Emergency and public health workers from Los Angeles, Orange, Riverside and San Diego counties will participate in the drill.

## **Emergency Response Tests At San Onofre Nuclear Generating Station (KCBS)**

KCBS-TV Los Angeles, April 12, 2011

SANTA ANA (CBS) — Emergency and public health workers from Los Angeles, Orange, Riverside and San Diego counties will take part in a drill to test emergency responses at the San Onofre Nuclear Generating Station, tomorrow.

Southern California radiation experts and emergency workers will take part in a secret drill exercise that will simulate a radioactive leak that goes beyond the plant's boundaries and into the community. Workers will test emergency shut-down procedures and practice securing radioactive fuel rods. Other officials will gather at a Joint Information Center, where they will simulate news conferences and practice how to disseminate information in case of a disaster.

The exercise is done every other year but has taken on added significance this year because of the disaster in Japan.

"One of the key steps is to know the resources in your local jurisdiction," said Tina Walker, a spokesman for the California Emergency Management Agency. "The best way someone can protect themselves and their family is to know your local resources. Speak to your local officials on emergency planning and once you get that information under your belt you'll be prepared for anything."

The California Emergency Management Agency will coordinate the test at the two nuclear reactors starting Tuesday, and end Thursday. The organization hopes to calm public fear about radioactive leaks as the earthquake-crippled Fukushima reactor in Japan continues to stoke anxiety.

Officials from The Federal Emergency Management Agency (FEMA) will hold a meeting at 4 p.m. Friday at the Capistrano Unified School District offices in San Juan Capistrano to give the public a "snapshot" view of how the drills went, said FEMA spokesman John Hamill. In three months, FEMA will issue its "report card" on the drill, Hamill said.

San Onofre's two reactors generate 2.1 billion watts of electricity when operating at full capacity. Both units were returned to 99 percent operations this year, after extensive rebuilding projects.

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## **Emergency Drill Set For Tuesday At San Onofre Nuclear Plant (SJCP)**

San Juan Capistrano Patch, April 12, 2011

Southern California radiation experts and emergency workers will take part in a drill Tuesday to test responses to an emergency at the San Onofre Nuclear Generating Station, an exercise that is done every other year but has taken on added significance because of the disaster in Japan.

The drills on site at the San Onofre plant will be done in secret, but other officials will gather at a Joint Information Center, where they will simulate news conferences as they practice how to disseminate information in case of a disaster.

Drills are conducted at the San Onofre plant a few times a year, but this biennial one is a much more extensive test that is monitored by the Federal Emergency Management Agency, Edison spokesman Gil Alexander said.

The main difference this year is the interest from the media, according to Tina Walker, a spokesperson for the California Emergency Management Agency. She said that is a positive change, because Southern California residents should know how to be prepared for an emergency.

"One of the key steps is to know the resources in your local jurisdiction," Walker said. "The best way someone can protect themselves and their family is to know your local resources. Speak to your local officials on emergency planning and once you get that information under your belt, you'll be prepared for anything."

Alexander said Edison hopes the increased coverage of the drills will help calm some fears as the earthquake-crippled Fukushima reactor in Japan continues to stoke anxiety about radioactive leaks.

"We're hopeful the news stories this week will show our extensive planning efforts," Alexander said. "We hope the reports on all of this will be reassuring to the public."

The drill at San Onofre will simulate a radioactive leak that goes beyond the plant's boundaries and into the community, Alexander said.

FEMA officials will hold a meeting at 4 p.m. Friday at the Capistrano Unified School District offices in San Juan Capistrano to give the public a "snapshot" view of how the drills went, said FEMA spokesman John Hamill.

In about three months, FEMA will issue its "report card" on the drill, Hamill said.

The California Emergency Management Agency will coordinate the test at the two nuclear reactors starting Tuesday, and concluding Thursday.

Workers will test emergency shut-down procedures and practice securing radioactive fuel rods.

San Onofre's two reactors generate 2.1 billion watts of electricity when operating at full capacity. Both units were returned to 99 percent operations this year, after extensive rebuilding projects.

Emergency and public health workers from Los Angeles, Orange, Riverside and San Diego counties will participate in the drill.

## **San Onofre Nuclear Generating Station Holding Emergency Drill Tuesday (ENPTCH)**

By Jennifer Reed

Encinitas Patch, April 12, 2011

Radiation experts and emergency workers from Los Angeles, Orange County, Riverside and San Diego will pretend that a major radioactive gas leak has happened at the San Onofre Nuclear Generating Station starting Tuesday.

The test is regularly scheduled, but happens to be occurring as a major meltdown is threatened at an earthquake-crippled reactor complex in Japan, 5,500 miles across the sea.

The California Emergency Management Agency will coordinate the test at the two nuclear reactors starting Tuesday and concluding Thursday.

San Onofre's two reactors generate 2.1 billion watts of electricity when operating at full capacity. Both units were returned to 99 percent operations this year, after extensive rebuilding projects.

Southern California Edison spokesman Gil Alexander told the San Diego Union-Tribune that workers will test emergency shut-down procedures, and

practice securing radioactive fuel rods.

City News Service contributed to this report.

## **Nuclear Emergency Drill Planned For San Onofre Nuclear Power Plant (XETV-TV)**

XETV-TV San Diego, April 12, 2011

SAN ONOFRE - Radiation experts and emergency workers from to the Mexican border will pretend that a major radioactive gas leak has occurred at the San Onofre Nuclear Generating Station next week.

The test is regularly-scheduled, but occurs as a major meltdown is threatened at an earthquake-crippled reactor complex in Japan, 5,500 miles across the sea.

The California Emergency Management Agency will coordinate the test at the two nuclear reactors in north San Diego County starting Tuesday, and concluding Thursday.

Southern California Edison spokesman Gil Alexander says workers will test emergency shut-down procedures, and practice securing radioactive fuel rods.

"There are a total of about 200 of us associated with the plant that will drill," Alexander said. Half of those will drill on plant procedures, and the other half will work on a pretend radiation leak with government officials, the news media and the general public.

San Onofre's two reactors generate 2.1 billion watts of electricity when operating at full capacity. Both units were returned to 99 percent operations this year, after extensive rebuilding projects.

The oceanfront plant is located between the beach and I-5, west of Camp Pendleton.

Emergency and public health workers from Los Angeles, Orange, Riverside and San Diego counties will participate in the drill.

## **NRC Sets Capistrano Hearing On San Onofre Nuclear Generating Station Performance (SANCT)**

By David Zimmerle

San Clemente (CA) Times, April 12, 2011

The Nuclear Regulatory Commission staff will meet in San Juan Capistrano on April 28 with representatives of Southern California Edison Co. to discuss the agency's 2010 assessment of safety performance at the San Onofre Nuclear Generating Station.

The meeting, which will be open to the public, will begin at 6 p.m. at the Capistrano Unified School District Board Room, 33122 Valle Road, San Juan Capistrano.

Following the performance assessment, the NRC staff will be available to answer questions from the public concerning San Onofre, as well as the NRC's role in ensuring safe plant operation.

The NRC continually reviews the performance of San Onofre and the nation's other commercial nuclear power facilities, NRC Region IV Administrator Elmo Collins said. This meeting will provide an opportunity for a discussion of our annual assessment of safety performance with the company and with local officials and residents who live near the plant.

A letter sent from the NRC Region IV office to plant officials addresses the performance of the plant during 2010 and will serve as the basis for the meeting discussion. It is available on the NRC web site at: [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LETTERS/sano\\_2010q4.pdf](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LETTERS/sano_2010q4.pdf).

San Onofre operated safely in 2010. The licensee addressed longstanding concerns in the area of problem identification and resolution, but has not been fully successful in addressing several longstanding human performance issues, the NRC said. The NRC will conduct additional focused inspections in the human performance area, and also in the safety conscious work environment area to verify that corrective actions are effective and sustainable.

Inspections are performed by two NRC Resident Inspectors assigned to the plant and by specialists from the Region IV Office in Arlington, Texas.

Current performance information for San Onofre Unit Two is available on the NRC web site at: [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/SANO2/sano2\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/SANO2/sano2_chart.html).

Current performance information for San Onofre Unit 3 is available at: [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/SANO3/sano3\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/SANO3/sano3_chart.html)

## **Court: Mass. Can Regulate Nuke Water Intake System (BOS)**

Boston Globe, April 12, 2011

BOSTON—The state's highest court has ruled that Massachusetts environmental officials have the power to regulate a water intake system used by the Pilgrim nuclear power plant in Plymouth.

The Supreme Judicial Court's decision issued on Tuesday reverses a lower court ruling that said the state Department of Environment lacked such authority.

Pilgrim employs a cooling system that pulls in water from Cape Cod Bay and later discharges heated water through outflow pipes. While the discharges are regulated by the state and federal governments, Entergy Corp., which owns Pilgrim, challenged whether the state also has the power to regulate the intake process.

Environmental officials say the intake system uses underwater suction that can kill or injure marine life.

The SJC decision was written by Justice Judith Cowin before her retirement last week.

## **SJC Upholds State's Right To Regulate Water Intake At Pilgrim Nuclear (BOS)**

By Beth Daley

Boston Globe, April 12, 2011

The state Supreme Judicial Court has upheld Massachusetts' right to regulate the intake of vast amounts of water by the Pilgrim Nuclear Station and other power plants, which can harm fish and other marine organisms.

Power plants use the water to cool equipment then discharge it later -- and hotter -- into waterways. Environmental studies show the heated water can harm aquatic life. The state and environmentalists have also long argued that the sucking in of water

can kill vast amounts of fish larvae, eggs, shellfish, and other aquatic organisms – larger creatures become trapped on screens covering the intake pipes, and smaller ones are sucked into the cooling system.

The state Department of Environmental Protection has long regulated the intake and discharge of water used at power plants. But Entergy, the owner of Pilgrim, sued four years ago after the state issued specific regulations spelling out its authority to do so. Entergy argued that the state had authority to regulate only the discharge of water, not its intake.

"This is great news for the Massachusetts environment," said Kenneth L. Kimmell, commissioner of the state Department of Environmental Protection. "It clearly gives us the ability to protect our aquatic resources from the potential harms (of intake)."

The SJC, reversing a Superior Court decision, said Pilgrim took too narrow a view of the state's authority and that it has the right to regulate the water intake.

Entergy issued a statement saying, "This decision affirms that the State of Massachusetts has the legal authority to regulate cooling water intake structures within the state. ... According to both the court and the state, this is no new authority for the agency."

The ruling comes as the federal government develops final rules for water intake at power plants. The decision, according to Kimmell, made clear that Massachusetts will have the right to maintain stricter rules if the federal regulations turn out to be weaker.

Kimmell said the decision also recognized the state environmental agency's ability to regulate emerging problems that are not specifically spelled out in state law.

"The court makes clear that our agency has the authority to protect our natural resources from emerging environmental threats," he said.

The Pilgrim plant, which is seeking to be re-licensed for another two decades after its original license expires next year, has been in the spotlight in recent weeks because it has a similar design to the most crippled Japanese nuclear reactor. Entergy said the SJC decision has no impact on relicensing.

The state Attorney General's Office, which argued the case, issued a statement saying, "Power plants, such as Entergy's Pilgrim Station in Plymouth, withdraw billions of gallons of water from the nation's waterways each day to cool their facilities. We are pleased that the SJC recognized the important role that MassDEP plays in protecting our water resources at these power plants."

## **SJC: State Authorities May Regulate Water Intake At Nuclear Plants (BOSH)**

Boston Herald, April 12, 2011

SJC: State authorities may regulate water intake at nuclear plants

Environmental authorities, arguing that water intake systems used by nuclear facilities kill "billions" of aquatic organisms each year, scored a victory Monday in Massachusetts's highest court.

The Supreme Judicial Court, in a ruling authored by now-retired Justice Judith Cowin, said the Massachusetts Department of Environmental Protection has the authority to regulate water intake, rejecting an argument by Entergy Nuclear Generation Co. that the agency overstepped its authority.

Entergy, which operates Pilgrim Nuclear Power Station and draws water from Cape Cod Bay, had argued that DEP may only regulate nuclear "discharge" and other traditional forms of pollution, but that water intake was off limits. Entergy also claimed federal regulators pressured the state to regulate water intake.

"The emphasis on traditional threats to water resources cannot be read to deprive the department of authority to address atypical or novel threats that may also harm those resources," Cowin wrote in the unanimous ruling. "The department's authority to create a discharge and pollution reduction program does not limit its authority to deal with water quality issues other than discharges and traditional pollution under its broad statutory powers. Restricting the department's authority to water pollution control, as Entergy suggests, would render superfluous the department's parallel duty to protect 'the quality and value of water resources.'"

"We conclude that the language of [state law] does not support, nor did the Legislature intend, such a narrow view of the department's authority," she continued.

The ruling overturned a Suffolk Superior Court ruling in Entergy's favor.

At issue is a December 2006 regulation issued by the department declaring its authority to set standards for the intake systems used by nuclear plants to cool their reactors. The regulation emerged after years of urging by the US Environmental Protection Agency to expand DEP's authority beyond water discharge and more traditional forms of pollution, according to DEP's filings in the suit.

Officials for Entergy declined immediate comment on the ruling.

"We have received the decision and our attorneys are studying it," said Jack Alexander, Entergy's manager of government relations.

According to the ruling, Entergy purchased the Pilgrim plant in 1999. The facility includes a "cooling water intake system" that draws water from Cape Cod Bay and discharges heated water and other pollutants. The facility holds a "discharge permit" issued by the EPA and state environmental authorities.

Nuclear issues burst into public consciousness last month after an earthquake and tsunami in Japan disrupted a cluster of reactors, releasing radioactive material into the air and water. Last week, Gov. Deval Patrick and legislative leaders urged the Nuclear Regulatory Commission to halt any steps toward relicensing the Pilgrim plant until all of the lessons from the Japanese nuclear crisis have been learned.

In its lawsuit, Entergy argued that DEP's decision to regulate water intake systems represented a "reversal" in policy and lacked the explicit backing of Massachusetts law.

"Indeed, in the thirty-plus years that MassDEP has administered [water quality laws], it consistently maintained, until 2006, that it lacked statutory authority to regulate withdrawal," Entergy attorneys argued in a brief submitted to the SJC. "Only after concerted pressure by EPA did MassDEP change its long-held position, though offering no explanation for the change. That administrative capitulation is not entitled to judicial deference."

Entergy argued that Massachusetts law lacked any specific reference to intake by nuclear cooling systems and that the EPA already regulated nuclear cooling systems.

"Therefore, notwithstanding any aspirational goals of the State Act or whatever force may be derived from its apologetic, policy-based arguments, MassDEP cannot evade the fundamental hurdle that it may not take any action unauthorized by statute," according to the brief, signed by three attorneys from Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, a Boston-based firm representing the company.

But the SJC argued that in areas like Cape Cod Bay, "with a designated use as aquatic habitat," nuclear cooling facilities "hinder the attainment of water quality standards."

"Accordingly, authority to regulate [cooling facilities] reasonably may be implied as necessary to protect water quality in the Commonwealth," Cowin wrote.

In February, the EPA issued a new permit for a power plant in Cambridge, ending longstanding litigation and requiring the facility to reduce its heat discharge and water withdrawal levels by 95 percent, a mandate that environmental regulators said would address "adverse impacts" on fish populations in the lower Charles River and Boston Harbor. The water discharge permit for the 256-megawatt Kendall Cogeneration Station plant requires the plant's owner GenOn, formerly Mirant, to closely monitor river temperatures to make sure its discharges into the river do not cause excessive warming of the waters.

According to the EPA, Kendall Station's cooling system withdraws an average of 70 million gallons a day from the Charles River and discharges it back into the river at temperatures increased by 20 degrees, up to a maximum discharge temperature of 105 degrees. Under a modified permit, station owners will be required to make facility upgrades that, in combination with a new steam pipeline to be built across the Longfellow Bridge in the next few years, will enable the plant to sell up to twice as much steam into Boston as is currently possible, resulting in a reduction in the station's heat discharge and cooling water withdrawals of about 95 percent. The modified permit requires Kendall Station to install and operate a back pressure steam turbine and an air-cooled condenser that will enable the plant to reduce its water flow to 3.2 million gallons a day, according to the EPA.

"Although the [SJC] seems to have rejected in silence a host of unsound statutory arguments that DEP made in support of its position, I was disappointed that the Court accepted DEP's argument that general statutory language permits it to control water intakes, despite the fact that the focus of the statutes clearly is elsewhere," said John Pagliaro, an attorney with the New England Law Foundation, which submitted a brief in support of Entergy. Article URL: <http://www.bostonherald.com/news/politics/view.bg?articleid=1329954> NRC defends Peach Bottom accident response, despite analyst's concern

</news/national/northeast/view.bg?articleid=1329967> Governor names openly gay Barbara Lenk to SJC

</news/politics/view.bg?articleid=1328294> SJC upholds '06 Casali murder conviction

</news/regional/view.bg?articleid=1324110>

## **High Court Restores State Oversight At Pilgrim Nuclear Plant (ENTNEWS)**

Enterprise News, April 12, 2011

Environmental authorities, arguing that water intake systems used by nuclear facilities kill "billions" of aquatic organisms each year, scored a victory Monday in Massachusetts's highest court.

The Supreme Judicial Court, in a ruling authored by now-retired Justice Judith Cowin, said the Massachusetts Department of Environmental Protection has the authority to regulate water intake, rejecting an argument by Entergy Nuclear Generation Co. that the agency overstepped its authority.

Entergy, which operates Pilgrim Nuclear Power Station and draws water from Cape Cod Bay, had argued that DEP may only regulate nuclear "discharge" and other traditional forms of pollution, but that water intake was off limits. Entergy also claimed federal regulators pressured the state to regulate water intake.

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steam pipeline to be built across the Longfellow Bridge in the next few years, will enable the plant to sell up to twice as much steam into Boston as is currently possible, resulting in a reduction in the station's heat discharge and cooling water withdrawals of about 95 percent. The modified permit requires Kendall Station to install and operate a back pressure steam turbine and an air-cooled condenser that will enable the plant to reduce its water flow to 3.2 million gallons a day, according to the EPA.

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## **Court Decision Gives MA Power To Regulate Cooling Water Intake System At Nuclear Plant (WW)**

Water World, April 12, 2011

Court decision gives MA power to regulate cooling water intake system at nuclear plant

BOSTON, MA, Apr. 11, 2011 -- The Supreme Judicial Court in Massachusetts has ruled that environmental officials have the authority to regulate a cooling water intake system at the Pilgrim nuclear power plant...

4/11/2011 12:00:00 AM

BOSTON, MA, Apr. 11, 2011 -- The Supreme Judicial Court in Massachusetts has ruled that environmental officials have the authority to regulate a cooling water intake system at the Pilgrim nuclear power plant.

The cooling system at the Pilgrim plant in Plymouth, MA, pulls in water from Cape Cod Bay. Heated water is later discharged through outflow pipes. The effluent is regulated by the state and federal governments.

Pilgrim owners, Entergy Corp., challenged whether the intake process is also within the state's regulatory jurisdiction. This latest court decision reverses a lower court ruling that said the state Department of Environment lacked such authority.

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## **Millstone Leaders Reiterate Case Against Tax Bills (NOB)**

Norwich (CT) Bulletin, April 12, 2011

Waterford, Conn. —

Millstone Nuclear Power Station executives publicly reiterated their case against two tax bills being considered by the General Assembly.

About 100 people attended a meeting at Waterford Town Hall Monday night which featured presentations by executives of Dominion Resources Inc., the Virginia-based company that owns the Waterford plant.

A \$335 million tax on the plant's electricity output contained in Senate Bill 1176 would be a first nationally, said Daniel Weekley, Dominion's vice president of governmental affairs.

"Once this production tax starts it will never stop," he said. "It will hit everyone of us."

Connecticut utility bills will skyrocket, he predicted. Connecticut already has the highest electricity rates in New England and the second highest nationally.

"The rate increases you will see will be unbelievable," Weekley said.

Gov. Dannel P. Malloy is supporting an alternative -- Senate Bill 1007 -- which would double Millstone current overall tax bill from its current \$33.6 million per year. Dominion is against that bill, too, although it hasn't said Millstone will shut down if that bill is passed. It has said a shutdown will occur if Bill 1176 becomes law.

"Some have reported that we're threatening to shut down," Weekley said. "That's wrong. The state will be forcing us to shut down."

Skip Jordan, Millstone's site vice president, opened the forum by saying the meeting's objective was "to talk about jobs." Yet the company said nothing new about the fate of the 1,080 Dominion workers at Millstone. Another 350 workers work at the plant that are employed by other companies. Dominion has said it might have to lay off or furlough workers in the event of a shutdown.

The company is airing radio ads this week stating its opposition to the bill, saying 1,000 Connecticut jobs are "in jeopardy."

State Sen. Andrea Stillman, D-Waterford, and Rep. Elizabeth "Betsy" Ritter, D-Waterford, introduced Weekley and Jordan, with Stillman calling the event "an opportunity to hear from the experts." Both lawmakers expressed their pleasure at the size of the crowd, which included Chamber of Commerce of Eastern Connecticut President Tony Sheridan, Southeastern Connecticut Enterprise Region Corp. Executive Director John Markowicz, and Waterford First Selectman Dan Steward.

The meeting was interrupted by members of the Connecticut Coalition Against Millstone, asking questions about spent fuel in the plant's decommissioned Unit 1 and carrying signs critical of Millstone. After a few tense minutes and urging from the crowd, Dominion executives resumed taking questions from the audience.

Jordan's presentation centered on Millstone safety procedures and differences between the Connecticut plant and the Japanese facility that was crippled by an earthquake last month. Dominion is offering technical assistance and advice to Japanese engineers, he said.

## **Millstone Owners Stress Safety, Oppose New Tax Proposal (GREENWICH)**

By Bill Cummings

Greenwich (CT) Time, April 12, 2011

WATERFORD -- The operators of the Millstone Nuclear Power Station on Monday attempted to assure nervous residents that the disaster now unfolding at a nuclear facility in Japan cannot happen here.

They also tried to deflect a huge proposed tax on the plant that's now before legislators in Hartford struggling to balance the state budget.

"Every meeting at Millstone station starts with a message about safety. Our number one priority is to protect the health and safety of the public," said Skip Jordan, Millstone's site vice president, who has worked in the industry for 28 years.

An audience of approximately 150 gathered at Waterford Town Hall Monday evening to hear Millstone officials discuss safety and a proposed \$335 million state tax. Most appeared to be pro-Millstone, not surprising considering the plant provides or supports thousands of local jobs.

State Sen. Andrea Stillman, D-Waterford, and state Rep. Betsy Ritter, D-Waterford, hosted the meeting; they said they wanted to discuss safety issues and other concerns in the wake of the unfolding disaster at the Fukushima Daiichi nuclear power facility. They also made it clear they oppose the proposed state tax on coal, oil and nuclear power generators.

Millstone officials have promised to close the plant if the tax becomes law, saying it would make the plant economically unfeasible.

Dan Weekley, vice president of government affairs for Millstone, said the plant already pays millions in taxes a year and purchases tens of millions of dollars worth of supplies. He said a recent state poll conducted by Dominion, Millstone's owner, found most state residents support nuclear power.

"No company could come along and pay those types of taxes. The state would be forcing us to shut down," Weekley said. "We as ratepayers will eat this increase."

Safety was also on the minds of some of those attending the meeting.

"Do you really believe this plant is safe," said one woman in the audience.

"I do," Jordan answered. "We are doing walk downs of initial designs and our emergency equipment to make sure we have what we need and are capable of performing in a severe accident.

"It includes a total loss of power and tornado, earthquakes and hurricanes. We have redundancy in each one of our systems, including back up generators and flood gates."

Nancy Burton, director of the Connecticut Coalition Against Millstone, said, "There are differing points of view. Fukushima is an exploded reactor. It no longer exists. That event is still happening and it's still out of control."

But as Burton tried to make her point, the mostly pro-Millstone audience demanded she ask a question. They also shouted down another anti-nuclear activist who attempted to speak.

"Many people here derive income from Millstone. I don't. Why don't you move the spent fuel out of Millstone Unit 1?" Burton said.

Jordan said the fuel is safely stored in a spent fuel pool. Millstone has two operating reactors and a decommissioned one. It produces nearly half of the state's electricity.

"It's in a safe condition. It's a very low heat load and we are looking at moving that out of the pool," Jordan said. "That is not an immediate thing. It takes planning and approval and the company is looking at doing that."

"The people of Japan thought they were safe," said one woman, standing to make her point. "What are you going to say when you are proved wrong?"

"I have to differ with you. If I didn't believe that, I would not be here," Jordan said.

## **The Day - Big Crowd Packs Millstone Meeting Monday Night (NLDAY)**

New London (CT) Day, April 12, 2011

Waterford

- Several members of a packed crowd sought assurance from executives giving a presentation about the Millstone Power Station Monday night that owner Dominion will put spent fuel from one shuttered reactor into safe dry storage on the site.

Skip Jordan, site vice president, and Dan Weekley, Dominion vice president of governmental affairs, spent an hour first discussing safety and a proposed tax on electric production at Millstone before fielding questions about the used fuel that sits in Unit 1, a boiling water reactor not unlike those at the badly damaged Fukushima Dai-ichi station in Japan.

Millstone's two operating reactors, which are pressurized water reactors, are safer, Jordan said, because they have primary and secondary cooling systems to keep the plants cool.

But Nancy Burton, a Mystic resident speaking on her own behalf and not in her role as director of the Connecticut Coalition Against Millstone, wanted to know why Dominion isn't moving the spent fuel from Unit 1 immediately into an alternate type of storage known as dry cask storage.

John Markowicz, executive director of the Southeastern Connecticut Enterprise Region and a Waterford resident, echoed her concern.

"What's the chance of the spent fuel being moved" if the bill to tax Millstone goes through, he asked.

Jordan said the company is evaluating moving that fuel so that it is no longer housed above the reactor, where it is more vulnerable, but he and Weekley noted that if the tax is approved it will make it more difficult to invest in safety improvements like that.

The meeting was still going on at 8:45 p.m. at Waterford Town Hall.

## **Residents Question Safety At Millstone (NLDAY)**

New London (CT) Day, April 12, 2011

Waterford

- The owner of Millstone Power Station sought to reassure concerned residents Monday night that it is working to put potentially vulnerable spent fuel from one closed reactor into safe, dry storage on site.

A crowd of more than 150 people at Waterford Town Hall included an unidentified woman who said she wasn't convinced by Millstone owner Dominion executives' premise that the two operating Unit 2 and 3 reactors and the closed Unit 1 reactor could withstand a natural catastrophe like the earthquake and tsunami that wrecked still-troubled Fukushima Dai-ichi reactors in Japan.

And later, a former contractor with Dominion criticized company management for not protecting him when he reported an employee was abusing prescription drugs. The contractor said he was the unjustly fired, he said.

Skip Jordan, site vice president, and Dan Weekley, Dominion vice president of governmental affairs, spent an hour discussing safety and a proposed tax on electric production at Millstone before fielding questions in the Town Hall auditorium. The meeting was still going on late Monday night.

Jordan and Weekley started by discussing the used fuel that sits in Unit 1, a boiling water reactor not unlike those at the Fukushima station. Millstone's two operating reactors, which are pressurized water reactors, are safer, Jordan said, because they have primary and secondary cooling systems to keep the plants cool.

But Nancy Burton, a Mystic resident speaking on her own behalf and not in her role as director of the Connecticut Coalition Against Millstone, wanted to know why Dominion isn't moving the spent fuel from Unit 1 immediately into an alternate type of storage known as dry cask storage. She lives outside the 10-mile radius that would be evacuated in event of a major calamity at Millstone, she said.

The crowd at times attacked her for trying to ask five questions instead of one, but John Markowicz, executive director of the Southeastern Connecticut Enterprise Region and a Waterford resident, echoed her concern.

"What's the chance of the spent fuel being moved" if the bill to tax Millstone goes through, he asked.

A proposed state tax on nuclear electricity production would charge 2 cents a kilowatt hour to Dominion, or about \$335 million a year, Weekley said.

Jordan said the company is evaluating moving that fuel so that it is no longer housed above the reactor, where it is more vulnerable, but he and Weekley noted that if the tax is approved it will make it more difficult to invest in safety improvements like that.

State legislators including Sen. Andrea Stillman, Rep. Betsy Ritter and Rep. Ed Jutila said they and the entire delegation were opposed to the tax and fighting it.

The woman concerned for her family's safety in the event of a disaster by "Mother Nature," which is "damn good at creating catastrophes," wanted to know, "How do I protect my boys?"

Jordan said he has the same concern for his family and friends, many of whom live in nearby Groton, and his employees share those concerns also.

Steven Lavoie, the contractor and apparent whistleblower, said he was fired after reporting a co-worker's abuse of prescription medication.

"What is Dominion going to do about the liars in your company?" he asked. "There's corruption going on in upper management and all I was obligated to do was report it ... I've had a target on my back. I want to know what you people are going to do to restructure management because people are crooked."

Jordan said the company's practice is to go through "multiple channels ... (and) fully and thoroughly investigate that. He told Lavoie his "commitment tonight is to go back and take another look at that."

One woman, Monica Rourke of Bristol, who said she was familiar with Millstone from when she worked in concrete repair in 2000, defended the nuclear complex as a well-run facility.  
p.daddona@theday.com

## **NRC Denies License To UniStar For CC3 (SOMD)**

### **Asks company to better address foreign ownership issue**

By Meghan Russell

Southern Maryland Newspapers, April 12, 2011

The US Nuclear Regulatory Commission, which oversees license approval for new nuclear reactors, released a report on Friday stating it could not issue UniStar Nuclear Energy a license for the proposed third reactor in Calvert County on the basis of foreign ownership.

According to NRC regulations, a foreign entity cannot own, control or dominate a US nuclear plant's operations for security reasons. UniStar submitted a combined license application and "negation action plan" in January in an attempt to address the issue, citing US individuals who would oversee the operations of Calvert Cliffs Nuclear Power Plant's third unit, since French company Electricite de France acquired Constellation Energy's 50 percent interest in UniStar, their joint US nuclear venture. The hierarchy of control and oversight was restructured in a way that UniStar hoped would negate EDF's dominant presence in the venture.

However, the NRC now rules that UniStar's plan is unsuitable for obtaining a license for CC3, on the grounds that: "1) UniStar is 100 percent owned by a foreign corporation (EDF), which is 85 percent owned by the French government; 2) EDF has the power to exercise foreign ownership, control, or domination over UniStar; and 3) the Negation Action Plan submitted by UniStar does not negate the foreign ownership, control or domination issues discussed above," the report states.

NRC staff will meet publicly with UniStar to discuss the results of its review if requested, the report continues. Also, while UniStar considers its next steps for proceeding with CC3, the NRC will continue to finalize the company's environmental impact statement and will continue to review the remaining sections of the combined license application that do not involve the foreign ownership question. But a license cannot be issued, the report states, unless the outstanding requirements are met.

"As we have consistently stated, Calvert Cliffs 3 will ultimately have a US partner," a spokesperson for EDF said. "While EDF and UniStar disagree with the Nuclear Regulatory Commission's conclusion regarding UniStar's present governance structure, we are pleased that the NRC will continue to review all other aspects of our pending application. This allows the project to continue moving forward as anticipated. UniStar and EDF will work with the NRC to resolve the governance issues prior to the issuance of the license."

Michael Mariotte, executive director of the Nuclear Information and Resource Service, an environmental group, called CC3 "the first US nuclear casualty of the post-Fukushima era" in a press release, referring to the nuclear disaster caused by the earthquake and tsunami at Japan's Fukushima Daiichi plant in March.

"The project already was on shaky ground with the withdrawal of Constellation Energy; it is impossible to imagine that Electricite de France will be able to find a new American partner to join in on a multi-billion dollar fiasco after the Fukushima nuclear disaster," he said in the release.

Mariotte also believes the ruling should end UniStar's chances of obtaining a Department of Energy loan guarantee for the project. "We would find it difficult to believe that the Energy Department could issue a loan guarantee for a project that is legally ineligible to obtain a construction license," Mariotte continued in the release, saying that if the DOE attempts to issue one anyway, "the matter would certainly be decided by the courts."

Calvert County Commissioners' President Susan Shaw (R), who has been among many local, state and federal leaders advocating for CC3, said she was not surprised by the NRC's ruling and believed UniStar has been actively searching for a US partner.

"We all knew that before they operated the plant they would have to have another owner," Shaw said. "All along we've believed they needed an American partner. This is supposed to be a prototype. ... My guess is they're going to have to find a partner sooner rather than later."

Shaw anticipates the construction of the third unit will create 5,000 temporary jobs and about 400 to 500 permanent positions, along with "millions of dollars" in tax revenue for the county. "Any way you look at it, it would be a huge boom," she said.

Contrary to Mariotte, Shaw said she hopes people will begin to see that the disaster that struck Japan last month could not occur at Calvert Cliffs because there is no shifting of the earth's plates in the region in which it is located. In addition, the troubled Japanese reactors were boiling water reactors, whereas the Calvert Cliffs units are pressurized water reactors, on top of other design differences that decrease the likelihood of a disaster at the US plant.

"I think a lot of that is becoming more clear and it will become even more clear as we learn more about what happened in Japan," she said. "... But I think as the price of oil continues to rise, the pressure will be on."

Shaw said she has heard the arguments regarding wind energy versus nuclear power, and she believes that while wind energy can provide peak power, it cannot always provide base generation power, or "power you count on for day-to-day needs" because "the wind does not blow all the time."

"Nuclear power is base load power," she said. "It's fairly reliable."

The irony of inventing more energy saving appliances, she added, is that there will be a greater need for electricity to power them. "Now we're going to have electric cars," she said. "Well where's that electricity supposed to come from?"

Once the events in Japan unfold, she said, more people may start to agree, "Nuclear is a way to go."

US House of Representatives Minority Whip Steny Hoyer (D-Md., 5th), another major supporter of CC3, also shared his views on the NRC's latest ruling and his desire to see the project continue.

"I have discussed with EDF their strong commitment to finding solutions to the challenges that confront the Calvert Cliffs 3 project," he said in a prepared statement. "I am very committed to the future of nuclear energy here in Maryland and am hopeful that EDF will find a US partner."

Neil Sheehan, spokesman for the NRC, said the agency will continue its review of the CC3 application. "For its part, UniStar will have to revisit its approach to satisfying our requirements on foreign ownership of US nuclear power plants," he said. "We will await word from the company as to how it plans to proceed."

## **NRC Will Not License French-owned Plant (WNN)**

World Nuclear News, April 12, 2011

Unistar's application to build a new nuclear power plant at Calvert Cliffs does not currently meet federal laws on foreign ownership, the US Nuclear Regulatory Commission (NRC) has said.

Unistar Nuclear Energy, originally a 50:50 joint venture between EDF and Constellation Energy, is planning to build a French-designed EPR reactor at the Calvert Cliffs site in Maryland where Constellation already operates two existing pressurized water reactors. EDF took 100% control of Unistar Nuclear Energy when it bought out its erstwhile partner in October 2010 after the financial burden of securing federal loan guarantees put the project beyond Constellation's commercial reach.

US federal regulation 10 CFR 50.38 prohibits the granting of a nuclear plant operating licence to foreign corporations. Unistar has made various revisions to the ownership and financial information in its combined construction and operation licence (COL) application for the plant, including what it called a negation plan which would see the company appoint a US citizen as CEO to assure US control over relevant matters, and various subcommittees of US citizens to ensure US control over safety, security and reliability matters. However, in a letter to Unistar president and CEO George Vanderheyden dated 6 April, the NRC said that the application still failed to meet the requirements of 10 CFR 50.38.

The regulator has said it will continue its review of the remaining portions of the COL application and to finalize the final environmental impact statement "while Unistar considers its options to move forward," leaving the door open for the company to secure a US partner. "However, a licence will not be issued unless the requirements of 10 CFR 50.38 are met," the regulator warns.

## **NRC Challenges Calvert Cliffs Reactor Project Ownership But Continues License Process (NUCSTR)**

Nuclear Street, April 12, 2011

The Nuclear Regulatory Commission has deemed that the ownership of a proposed third reactor for Maryland's Calvert Cliffs nuclear plant is illegal under US law, but the agency indicated it will move forward with the reactor's licensing as French-owned UniStar seeks a US partner.

UniStar began the project as a joint venture between French firm EDF and US-based Constellation Energy Group. The latter backed out, though, last year over uncertainty regarding a federal loan guarantee for the project. UniStar indicated it would continue to look for a US-based partner, as federal law prohibits non-US companies from owning nuclear power plants.

In a letter Friday, the NRC notified the company that it will continue the licensing process for the project, but a final license would not be granted under the reactor's current ownership. A spokeswoman for UniStar told the Baltimore Sun that the project would move forward as anticipated and that it continues to seek a US partner.

A company proposal forwarded to the NRC in December would place two US citizens on its board and appoint only US citizens as chairman and CEO, but the NRC letter indicates that plan still does not bring the project's ownership within US law.

Proposed in 2007, the \$9.6 billion Calvert Cliffs unit 3 project calls for a new Areva-designed Evolutionary Power Reactor 40 miles south of Annapolis, Md.

### **FEMA To Test Emergency Preparedness At TMI (WHTM)**

By Myles Snyder

WHTM-TV Harrisburg (PA), April 11, 2011

The Federal Emergency Management Agency will evaluate Three Mile Island's ability to respond to an emergency during a drill this week.

The week-long exercises are required by the federal government every two years.

FEMA specifically will evaluate the response of state and local emergency agencies within the 10-mile emergency-planning zone of the nuclear plant.

No sirens will be sounded during the drill.

Preliminary findings of the exercise will be presented during a public meeting Friday at 11:00 a.m. at the Hilton Garden Inn, at 3943 TecPort Drive, in Harrisburg.

Within 90 days, FEMA will send its evaluation to the Nuclear Regulatory Commission for use in licensing decisions.

The final report will be available to the public in July.

### **Three Mile Island Drill (WTAJ)**

By Kevin Flanigan

WTAJ-TV Altoona, PA, April 12, 2011

Middletown, Dauphin County - Emergency crews at and around Three Mile Island will be evaluated starting Monday.

FEMA will be looking at how prepared state and local responders are to protect public health and safety.

Preliminary findings of the emergency preparedness drills will be revealed on Friday.

### **Drills Being Held At Three Mile Island (WFMZ)**

WFMZ-TV Allentown (PA), April 11, 2011

Officials will be at Three Mile Island this week to judge how well crews would respond to a nuclear accident.

The Federal Emergency Management Agency will be monitoring drills at Three Mile Island.

The drills are held every two years.

They are meant to test the government ability to protect public health and safety.

FEMA will send its evaluation to the nuclear regulatory commission within 90 days.

FEMA will present its preliminary findings at a public meeting Friday morning.

### **Athens Seeking Grant For Evacuation Route (DECD)**

By Holly Hollman

Decatur (AL) Daily, April 12, 2011

ATHENS — A multi-million project at Browns Ferry Nuclear Plant could help the city and county get a grant to improve one of the plant's evacuation routes.

The only westward route from the plant, which is Nuclear Plant Road, is a narrow county road without striping.

The estimated cost to pave and widen it is \$2.5 million.

On Monday, the Athens City Council approved spending up to \$250,000 from its general reserve fund toward the project, contingent on it receiving a \$2 million grant. The city is asking the Limestone County Commission to also approve spending up to \$250,000.

Public Works Director James Rich said the grant is through the Alabama Industrial Access Road and Bridge Corp. The city will make a grant request at the corporation's June meeting.

Part of the city's request will include the \$160,000,000 cooling tower project at the nuclear plant that requires changes to roads by the plant. The project is bringing 175 jobs to the city.

"Crews coming in stay at our hotels here," said Council President Jimmy Gill, "and they use that road to get to and from the plant."

Councilman Harold Wales said if the city does not get the grant, the city should de-annex property on Nuclear Plant Road. Gill disagreed, saying he wanted to keep his constituents.

## **AARP Defends Opposition To Nuclear Power Development Plan (CRG)**

Cedar Rapids (IA) Gazette, April 12, 2011

An aerial view, looking southeast, of the 500-acre Duane Arnold Energy Center, located north of Palo, Iowa and northwest of Cedar Rapids. It is Iowa's only nuclear power plant.

AARP is firing back in a war of words over legislation it says would stick Iowans with the cost of developing future nuclear power generation even if the plants are never built.

At a Statehouse press conference Monday, AARP said it doesn't oppose the development of new power generation, including MidAmerican Energy's proposed nuclear plant, but objects to a pair of bills that would change the rules at the expense of Iowans, including its 370,000 50-and-older Iowa members.

AARP has been warning of "unnecessary and unknown" rate hikes that could hit ratepayers if Senate File 390 or House File 561 is passed into law.

The bills would help address hurdles MidAmerican might encounter in exploring the development of a 540-megawatt nuclear-powered facility costing \$1 billion to \$2 billion employing new technology that consists of a cluster of small modular reactors rather than the more typical large-scale nuclear power plants.

Rather than rely on shareholders and investors to finance a new power plant, Bruce Koepfel AARP state director, said the proposed legislation "shifts the billion-dollar plus costs to ratepayers for a possible nuclear plant, years before the plant is built, or the plant design has even been approved."

Koepfel said he was responding to questions lawmakers raised about an AARP advertising campaign urging people to tell legislators to "protect Iowans from unfair utility rate hikes."

Senate Commerce Committee Chairwoman Swati Dandekar, D-Marion, called the ads "deliberately misleading." in an op-ed piece that appeared in some Iowa newspapers "misleading."

"This state legislation is needed to continue consideration of nuclear power as a viable option for the state's future energy mix," Dandekar said.

She rejected AARP's argument that the legislation will increase utility costs.

"Not true. Nothing in this legislation increases electric rates or authorizes the construction of a nuclear facility," she said. "The legislation also does not alter the traditional role and responsibility of the Iowa Utilities Board or Consumer Advocate in deciding such matters."

Koepfel disputed that. AARP opposes the legislation because of "the lack of consumer protection – no comparison of alternatives, no cap on how much rates can increase no cost protection from cost overruns and no protection if the proposed plant is cancelled."

Those factors, "coupled with the unknowns about when, where and how much it will cost to build the new plant, demonstrates the need for Iowa lawmakers to study how to best increase the state's electric power generation," he said.

Dandekar insisted the proposed legislation includes a number of consumer protection measures, such as annual reporting and stringent accountability.

"The Iowa Utilities Board and the Office of Consumer Advocate always will keep Iowa's interests and economy at the forefront," she said. "Iowa needs to keep nuclear power in the mix in order to keep control of our electricity prices and continue to advance our economy."

Without taking a side, Gov. Terry Branstad said Monday that it's the Iowa Utilities Board's responsibility to answer many of those questions. When he appointed former Republican Rep. Libby Jacobs to chair the board it was with the understanding the board "would have the staff and wherewithal to protect the interests of the ratepayers and the state of Iowa."

At the same time, Branstad said, the state has to plan ahead to meet future energy needs.

"As we work to revitalize our economy, to bring jobs here, we want to make sure we have affordable and economical power available for our citizens and we want to do it in a way that environmentally safe as well," he said.

## **AARP Says Ad Opposing Nuclear Plan Is Accurate (AP)**

Associated Press, April 12, 2011

DES MOINES, Iowa (AP) - The senior advocacy group AARP is responding to criticism of an advertisement by the organization that argues a bill backed by utilities could cause rate increases.

AARP senior state director Bruce Koepl argued at a news conference Monday that newspaper ads paid for by the group are accurate. The ads claim residents and businesses would pay more if the Legislature approves a bill backed by MidAmerican Energy that would let the utility charge customers in advance for the construction of a nuclear power plant.

Democratic Sen. Swati Dandekar of Marion and others have called the ad misleading.

AARP has more than 370,000 members in Iowa, and many of them have asked legislators to oppose the measure.

The bill has been approved by committees in both the House and Senate.

## **AARP Speaks Out Against Nuclear Plant Bill (RADIA)**

By Dar Danielson

Radio Iowa, April 12, 2011

A war of words continues at the statehouse between backers of proposed new nuclear power plants and a lobbying group which opposes it. An ad by the A.A.R.P. urges defeat of bill, saying it would force utility rates up. State Senator Swati Dandekar, a Democrat from Marion, says the A.A.R.P. ad misleadingly as it refers to higher electric rates from a large nuclear power plant in Florida.

A.A.R.P. state director Bruce Koepl does admit the Iowa proposal involves much less expensive smaller plants. "However, the bill does not limit the plant build to that smaller technology," Koepl says. Dandekar says the bill preserves the Consumer Advocates traditional role in rate hike requests, and nothing in the bill will raise rates or even authorize a new nuclear plant.

But Koepl says the legislation breaks new ground by letting MidAmerican Energy raise rates ahead of plant construction. "This proposal allows utility companies to force customers to continue paying accumulated costs to the utility even if the plant is cancelled," Koepl said. Statehouse switchboard operators report numerous calls from A.A.R.P. members to their lawmakers urging defeat of the bill.

Koepl estimates that A.A.R.P. members have made thousands of calls to lawmakers opposing the legislation, and the organization is spending thousands on its ads. Governor Terry Branstad said today he's confident state regulators would have the ability to monitor the situation and protect rate-payers.

## **AARP Calls Iowa Nuclear Plant Bill "bad Public Policy" (DMR)**

By William Petroski

Des Moines Register, April 12, 2011

A state organization representing 378,000 older Iowans said today that thousands of its members have been contacting Iowa legislators to oppose bills that would help MidAmerican Energy construct a new nuclear electricity plant in Iowa.

"We oppose Senate File 390 and House File 961 because those bills substantially shift the cost and risk for nuclear power construction to ratepayers," said Bruce Koepl, AARP's state director. "Rather than rely on shareholders to finance a new power plant, this legislation shifts the billion-dollar-plus costs to ratepayers for a possible nuclear power plant, years before the plant is built, or the plant design has even been approved."

Koepl spoke to a reporters at an Iowa Statehouse news conference, remarking, "This is a bad bill, bad public policy." He distributed a letter from Florida State Sen. Mike Fasano, dated Feb. 17, 2011, to North Carolina Gov. Bev Perdue. Fasano, a Republican who describes himself as pro-business, told Perdue he regretted his support for a 2006 bill approved by the Florida Legislature which allowed utilities to charge ratepayers for new power plant construction costs before a plant is put in service.

Fasano wrote: "I believe that it is inherently unfair for utilities to ask their customers, our constituents, to front the costs of massive and expensive construction projects that are not even guaranteed to be completed. These risky investments ought to be the responsibility of utility shareholders and their investment partners, not the average ratepayer that is already struggling to pay their monthly utility bill or keep their business afloat."

AARP officials said the House version could be debated as soon as Tuesday on the House floor, while the Senate version could come up next week on the Senate floor. Both bills have already cleared House and Senate committees.

Koepl said the lack of consumer protections in the bills – no comparison of alternatives, no cap on how much rates can increase, no cost protection from cost overruns, and no protection if the proposed plant is cancelled, demonstrate the need for Iowa legislators to study how to best increase the state's electrical power generation.

William Fehrman, MidAmerican Energy's president, recently told legislators the company "certainly respects and appreciates" concerns about increased customer costs. But he added, "Costs are going to go up. That is just a fact of life." Consumers and legislators should also be aware that coal-fired power plants will be negatively affected in the future by "very strong and onerous regulations" linked to environmental issues, he said.

AARP has drafted an amendment to the proposed Iowa House bill aimed at developing an "informed plan" for expanding electrical generation in Iowa and is sharing it today with House members.

The pending Iowa bills would allow MidAmerican and its partners to recover "all prudent costs" associated with obtaining permits and licenses and to construct a proposed 540-megawatt plant to be located at an unspecified Iowa site. MidAmerican expects its share of the project's costs would be \$1 billion to \$2 billion, and partners would also contribute toward construction.

MidAmerican officials have said customers would see their electric bills rise 10 percent over a decade to pay for the investor-owned utility's share of the proposed plant. That doesn't include any other rate increases the company might seek to cover costs not related to plant construction.

Gov. Terry Branstad today indicated that he supports exploring further nuclear options in Iowa. He noted that the ultimate authority will go to the Iowa Utilities Board, which provides regulation for the state.

"I think there's a critical need for us to look at how we can in the future meet the additional energy needs in the state of Iowa," Branstad said. "And I think we should be open to considering things like clean coal and nuclear as well as natural gas and wind and the other sources that we have."

## **Vt. Gov Has Plan For 55-cent Charge (AP)**

By Dave Gram

Associated Press, April 12, 2011

MONTPELIER, Vt. (AP) — Vermont Gov. Pete Shumlin on Monday unveiled his plan to pay for promoting renewable energy development without relying on a surcharge to customers.

The governor said he wants to use money in the Clean Energy Development Fund to pay for the up-front grants, rather than tax credits.

Twenty-three Vermont renewable energy developers got a total of about \$8.5 million in tax credits to be taken over five years. Now, Shumlin said he wants to give them an option: the tax credit or half as much money in the form of an up-front cash payment when their project is up and running.

The governor and Administration Secretary Jeb Spaulding said they expected enough developers would take the up-front cash to save the fund between \$2.7 million and \$3 million. That's more than the \$2.38 million that would have been raised by a proposed 55-cent electric bill surcharge.

Shumlin said the fund would have sufficient cash "without raising 55 cents a month on Vermonters' electric bills at a time when Vermonters are hard-pressed to pay their bills and afford \$4-a-gallon gas."

Leigh Seddon, vice president of Alteris Renewables, a solar energy developer that has been working on a project in the southwestern Vermont of Pownal, said his company and its financing partners had welcomed the chance to take payment up front, even if smaller, rather than the tax credit over five years.

"When this proposal came to us from the administration, would you accept \$450,000 instead of the \$900,000 tax credit so you could get it this year when you want to build the plant, not over five years, the investment people ... said that works for us, financially. That works for us to have the cash up front and the certainty, and we will go along with it," Seddon said.

The scramble to find the right source of money comes as what has been the Clean Energy Development Fund's main funding source, the Vermont Yankee nuclear plant, is slated to close down next March. Shumlin and lawmakers had been looking for a one-year bridge to get from that funding source to a new one.

The governor said Monday he still hoped to get money for the fund from Vermont Yankee's owner, New Orleans-based Entergy Corp. Shumlin said he wants lawmakers to pass a new tax on spent nuclear fuel being stored in the state.

Vermont Yankee's spent fuel storage pool is nearly full and the plant has begun storing some of its spent fuel in concrete cask outside its reactor building in Vernon. Like other nuclear plants around the country, Vermont Yankee has been hard-pressed to find a place to send its highly radioactive waste. The federal government, so far, has not fulfilled a promise, made in a law passed by Congress two decades ago, to take the waste from reactors to a national disposal site.

The electric bill surcharge would have amounted to \$6.60 per year and became a hotly debated issue in the Legislature last week. Some lawmakers argued it would be an extra cost ratepayers don't need; others said it would be regressive, since both rich and poor ratepayers would be charged the same amount.

Shumlin told reporters on Monday the surcharge had been "not my idea," but Rep. Tony Klein, chairman of the House Natural Resources and Energy Committee, said it did come from the administration, in the person of now former Deputy Commissioner of Public Service Stephen Wark.

Told the governor was saying the idea didn't come from him, Klein scoffed.

"It didn't (come from Shumlin) but it came from his Department (of Public Service) and that's close enough for me," he said. "It came from the department and they work for him."

## **Shumlin Wants Energy Fund Redesign (WCAX)**

By Jack Thurston

WCAX-TV, April 12, 2011

Vermont now has a little more than \$8.5 million in its Clean Energy Development Fund. That fund grants tax credits to builders of solar parks and other renewable energy projects. But since the Vermont Yankee nuclear plant pays into the program, and since Yankee is scheduled to close next year, the Shumlin administration had to come up with a way to keep the development money flowing.

"I really think it's a win-win," said businessman Leigh Seddon. Seddon is one of the developers behind Alteris Renewables. The group wants to build Vermont's largest solar park at the old racetrack in Pownal, on the Massachusetts border. The state is encouraging him with \$900,000 in tax credits over five years when the project's done. But Governor Peter Shumlin, D-Vermont, instead wants to give the project a one-time cash payment of \$450,000 upon completion. "That works for us," Seddon said.

Shumlin says switching the way the state handles its Clean Energy Development Fund will ensure money's in the pot to entice other projects to break ground. Right now, 23 different businesses are up for credits for nearly 100 projects. The governor calls instant pay-outs of half what companies would get over time a far better way to fund the program than a previous proposal in the House. Lawmakers had been considering tacking a 55-cent surcharge onto Vermonters' monthly electric bills.

"My challenge as governor is the simple fact that Vermonters on average are making the same money they were making 10 years ago, and their bills have gone up," Shumlin said.

But some Republicans question Shumlin's motivation. The Williston company AllEarth Renewables, which makes and designs wind and solar systems, suggested the governor look at the idea. The head of that company was a big donor to Shumlin's campaign and his firm would get fast cash instead of long-term tax credits if the proposal goes through.

"We, up until last week, had no mention of any of this stuff," Turner said. "So having a new proposal within three days of the previous proposal is quite concerning to us."

"It's an example of government being smart," Shumlin insisted.

Shumlin says the idea first went through the public service and tax departments, and was floated to many of the companies taking advantage of the fund, not just AllEarth. Plus, the idea isn't really new: the Shumlin plan is a modified version of the way the federal government handles incentives. That system is already established law.

Some may wonder why developers would take money at 50-cents on the dollar of what they were promised as tax credits. The company that wants to put the solar park in Pownal says it's still very hard to get funding in this economy, so it thinks investors will be more likely to sign off if they know they'll get fast cash returns instead of long-term credits.

Again, the cash payments would not go to developers until their projects are complete. And nothing here's final, either. The change to the way the fund is administered still needs approval from Vermont lawmakers. Republican leader Don Turner says this is just one of the many headaches that will come when Vermont Yankee closes.

## **Peace Walk Extends From Indian Point To Vermont Yankee (MIDHUD)**

Mid-Hudson News, April 12, 2011

BUCHANAN – Some two dozen people started their Peace Walk in Croton Sunday, stopped to pray outside the Indian Point nuclear power plant in Buchanan, before they set out for the 206-mile walk to the Vermont Yankee nuclear power plant.

Japanese Buddhist nun Jun Yasuda of the Grafton Peace Pagoda in Petersburg, NY, led the walk.

"People have been suffering from the earthquake; so many people died by the earthquake and also so many people are suffering under the nuclear situations," she said.

Among those joining the walk was Gerry Katzpen of Putnam Valley.

"While it would be wonderful to think that nuclear energy can provide clean energy, carbon free energy, it seems sometimes that the risk may not be worth that benefit because should be a mishap, it endangers millions of lives for a very long term," he said.

Sr. Yasuda said the long walk was meant as a meditation for a nuclear free future world.

Debates rage over the future of both Indian Point and Vermont Yankee.

Licenses for the two Indian Point reactors are up in 2013 and 2015, respectively. Entergy, which owns Indian Point, is seeking 20-year renewals for both reactors. Gov. Andrew Cuomo wants the plant closed.

Vermont Yankee is scheduled to shut down in 2012, but the owners are trying to keep it open, an effort opposed by the state attorney general.

## **Riverkeeper Warns Lawmakers Of Risks At Indian Point (WESTJN)**

By Jorge Fitz-Gibbon

Westchester Journal News, April 12, 2011

WHITE PLAINS — It wouldn't take a tsunami to dangerously damage the Indian Point nuclear reactors, an environmentalist group told Westchester County legislators on Monday.

Speaking one month after an earthquake and tsunami set off a crisis at Japan's Fukushima nuclear plant, Hudson Riverkeeper Paul Gallay also told a county board committee that radioactive spent fuel pools at the Buchanan reactors are Indian Point's "Achilles' heel."

"All of these issues do not require a tsunami, which is one of the things that Indian Point says, and says that we should be easy in our minds because we won't have a tsunami," Gallay said. "Well, if this plant is not equipped to handle an earthquake without a tsunami, we could be in the situation we find ourselves in in Japan."

"There are issues associated with the age of the plant that have to do with corrosion of piping, that have to do with metal fatigue in the containment dome, that have to do with embrittlement of the containment dome," he said.

The public meeting, held at the Michaelian Westchester County Office Building in White Plains, is the last in a series held by Legislator Michael Kaplowitz, D-Somers, and Legislator Martin Rogowsky, D-Harrison.

Kaplowitz chairs the board's Committee on Environment and Energy ; Rogowsky chairs the Public Safety and Security Committee.

"Whether Indian Point is open or closed, we're going to need an evacuation plan because of the spent fuel that is at Indian Point," Kaplowitz said Monday.

"So we're going to deal with this issue for as much as 10,000 years, the scientists tell us," he said. "And certainly dry cask as much as 100 years in the current format, and the spent fuel as it currently exists for some period of time."

Kaplowitz said the continuing nuclear crisis at Japan's Fukushima plant warrants close scrutiny of Indian Point, which sits near an earthquake fault.

Federal and state officials have also made nuclear safety a priority, prompting the Nuclear Regulatory Commission to assure that Indian Point will top the list when the agency conducts more thorough seismic assessments of the nation's nuclear plants.

NRC spokesman Neil Sheehan said the agency was quick to react after the Fukushima incident, and is finalizing a stringent assessment of the plants. He said the agency has strict standards for earthquake resistance.

"We are hardly ignoring the lessons learned that came out of the Japan reactor events. We intend to look at them aggressively and make changes at US reactors wherever appropriate," Sheehan said. "We are not sitting back and remaining indifferent to the earthquake risks faced by Indian Point or any other plants."

Jerry Nappi, a spokesman for Entergy Nuclear Northeast, which owns Indian Point, added that plant officials "take the storage of used fuel very seriously and we store it through two very safe methods."

Nappi said Entergy also questioned legislators' motive for the county meetings.

"Legislator Kaplowitz has moved past addressing the understandable concerns people have following the earthquake and tsunami in Japan and on to his self-serving agenda to close Indian Point," Nappi said.

But Gallay and Phil Musegaas, Riverkeeper's Hudson River program director, contend that the plants' age — including underground pipes that carry cooling water and power lines required to operate backup systems, should be a concern at Indian Point.

Of particular concern, they said, is that the NRC does not evaluate evacuation plans, seismic resistance and the spent fuel pools when it re-licenses nuclear plants — something the agency is currently considering for Indian Point.

"What this process needs," Gallay said, "this relicensing process, the process of evaluating the safety of the nuclear power stations in the United States and Indian Point in particular — it requires independent, expert analysis prior to any decision whether to re-license the Indian Point power plants."

## **Entergy, Riverkeeper Officials Invited To Brief Lawmakers On Indian Point Safety; Watch At 3 P.m. (WESTJN)**

By Jorge Fitz-Gibbon

Westchester Journal News, April 12, 2011

WHITE PLAINS — The Westchester County Board of Legislators will hold its latest in a series of public meetings on the Indian Point nuclear power plants today at 3 p.m., seeking to shed light on safety issues at the Buchanan plant in the wake of the crisis facing Japan's Fukushima nuclear plant.

Watch the session live online at 3 p.m.

The county board's committees on environment and energy, and public safety and security, which have hosted the meetings, said they have invited officials from the environmental group Riverkeeper as well as officials from Entergy Northeast, which owns the Indian Point reactors. The board said in a press release that Entergy officials had not notified the committees if they would be able to attend.

County Legislators Michael Kaplowitz, D-Somers, and Martin Rogowsky, D-Harrison, who chair the two committees, said they began holding the public meetings to ensure that residents have complete information about Indian Point.

Federal and state officials, including Gov. Andrew Cuomo, have focused on the safety of the plant after the Japanese reactor was damaged during a earthquake and tsunami last month. Riverkeeper, a frequent critic of the Indian Point plant, has been among those raising concerns. The Buchanan plant lies close to an earthquake fault.

Entergy is awaiting word from federal officials on its application to extend the plant's operating license, a move opposed by Riverkeeper, among others.

Last week the Westchester County board announced legislation extending the federal evacuation zone around Indian point from 10 miles to 50 miles in the wake of the Japanese nuclear crisis.

Today's meeting will be held at 3 p.m. on the eighth floor of the county office building at 148 Martine Ave., on the corner of Court Street in White Plains. The meeting is open to the public.

## **US Nuclear Output Falls As Units Shut In New Jersey, Nebraska (BLOOM)**

By Colin McClelland

Bloomberg News, April 12, 2011

US nuclear-power output fell 0.4 percent as reactors shut in New Jersey and Nebraska, the Nuclear Regulatory Commission said.

Power generation nationwide decreased 322 megawatts from April 8 to 75,969 megawatts, or 75 percent of capacity, according to an NRC report today and data compiled by Bloomberg. Twenty-four of the nation's 104 reactors were offline.

Public Service Enterprise Group Inc. (PEG) shut the 1,130- megawatt Salem 2 reactor located about 18 miles (29 kilometers) south of Wilmington, Delaware. It was operating at 95 percent of capacity on April 8. Another unit at the site, the 1,174- megawatt Salem 1, is operating at full power.

Omaha Public Power District idled the 482-megawatt Fort Calhoun reactor located on the Missouri River, 19 miles north of Omaha. It was operating at full capacity on April 8, the commission said.

Southern Co. (SO) slowed the 860-megawatt Farley 2 reactor in Alabama to 56 percent of capacity from 100 percent on April 8. Another unit at the site, the 851-megawatt Farley 1, is operating at full power. The plant is located about 18 miles east of Dothan.

FirstEnergy Corp. (FE) started the 940-megawatt Beaver Valley 2 reactor in Shippingport, Pennsylvania. It is operating at 25 percent of capacity.

While the unit was at 15 percent of capacity on April 9, the "A" auxiliary feedwater injection header was declared inoperable due to a water leak and the reactor was put in hot standby mode, meaning it was at operating pressure and temperature, the NRC said.

At about 4 a.m. local time yesterday, the unit was manually tripped offline because of a build-up of steam in one of its generators, the federal agency said.

The plant is located about 26 miles northwest of Pittsburgh. Another 940-megawatt unit at the site, Beaver Valley 1, is operating at 82 percent of capacity.

Entergy Corp. (ETR) started the 1,025-megawatt Indian Point 3 located on the Hudson River about 27 miles north of New York City. It is operating at 86 percent of capacity. The 1,020- megawatt Indian Point 2 reactor is operating at full capacity. Unit 1 was shut in 1974.

The Tennessee Valley Authority boosted output from the 1,104-megawatt Browns Ferry 2 reactor in Alabama to 68 percent of capacity from 19 percent on April 8.

Browns Ferry Units 1 and 3, which have respective capacities of 1,065 megawatts and 1,115 megawatts, are operating at full power. The plant is located 84 miles north of Birmingham on Wheeler Lake, near the Tennessee border.

FirstEnergy slowed the 893-megawatt Davis-Besse reactor to 91 percent of capacity from 100 percent on April 8. The unit is located on Lake Erie 21 miles east of Toledo, Ohio.

Some reactors close for maintenance and refueling during the spring and fall in the US, when demand for heating and cooling is lower. The outages can increase consumption of natural gas and coal to generate electricity.

The average US reactor refueling outage lasted 41 days in 2009, according to the Nuclear Energy Institute.

## **Shimkus Says Yucca Mountain Trip A Go Despite Cost Warnings (SLPD)**

By Bill Lambrecht

St. Louis Post-Dispatch, April 12, 2011

WASHINGTON -- Even before the nuclear disaster in Japan, US nuclear operators and their allies in Congress were demanding that the Obama administration rethink its decision to put Yucca Mountain off limits to high-level reactor waste.

Two weeks ago, Rep. John Shimkus, R-Collinsville, who heads an Energy subcommittee dealing with atomic wastes, announced that the Energy Committee will investigate the decision.

And that meant Shimkus and other members would be traveling to Nevada this month to view Yucca Mountain for themselves, Shimkus said.

Fact-finding trips by Washington politicians are common, but this one is proving to be anything but.

On Friday, Rep. Henry Waxman, of California, urged Shimkus to cancel the trip, declaring that it would cost \$200,000, including the cost of helicopters to transport members from Las Vegas.

Citing an Energy Department letter, Waxman, the ranking Democrat on Shimkus's subcommittee, said the trip could turn into a big waste if unsafe levels of dangerous gas keep members from entering Yucca's storage tunnel.

The letter went on to say that "the environment within the tunnel will not be comfortable. There will be a lot of airborne dust and visitors will likely have to wear respirator masks...When riding in the 'mules', the entire group will not be able to hear well."

Waxman, hours before a budget deal averted a curtailment of government services, wrote: "At a time when the government is facing a shutdown over funding, it seems completely inappropriate to incur these needless expenses."

Shimkus said he is undeterred -- and "appalled" at the suggestion that the delegation would be wasting money. "We spent \$14 billion or \$15 billion to prepare this site for long-term storage. What are they trying to hide?" he asked in an interview.

The Energy Department is distorting the cost, Shimkus contended. The delegation is willing to ride a bus to the site and doesn't need helicopters, he said. Nor is it a must that they see inside the mountain, meaning that expensive safety tests and other preparation is unnecessary.

"What I think has happened is that they have illegally closed Yucca Mountain," Shimkus asserted.

Nearly 30 years ago, Congress declared that the nation should have a single repository for the dangerous spent fuel from reactor cores. Five years later, Yucca Mountain, a volcanic ridge northwest of Las Vegas, was selected.

Since then, a combination of safety questions and political opposition has left the massive project on life-support. The Obama administration announced last year that it was committing no more money to Yucca Mountain and looking elsewhere for a location to permanently house some 60,000 tons of intensely hot material.

As part of its investigation, the House Energy Committee is demanding that the Energy Department and Nuclear Regulatory Commission provide documents and details about the Yucca decisions.

Shimkus said he had hoped that as many as a dozen House members, including Democrats, would be making the trip during a congressional recess at month's end. He worries now that the lack of cooperation might dissuade some colleagues from the travel.

"We think they're slow-stepping us to create a smaller group," Shimkus said. "There are just a lot of weird things going on."

After reading this blog post, Rep. Shelley Berkley, a Democrat who represents the Nevada area, remarked that perhaps the Energy Committee members "think there is an extra \$100 billion laying around inside Yucca Mountain to pay for their plan to turn Nevada into a radioactive graveyard."

She added in a statement: "Instead of parading around an empty hole in the Nevada desert for the cameras, why doesn't Congressman Shimkus call on the nuclear industry to quit putting profits over the safety of America's families and join me in demanding they secure waste in on-site dry-cask storage."

Shimkus observed that Energy Department officials told him no news media members would be permitted to cover the visit.

## **Lawmakers To Take Buses On Yucca Tour (LVSRJ)**

By Steve Tetreault

Las Vegas Review-Journal, April 12, 2011

Full-text stories from this source currently cannot be included in this document. You may, however, click the link above to access the story.

## **US Needs Nuclear Waste Storage Site (HILL)**

By Rep. John Shimkus

The Hill, April 12, 2011

The March 11 earthquake in Japan led to a tsunami that crippled the Fukushima Daiichi nuclear power plant. While a similar situation is not likely at any US nuclear plant, we must use this to look at our country's lack of a central storage facility for nuclear waste.

The first commercial nuclear power plant began operating in the United States in 1960. In 1982 the Nuclear Waste Policy Act made the federal government responsible for collecting nuclear waste.

In 1987, Yucca Mountain was named the sole site for a permanent repository of nuclear waste. The Department of Energy (DOE) confirmed the scientific side of this decision in 1994. In 2002, Congress and the President approved Yucca Mountain again. In 2008, DOE filed a license application with the Nuclear Regulatory Commission to build Yucca Mountain.

Obviously, the decision to move forward with a national nuclear waste repository has been supported by Republican- and Democrat-controlled Congresses and Republican and Democrat presidents for all these years.

I have visited Yucca Mountain. It is located on federal property. The storage site would be 1,000 feet below ground in a remote desert location. Earthquakes have had little impact on this area and even less of an impact underground.

Today, we store nuclear waste at 121 sites in 39 states. Nuclear power provides over 20 percent of our nation's electricity. That number is closer to 50 percent in Illinois.

In Illinois, eight pools house spent nuclear fuel rods from the 13 nuclear power plants, 11 of which are still operating. Two pools are within 40 miles of downtown Chicago. Is that really where we want to store nuclear waste?

In testimony before the Senate on March 30, Massachusetts Institute of Technology professor of physics Ernest Moniz called for these spent fuel rods to be stored in "dry" casks at regional government facilities. Sen. Dianne Feinstein (D-Calif.) agreed.

While I agree with the government following its own law and taking control of nuclear waste, I question why we should throw away the \$14.5 billion already spent on Yucca Mountain. We don't need regional sites; we already have designated a consolidated government storage site!

Also on March 30, President Obama called for an increase in nuclear power as part of a clean energy standard. While I may not agree with a mandated standard, I know that nuclear power will continue to be vital in our nation's electricity portfolio.

Unfortunately President Obama and his administration have unilaterally halted work on Yucca Mountain. They would rather see nuclear waste stored all over the country instead in Nevada – home of Senate Majority Leader Reid.

I believe the administration is failing to carry out the current federal law. In order to find out exactly why the administration halted work on Yucca Mountain, under our oversight authority House Energy and Commerce Committee Chairman Fred Upton (R-Mich.) and I are proceeding with an investigation. On March 31 we sent letters to the Secretary of Energy and to the Chairman of the Nuclear Regulatory Commission.

In addition, as part of our oversight and responsibility to rate payers and taxpayers, I will be leading a delegation of legislators to tour Yucca Mountain later this month.

Past Congresses and administrations have approved Yucca Mountain. And while it has taken too long to become reality, this administration cannot rewrite the law or pull already issued permits away from it.

Rep. John Shimkus (R-Ill.) is chairman of the House Energy and Commerce Subcommittee on Environment and the Economy.

## **Despite House GOP Push, Harry Reid Declares 'Yucca Is Dead' (LVS)**

By Karoun Demirjian

Las Vegas Sun, April 12, 2011

In the final days, the budget compromise came down to a faceoff over policy riders, with funding for Planned Parenthood, National Public Radio and the authority of the Environmental Protection Agency taking center stage.

But it's one rider that fell off the table quietly that will likely resonate strongest for Nevada.

"Yucca Mountain is dead," said Senate Majority Leader Harry Reid, who was the chief negotiator for Democrats. "And I think it's time for opponents to move on."

Yucca Mountain, which hasn't received funding under any federal budget that's been passed since Obama came to office, came back on the agenda this past winter, when Republican House leaders included funding and a directive about the projected nuclear waste storage site in their budget bill, H.R. 1.

That bill, which passed the House but failed in the Senate, would have made it illegal to use federal funds to derail ongoing activities at Yucca, including the siting process, now mired in the Nuclear Regulatory Commission's approvals process. Effectively, it would have kept the site open.

"H.R. 1's history, man," Reid said Monday when asked if he was at all concerned that it might still be funded.

Yucca Mountain's an emotional issue for many Nevadans, and one that members of the state delegation kept recalling, both as a matter of policy and politics, throughout the budget process.

Nevada Republican Rep. Dean Heller, who supported H.R. 1, tried to remove the Yucca rider from the bill by amendment before it passed. His attempt failed.

Nevada Democratic Rep. Shelley Berkley tried to paint the whole budget standoff in terms of the Yucca Mountain rider.

"Republicans say we have to make damaging budget cuts at the same time they are seeing these same Republicans push for \$100 billion in spending to turn Nevada into a nuclear waste dump," she said. "Nevadans reject Yucca Mountain ... and they are stunned that these same Republican lawmakers are willing to shut down the government over an amount that is less than half the cost of Yucca Mountain."

While Reid's efforts may have finally killed the Yucca rider in the budget process, enthusiasm for keeping the project alive doesn't seem to be waning in the House. Republican members of the House's Energy and Commerce Committee had been planning on taking an April recess vacation to view the site.

But because the site's been closed for two years, it would take some doing to ready it for inspection, and the extra effort is expected to run the government about \$175,000 -- not to mention the cost of helicopters and lodging.

"To think that the House Republican members of the Energy and Commerce Committee are planning a trip to Yucca Mountain that will cost almost \$200,000 to get the tunnel ready so they can go look at it?" Reid said Monday. "The only thing that might be a good idea is if they all travel to Las Vegas and stay in one of our hotels, that's the only good part about it."

The proposed trip, spearheaded by Illinois' Rep. John Shimkus, has been canceled, in part because of spreading revelations that whatever they found, there's little chance that anything but a huge influx of political will and capital could get the project up and running again soon.

"The President of the United States opposed it. The Secretary of Energy opposed it," Reid said. "It has no money."

That last bit is key.

Yucca Mountain's potential funding lies in the Treasury's Nuclear Waste Fund, made up of annual fees charged to utility companies based on the amount of nuclear power plant-generated electricity they produce and sell. Money that comes in is considered mandatory spending, but money can only flow out as a result of a congressional authorization.

Thus, there's more coming in than going out -- an imbalance that has grown the fund to nearly \$30 billion. Under the Nuclear Waste Policy Act, the Treasury Department can reinvest whatever money goes unspent (which it mostly does) as "non-marketable Treasury securities." Because it's sitting there, the money is treated as part of the general Treasury funds on the books, a categorization that lets the Treasury count what's in waiting toward deficit reduction.

The money hasn't yet been liquidated: Congress rejected an effort led by Sens. Lindsey Graham and John McCain in 2009, shortly after Obama indicated his intention to see to it that the Yucca project remain on ice.

But the project has never received enough political backing to make dipping into Treasury funds feasible -- nor would it actually do much good until the Nuclear Regulatory Commission's Yucca evaluation is complete.

While the events at the Fukushima reactor in Japan have opened an intense season of discussion around nuclear energy, it doesn't seem like that's translating toward enthusiasm for re-opening Yucca so much as it is making lawmakers look toward safer ways of storing nuclear waste on site.

"Are we not in a world that has accepted reprocessing? Should we not be looking at ourselves as an alternative to a \$90 billion Yucca Mountain investment that might come online 10 years from now?" Sen. Dick Durbin asked a panel of the government's nuclear experts, including Nuclear Regulatory Commission chair Greg Jaczko and the acting assistant energy secretary Peter Lyons.

"The one thing that was proven to be safe [in Japan] was the spent fuel rods in the dry-cast storage," Reid said, stressing that carting off spent fuel rods to Nevada seemed a gratuitous step when safe storage procedures were available closer to plants themselves. "It's really not sensible for them to try to use this as an issue."

## **US Senate Majority Leader Reid Says Yucca Rider Removed From CR (PLATTS)**

Platts, April 12, 2011

US Senate Majority Leader Harry Reid said Monday that a rider barring the Nuclear Regulatory Commission from completing the closeout of the Yucca Mountain repository project was knocked out of a stop-gap spending measure last week. "I've said it before and will say it again, Yucca Mountain is dead," Reid, Nevada's senior senator and the state's leading opponent of the Yucca Mountain project, told reporters during a teleconference. The rider to the continuing resolution that lawmakers approved late Friday to avert a government shutdown did not contain any funding. It would have, however, barred the NRC from spending any money to further close out any agency activities associated with the Yucca Mountain repository project. President Barack Obama's administration canceled the program, citing Nevada's opposition to the facility. By the time fiscal 2011 began

October 1, both the Yucca Mountain project and the DOE office that oversaw it had been dismantled. NRC Chairman Gregory Jaczko also had terminated NRC's licensing activities associated with the DOE's Yucca Mountain repository license application in October. --Elaine Hiruo, elaine\_hiruo@platts.com

## **Analyst Questions Safety Of Spent Fuel Storage (AP)**

Associated Press, April 12, 2011

CHATTANOOGA, Tenn. — The Tennessee Valley Authority stores spent fuel and fuel rods at its plants, just like other nuclear plant operators, but an industry analyst is questioning the safety of that storage.

TVA has more than 2,544 metric tons of radioactive spent fuel in cooling ponds at its Sequoyah and Watts Bar nuclear plants in Tennessee and Browns Ferry plant in Athens. That is far more than in the reactors themselves.

The Union of Concerned Scientists' Edwin Lyman said the amount of fuel from TVA's reactors represents about "100 reactor-years worth of discharges."

Nuclear industry analyst David Lochbaum told the Chattanooga Times Free Press that some storage pools are in buildings with sheet-metal siding.

TVA nuclear spokesman Ray Golden said the spent fuel pools at TVA's three nuclear plants are safe.

## **Murkowski: Smaller Steps On Energy (POLITCO)**

By Darren Goode

Politico, April 12, 2011

Alaska Sen. Lisa Murkowski thinks Congress will have more success taking a "graduated" approach to energy legislation while keeping up the pressure to respond to last year's Gulf of Mexico spill.

While the Senate Energy and Natural Resources Committee, in which Murkowski is the top Republican, approved separate strategies last Congress addressing the historic oil spill and broader energy problems, the full Senate and Congress more generally did not follow suit.

"So more of a graduated approach to an energy policy, and I happen to believe that we will have greater likelihood of success in advancing something like that through the committee and getting it through the floor of the Senate and the House as well," Murkowski told POLITICO in the video series "Powering America's Future."

Murkowski cited legislation increasing hydropower and addressing small-modular nuclear reactors as examples. There is "probably much greater likelihood" of something like the latter bill moving "than a full-on expanded nuclear piece, particularly in view of just the uncertainty that we're seeing after the earthquake in Japan."

Senate Energy and Natural Resources Committee Chairman Jeff Bingaman (D-N.M.) will start marking up energy measures Tuesday, with additional measures coming before Memorial Day.

In order to spur floor action in this Congress, Bingaman has said he hopes to pass everything out of committee by early summer, including legislation designed to ensure the Interior Department "has the authority and resources they need to maintain proper regulation of oil and gas drilling on the outer continental shelf," he said at a March 30 POLITICO Pro event.

As the first anniversary of the April 20 explosion of the Deepwater Horizon rig that led to the biggest oil spill in history approaches, lawmakers also face a public both skittish on nuclear power after the damage to Japan's Fukushima Daiichi reactor and frustrated by the rise of gas prices.

Some of the ideas Murkowski thinks the energy panel will take up may not sound like headline-grabbing proposals that would restore public confidence in how Capitol Hill is responding to their concerns.

"I wouldn't suggest it's kind of nibbling around the edges," Murkowski said. "I would suggest to you that what we're doing is being more focused in terms of those areas where we feel that we can reach consensus on some energy issues, work to utilize the committee process to build good, solid legislation in these areas, advance them through."

She added, "It is a broader, more comprehensive" plan than just focusing on something like hydropower specifically. "But we haven't gone about it in the same manner that we did in the last Congress. We took the 'full-meal deal' approach, and we weren't able to sell it."

The panel also wasn't able to fully sell the strategy it passed last June to quickly respond to the Gulf spill, getting caught in the politics in the broader Senate on raising the per-spill liability limit for companies and cutting tax incentives for the oil industry.

At the time, "the explosion, the deaths, just the real tragedy that went on with that, the nation was fixated on what was happening in the Gulf of Mexico as we watched on our TVs, as we read about the efforts to plug that hole," Murkowski said. "And then they find success and they plug the well and the cleanup continues, and no longer is this incident in the news. And then, it seems like the pressure is off of us here in the Congress to act legislatively."

"We shouldn't allow the timing and the circumstances of what has happened down there to remove us from the responsibility of addressing the reforms that need to be made," she added.

Last year's failure of Congress to produce a spill-response bill showed "even if we were successful in building a bipartisan product, there's no guarantee that it then becomes a priority," she said, adding that Senate Majority Leader Harry Reid should make it a priority as well. "It needs to be made a priority by the administration, to say we need to have these structural reforms."

The Interior Department has started separating safety and environmental oversight from approval of offshore drilling leases and collection of royalty relief.

Interior Secretary Ken Salazar "has done some things internally. But quite honestly, a lot of the fixes require a legislative fix," Murkowski said.

One of those is largely out of the hands of Murkowski and the Senate energy panel.

Sens. Mary Landrieu (D-La.), Mark Begich (D-Alaska) and Bob Menendez (D-N.J.) are trying to find a compromise to raising the two-decade-old \$75 million-per-spill liability cap for companies.

Landrieu and Begich are meeting first to develop an idea that would need to pass muster with those like Menendez, who is one of the leading offshore drilling critics. "We've told our staffs to get back at it," Begich told POLITICO. He met briefly with Landrieu to talk about it. "We both feel it's time to re-engage."

Murkowski said that's going to have to happen.

"One of the things that held us up ... was what happens with the liability issue and the cap," she said. "And so, maybe what you do [is] take people like Bob Menendez, who was leading on that issue, [Sen.] Frank Lautenberg [D-N.J.], and team them up with Mary Landrieu, myself, some of the others to make sure the commitment to fixing the systems is made while at the same time we can address the liability issue."

Meanwhile, Murkowski and Bingaman are also working on President Barack Obama's "clean energy standard," which promotes renewable power, nuclear sources and cleaner use of coal. She and Bingaman last month solicited public input on what a standard should entail. Responses are due Monday.

"There are those who suggested that a clean energy standard, in fact, may be nothing more than, you know, cap and trade under a different name," Murkowski said. "I don't think that that is the case, but if that is the case, then CES is not going to happen if that's how it is viewed. So ... we're looking to see just what is the temperature out there for an approach that would mandate a clean standard."

## **Higher MOX Fuel Concentration Weighed For US Reactors (GSN)**

Global Security Newswire, April 12, 2011

The federal Tennessee Valley Authority and Energy Department have conducted talks on potentially substituting mixed-oxide fuel derived from nuclear-weapon material for one-third of the low-enriched uranium in several US power reactors, a substantially higher proportion of MOX fuel than a crippled Japanese nuclear plant had used, the New York Times reported on Sunday (see GSN, April 5).

Any TVA move on the proposal has been put off pending a review of the behavior of MOX fuel at Japan's Fukushima Daiichi nuclear power plant, which was severely damaged last month by a 9.0-magnitude earthquake and tsunami (see related GSN story, today). The federal investigation would address the extent to which the MOX fuel -- which comprised 6 percent of the material in the Japanese facility's No. 3 reactor -- has heated and broken down since the March disasters.

"We are studying the ongoing events in Japan very closely," TVA spokesman Ray Golden said.

The Mixed-Oxide Fuel Fabrication Facility, a site under construction at the Savannah River Site in South Carolina, would convert 34 metric tons of excess weapons plutonium to nuclear power plant fuel, according to an earlier report. The facility's expense has reached almost \$5 billion since the government signed a contract for its creation, and no entity has officially stepped forward to buy the fuel.

A nuclear regulatory board this month called for new testimony on measures to manage and protect the plutonium the facility would house, noting "significant public safety and national security issues" (see GSN, April 4).

Some experts contend MOX fuel poses a greater risk of dangerous incidents than other nuclear fuel, but the administration has defended the material's safety profile. Six countries other than Japan have authorized the fuel's regular use, said Anne Harrington, deputy administrator for the US National Nuclear Security Administration.

Opponents of the fuel have made "an opportunistic attempt" to damage the material's reputation following the Fukushima disaster, Harrington said. "MOX is nothing new," she added.

"Proliferation causes a far greater danger to a far greater number of people than highly controlled use of this fuel in a reactor," she said.

"MOX was not the cause of [the Japanese] accident, and the consequences of it have not been impacted by MOX," said David Jones, a vice president with the French atomic firm Areva, a primary participant in the US MOX plant's construction. No firms indicators have emerged of plutonium escaping from the Japanese facility, the Times reported.

The MOX facility's detractors, though, suggested the project faced a growing prospect of being thwarted and becoming what Union of Concerned Scientists senior staff scientist Edwin Lyman called "a plant to nowhere." Such a development would scuttle Washington's plan for disposing of excess US weapons plutonium capable of powering as many as 10,000 nuclear weapons or a larger number of radiological "dirty bombs," according to the Times. The material might also power 43 reactors for one year, the newspaper said.

Releases of the converted weapon material could pose greater health risks than other nuclear fuel types, Lyman concluded in a 2001 study. Energy Department officials have acknowledged but played down the potentially greater health threat posed by MOX fuel.

MOX opponents said Washington has lessened the South Carolina plant's nonproliferation benefit by loosening certain regulations for the protection of plutonium. The material might be stolen ahead of its conversion into material too dangerous for human handling, they said.

The Nuclear Regulatory Commission has required fewer protective measures for MOX fuel inside larger components on grounds that the material would be of less interest to extremists.

Shaw Areva MOX Services, which is constructing the South Carolina plant, submitted and then canceled a formal call for the government to waive plutonium management and tracking requirements. Despite the revocation, the Atomic Safety Licensing Board responded with a call for additional testimony on the MOX site's ability to safely handle and transfer plutonium.

"We continue to believe that the MOX project meets all the regulatory requirements for licensing, and we welcome the opportunity to present our case," the entity said in a statement.

"I'd defy anyone to walk in and walk out with any of our plutonium," Harrington added (Becker/Broad, New York Times, April 10).

## **Shaw Group, Babcock & Wilcox To Help Dismantle Damaged Japanese Plants (CLTBIZJ)**

By John Downey

Charlotte (NC) Business Journal, April 12, 2011

Welcome to Power Weekend, catching up on stuff we've learned since Friday.

Babcock & Wilcox and the Shaw Power Group are working with Toshiba and Westinghouse on plans to dismantle the badly damaged nuclear reactors in northern Japan.

The New York Times reported last week Tokyo Electric Power Co., owner of the crippled Fukushima reactors, acknowledges the plants must be scrapped.

Toshiba, the lead company involved in the work, has assembled a team of experts from the other companies to help with the plans. Toshiba is the principal owners of Westinghouse. The parent company of Charlotte's Shaw Power Group, The Shaw Group, owns 20% of Westinghouse.

Westinghouse and Babcock & Wilcox, also based in Charlotte, dismantled the Three-Mile Island plant in Pennsylvania after it experienced the worst nuclear accident in US history in 1979.

The Times reports: The plans to take apart the reactors are complicated not only by the volatility of the situation but also by the uncertainty about the reactors' condition once they finally cool. No one has ever decommissioned four damaged reactors at one power plant, let alone reactors rocked by a powerful earthquake and swamped by a tsunami.

The American teams began arriving in Japan about two weeks ago, the paper reports. But work cannot start in earnest, it says, until TEPCO gets the reactors under control. "All things hinge on having safe access," David Richards, a president at Babcock & Wilcox told the Times. S.C. regulators let activist intervene in Duke nuclear proceeding

S.C. regulators have rejected Duke Energy's bid to prevent anti-nuclear activist Tom Clements from participating in hearings on allowing Duke to spend \$229 million more on planning for the proposed Lee Nuclear Station.

Clements, who is with S.C. Friends of the Earth, filed to intervene in the hearings as an individual. That allows him to participate — and represent his organization's viewpoint — without hiring a lawyer.

Duke objected. It noted Clements is not a Duke customer — living in Columbia, S.C. — and so had no direct interest in the outcome of the request.

The S.C. Public Service Commission voted unanimously Friday to let Clements participate.

Duke has already spent \$230 million on planning for the plant, which would be built near Gaffney, S.C. If the commission grants Duke's request, it would be possible for the company to add those costs into its rate base, regardless of whether the plant

is built. Clements and his organization object to building the plant. N.C. cities still seek rate concessions from Duke in Progress merger

The city of New Bern has talked to federal regulators about reducing the costs for power from Progress Energy as part of its proposed acquisition by Duke Energy, the New Bern Sun Journal reports.

The city continues to seek allies among other eastern N.C. cities to help pay for a lawyer to represent the cities in merger hearings before the Federal Energy Regulatory Commission. New Bern would like other cities to chip in \$40,000 to \$100,000 for the effort.

Last week, New Bern Mayor Lee Bettis attended a meeting of the N.C. Municipal Power Agency that represents 20 eastern cities that have their own power utilities. He said his fellow city officials showed interest in the proposal, but no agreements have been made on providing money for a lawyer. John Downey covers the energy industry for the Charlotte Business Journal. Click here to read more recent postings on Power City. To get an RSS feed for Power City click here.

## **Shaw Net Income Falls On Yen-dollar Swings (AP)**

Associated Press, April 12, 2011

Shaw Group Inc., an engineering and construction company whose projects include nuclear power, said on Monday that its second-quarter profit tumbled sharply mainly due to charges to cover big swings in the value of the dollar versus the yen.

Shaw reported a profit of \$1.2 million, or a penny a share, for the quarter that ended Feb. 28, compared with net income of \$61.5 million, or 72 cents per share, for the same period last year. The latest period includes a charge of \$28.7 million linked to foreign exchange losses, while the year-ago period included a gain of \$24.2 million.

Excluding the company's Westinghouse segment, Shaw would have earned \$35 million, or 40 cents per share, in the latest period. The drop in the US dollar versus the yen negatively affected that division because the company used bonds denominated in the yen to finance its 20 percent stake in the Westinghouse Group nuclear segment. Shaw's results also were trimmed by reduced earnings on a major petrochemical project.

Revenue fell 12 percent to \$1.42 billion from \$1.62 billion a year earlier.

Analysts had been expecting a profit of 45 cents per share on revenue of \$1.55 billion, according to FactSet. Analysts typically exclude one-time items such as expected currency changes.

Shaw said its nuclear power construction work continues as planned. The nuclear power industry has faced intense scrutiny in the wake of last month's earthquake and tsunami in Japan, which badly damaged nuclear facilities. Authorities there are still struggling to contain radiation from overheating reactors nearly a month later.

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It also said its nuclear construction and emergency response experience "positions us to assist with the recovery efforts in Japan and any future modification needs to existing power plants in the US and internationally."

For all of fiscal 2011, Shaw said it expects earnings per share to range between \$1.86 and \$1.91 on revenue of \$6.3 billion. Analysts are expecting net income of \$1.76 per share on revenue of \$6.56 billion, on average.

Shaw said it identified an accounting error linked to how revenue was calculated on an energy contract. As a result, Shaw overstated 2009 revenue by \$3.4 million and net income by \$2.2 million, and overstated 2010 earnings by \$10.7 million and revenues by \$16.7 million. It is revising its 2010 report to correct the mistake.

Shaw shares fell 48 cents to close at \$34.97.

## **Georgia moves to swap drugs for executions (AUGC)**

Augusta Chronicle, April 12, 2011

ATLANTA --- Georgia prison officials are laying the groundwork to swap out a key sedative used for lethal injections after federal regulators took the state's stockpile of sodium thiopental, which is in short supply nationwide, according to more than 1,000 pages of documents reviewed by The Associated Press.

State Department of Corrections officials met with counterparts in Ohio and Oklahoma, two states that have already used another drug, pentobarbital, to execute inmates. They have also collected hundreds of pages of legal filings and other documents about the use of pentobarbital in those states, according to files obtained through an open records request.

The US Drug Enforcement Administration took Georgia's supply of sodium thiopental last week over questions whether the state circumvented law to get it.

The move effectively blocked Georgia from scheduling and carrying out any executions.

House speaker joins SRS H Canyon efforts

COLUMBIA --- South Carolina House Speaker Bobby Harrell met with Savannah River Site managers and officials and members of the Aiken County legislative delegation Monday for a briefing on the Savannah River National Laboratory and the uncertain future of the site's plutonium-processing H Canyon.

"The purpose of the meeting wasn't to create or ask for next steps but to inform," said Clif Webb, the vice president of public affairs for Savannah River Nuclear Solutions, the contractor that operates and manages the site. "We felt we had a great dialogue with the speaker."

Last month, the nine members of the Aiken County legislative delegation wrote to US Energy Secretary Steven Chu to lay out concerns about the effects of shifting funding away from H Canyon, as is proposed in the federal budget. Harrell spokesman Greg Foster said Monday that the speaker also planned to send a letter to Chu.

## **Retired General: US Vulnerable To Cyber Attacks (AP)**

Associated Press, April 11, 2011

COLORADO SPRINGS, Colo. (AP) — The United States is still "hugely vulnerable" to cyber attacks, but so are most other nations, a former chairman of the Joint Chiefs of Staff said Monday.

"We're way late" in preparing to defend critical computer systems from hackers, enemies and others, retired Marine Gen. Peter Pace said.

Pace was chairman of the Joint Chiefs, the nation's highest military post, under then-President George W. Bush from 2005 until 2007. He spoke at the Space Foundation's Cyber 1.1 conference in Colorado Springs.

Pace said the US probably has the strongest offensive cyber capabilities of any nation, and it has employed cyber attacks in the past. After his remarks, he declined to say how many times that has happened, or to describe the circumstances.

Pace said the federal government should set security requirements for critical computer networks in the private sector, such as banking and finance.

Uniform requirements would prevent one corporation from gaining a competitive advantage by ignoring expensive upgrades. He also said it would encourage innovation by creating demand for security measures.

"We need to help prime that pump," said Pace, now president and CEO of SM&A, a management consulting firm.

Roger Cressey, an adviser on cyber security and counterterrorism under Presidents Bill Clinton and George W. Bush, told the conference that data manipulation — surreptitiously altering critical information on computer networks — is an underrated threat to cyber security

"The government makes decisions based on the assumption of accuracy of the data it's using," Cressey said in an interview later. "If a creative adversary doesn't steal, but just manipulates, that throws our decision-making process into disarray."

He said the banking and financial system, with trillions of dollars of international transactions at stake, could also suffer.

Cressey, now a senior vice president for defense contractor Booz Allen Hamilton, said he's not aware of any large-scale data manipulation attacks to date.

Gen. William Shelton, head of the Air Force Space Command, told the conference the US military still faces challenges in cyberspace, especially in "situational awareness" — a military term for knowing not only where an enemy is, but where it has been, where it's going and what its intentions are.

Shelton said computer-enabled weapons such as remotely piloted aircraft represent the future of warfare.

## **Cyber-security In The Spotlight At URI (PROJO)**

By Michael P. McKinney

Providence Journal, April 12, 2011

The four-star general who leads the National Security Agency headlined a cyber-security conference at the University of Rhode Island on Monday that highlighted student and faculty research into such challenges as defending the power grid from cyber-attackers.

Gen. Keith Alexander told the 150 to 200 attendees that cyber-security "is one of the most important issues facing our nation today."

In 2008, he said, the US Defense Department found that it had "malicious software" in its networks, the result of people using certain drives to go from unclassified computer networks to classified ones. In response, a team identified the problem and built a system in 22 hours to rectify the situation. That incident led to the start of the US Cyber Command, which he also commands.

Alexander called URI and the state's congressional delegation leaders on cyber-security issues. He noted that a 1986 graduate of URI is "one of the architects" for cyber-security at the NSA.

Part of Alexander's role is to defend the military's computer systems from cyber-threats, but security problems affect other areas as well.

US Sen. Sheldon Whitehouse said that a report indicated that the monetary value of intellectual property in the corporate world stolen through forms of cyber-security breaches is vast. He said more legislation on cyber-security issues is expected.

US Rep. James R. Langevin said that the nation "still stands largely unprepared to deal with various potential cyber-security threats.

The defenders of the nation's military secrets and the protectors of corporations' trade secrets and people's identities are a varied group.

One is Wenkai Wang, 30, a doctoral-degree candidate at URI who contributed to assumption-defying research with faculty that found a cyber-attack on the power grid could be more effective on a substation that does not carry the highest power load.

The idea was to look at scenarios from an attacker's point of view to develop better defenses against such attacks. A "traditional attack strategy," according to a poster describing their research, held that cyber-attacks would be attempted on the substation that has a high power load.

Yan Sun, a URI professor who worked with Wang and other faculty, said the research, focused on one cyber-attacker. Future research will look at multiple cyber-attackers on a power grid.

Jeffrey Troy, deputy assistant director of the FBI's Cyber Security Division, said the agency uses data obtained through computer forensics to gather the "signatures" of various groups that attempt to compromise security.

And the FBI is using technologies such as MCARTA, which, Troy said, allows investigators to know within 48 hours what malicious software did in a given case.

## **Congress, Administration Grapple With Cyber Defense Authority (NGOV)**

By Aliya Sternstein, Nextgov

Nextgov, April 12, 2011

The head of the military unit overseeing cyberspace reaffirmed that the US Cyber Command cannot monitor civilian networks, noting its powerlessness over systems outside the .mil domain might require congressional action.

"I do not have the authority to look at what's going on in other government sectors, nor what would happen to critical infrastructures. That means that I can't stop [an assault on nonmilitary networks]," Cyber Command chief Gen. Keith Alexander said during remarks at a University of Rhode Island symposium on the increasing threat of cyberattacks.

The division of responsibility between the Pentagon and the Homeland Security Department is at the center of a debate on cybersecurity legislation. DHS currently keeps an eye on vulnerabilities in the .gov and other civilian domains, while the Defense Department has visibility only into .mil networks. The White House has yet to weigh in on how to empower Defense to avert a potential cyberwar without running astray of civil rights and privacy laws. But Alexander offered hints about what the Pentagon might be pushing the Obama administration to consider.

"Civil liberties and privacy are not [upheld] at the expense of cybersecurity," he said. "They will benefit from cybersecurity." With the proper oversight from the administration and Congress, the military would be held accountable for any transgressions, Alexander added.

Alexander, who also serves as National Security Agency director, noted the Pentagon and DHS presently are sharing information, security equipment and staff at an NSA office, under the guidance of legal counsel and privacy officers.

He does not expect an imminent cyberattack by a nation state against the United States, but the country must be prepared for the day when adversaries take to the Web to destroy the US power grid, derail electronic stock exchanges, or shut down online communications, Alexander said.

Cyberspace is a domain that must be protected like the air, land and sea, "but it's also unique in that it's inside and outside military, civilian and government" domains, he said. Military forces "have to have the ability to move seamlessly when our nation is under attack to defend it . . . the mechanisms for doing that have to be laid out and agreed to. The laws don't exist in this area."

In March, Rep. James R. Langevin, D-R.I., who chairs the Congressional Cybersecurity Caucus, introduced a bill, H.R. 1136, that would create a cybersecurity review board with representation from civilian agencies, Defense and the White House. The measure has backing from Rep. Roscoe Bartlett, R-Md., a senior member of the Armed Services Committee.

"There is no one single person or office leading our government's efforts to keep our networks safe," Langevin said during the event. "My proposal establishes one national office to oversee cybersecurity, while ensuring the government and military can acquire the best technology and undergo regular reviews to evaluate their performance."

Sen. Sheldon Whitehouse, D-R.I., in recent weeks has pressured the administration to deliver to Congress a proposal for cyber reforms. Whitehouse, who also attended the forum, said last week lawmakers have been unable to act on network security

legislation because they haven't received direction from the White House on assimilating the multiple cyber bills under consideration in both chambers.

The administration "will soon be prepared to reengage with Congress on this issue," said Whitehouse, chairman of the Judiciary Subcommittee on Crime and Terrorism, who also attended the forum.

"We hope to do a major bill this year," he added, noting that Langevin's bill "will be an important and foundational document."

## **IN THE BLOGS:**

### **Avoiding Nuclear Safety | The Energy Collective (ENCOL)**

By Charles Barton

Energy Collective, April 12, 2011

The real question about nuclear safety is not "can nuclear accidents be avoided," but "do we want to do what ever is required to avoid nuclear accidents." As it turns out avoiding and mitigating nuclear accidents is not terribly expensive, nor does it make nuclear power impractical, but does require the nuclear industry to change the way it does business. The current nuclear safety philosophy centers on what is called "Defense in Depth." "Defense in Depth:"

Defense in Depth can refer to a system of barriers which serve to prevent the exposure of people to radioactive materials that originate in the reactor core and which might for a variety of reasons, escape from the reactor. This is the central fear for nuclear accident. At one time it was believed that everything that was inside the reactor was fair game for escape, but some materials are a whole lot more likely to escape than others. One way to prevent the escape of radioactive materials is to erect a system of barriers that are intended to block the paths taken by radioactive materials out of reactor cores. The history of major reactor accidents suggests that in the event of a major reactor accident, blocking the paths taken out of the reactor core by some materials may prove difficult. Indeed it might prove a better safety approach to capture some nuclear materials and remove them to a safe places outside the core, rather than preventing their escape.

One reason for doing this is that the escape of some radioactive materials particularly gases and materials that are likely to turn into gases in a serious nuclear accident may be difficult to prevent, if an accident leads to core overheating and meltdown. The conventional defense system of core meltdown prevention is to back up the core coolant system with secondary coolants systems, and back up the secondary systems with emergency coolant systems. Passive emergency coolant circulation is more reliable as well as less expensive than emergency coolant circulation by pumps, as well as more reliable. The Fukushima Dai-ichi reactors, were designed for emergency coolant water circulation by use of electrical powered pumps. The pumps were powered in the event of a grid shutdown by fossil fuel powered generators. Those generators were vulnerable to tsunami at Fukushima Dai-ichi. The Westinghouse AP-1000 is designed with a more advanced safety system.

A large tank of emergency coolant water is located above the AP-1000 core. In the event of an emergency shut down, the loss of electricity automatically releases valves that allow the flow of emergency coolant water from the tank to the core. The flow itself is powered by gravity and the coolant lines lead directly from the tank to the core. Such a system provided superior nuclear safety at Fukushima Dai-ichi, In addition to the emergency passive water coolant system, the Westinghouse AP-1000 has a passive air cooling system. The passive containment cooling system (PCS), provides the safety-related ultimate heat sink for the plant. The PCS cools the containment following an accident so that design pressure is not exceeded and pressure is rapidly reduced. The steel containment vessel provides the heat transfer surface that removes heat from inside the containment and transfers it to the atmosphere. Heat is removed from the containment vessel by the continuous, natural circulation of air. During an accident, air cooling is supplemented by water evaporation. The water drains by gravity from a tank located on top of the containment shield building.

In addition a more primary emergency water cooling system relies on natural water circulation to remove decay heat from the AP-1000 core in the event of an accident

A literature survey reveals that there have been many experimental and numerical investigations on the characteristics of different PRHRs. The Westinghouse advanced passive PWRs, AP-600, AP-1000, and EP-1000 (IAEA-TECDOC-1391, 2004; Adomaitis et al. [1]; Reyes and Hochreiter [2]; Zhang et al. [3]) adopt passive core cooling system (PXS) to protect the plant against reactor coolant system (RCS) leaks and ruptures of various sizes and locations. The PXS includes a 100% capacity passive residual heat removal heat exchanger (PRHR HX), which satisfies the safety criteria for loss of feedwater, feedwater and steam line breaks. The PRHR HX, immersed in the in-containment refueling water storage tank (IRWST), is connected through the cold leg and hot leg to the core. The IRWST water volume is sufficient to absorb decay heat for more than 1 hour before the water begins to boil. Once boiling starts in the IRWST, the steam passes to the containment and condenses on the inner surface

of the steel containment vessel, and then drains by gravity back into the IRWST. The PRHR HX and the passive containment cooling system (PCCS) provide indefinite decay heat removal capability with no operator action required. The theoretical and experimental investigations on the PXS characteristics of AP600 indicate that the design of the PRHRS is feasible and rational.

Despite the use of sophisticated passive safety features which greatly limit the likelihood of an accident that could lead to a core meltdown, both the AP-1000 and ESBWR employ the standard defense in depth barriers for the prevention of the release of radioactive materials in the event of nuclear accidents. The operation of advanced cooling system and emergency cooling system technologies, tend to make the breakdown of fission product release barriers even less likely than would be the case in older reactor designs.

This reactor manufacturers continue to make impressive advances in reactor safety designs. Yet critics of nuclear power seem totally unwilling to acknowledge any improvement in nuclear safety. Michael Collins, a self styled liberal, and "Joiquin" of the Agonist, are implacable enemies of nuclear power. "Joiquin" thinks that nuclear power is so dangerous that the nuclear power industry and the media are afraid to tell the truth about its dangers. Joiquin says, The truth is, there is a big fat lie that the nuclear power industry and the media are foisting on the public and that has not changed. We are supposed to believe that this hydrogen explosion is no biggie; course it isn't; it's just a direct hit

Of course Joiquin did not go into a similar tizzy when a natural gas fired power plant exploded in Connecticut last year. The fact that the Dai-ichi explosions killed six fewer people than the single Klean Energy Systems explosion. Of course if you get killed in a nuclear plant accident, you are much more dead than if you are killed in a natural gas plant accident. Even if no one is actually killed in a nuclear plant accident it is much more deadly and dangerous than an accident involving fossil fuels that produces real casualties. Joiquin tells So, back to the big lie; what is it? This lie has to do with the nature of nuclear power in the future. Everyone is asking, can we make nuclear technology, the current, nuclear technology safe? In truth, the current risks with the nuclear fuel cycle i.e., the risks of contaminating the environment, are not the risks of the future because the current nuclear fuel cycle is not the fuel cycle that will be used in the future.

Note, that Joiquin completely ignores the Improvement in reactor design, and focuses on the fuel cycle, as if the fuel cycle alone makes reactors unsafe. US government intend to use more exotic fuel cycles in the future power plants including, . . . Thorium, and breeder reactors of various types.

All of this is hush, hush because, the industry and their government and media proxies don't want to talk about this fact too much because the waste from these future fuel cycles is far more dangerous than most of the stuff slowly making a large part of Japan uninhabitable for the next few dozen millennium. In other words, the discussion in the media about future nuclear safety is completely dishonest.

Well somebody is being dishonest. but I would not say it is the industry and the government. Claims such as a "large part of Japan uninhabitable for the next few dozen millennium," are quite dishonest, but all too typical of the sensationalist exaggerations of the anti-nuclear lobby.

Michael Collins basically reposts the previous post.

How did Joiquin find his material? He references the Wikipedia on thorium and tells us, Thorium could theoretically be used to fuel future reactors but probably nothing like what we have now; they would be cooled with liquid salt. The advantage is the Thorium is much more naturally abundant than Uranium. Another potential bonanza! Except of course for a few minor problems: doesn't work yet, creates a contaminant that is a gamma ray emitter U 232 which decays into many more alpha and beta emitters making the spent fuel very difficult to handle and very toxic for hundreds of years.

In a note on sources Joiquin adds Arjun Makhijani and Michele Boyd's "Thorium Fuel: No Panacea for Nuclear Power.

" Makhijani is usually one of the more careful of the nuclear critics but in his thorium fuel essay he makes a number of large errors, including a committing the fallacy of composition when he claims, Using thorium in a nuclear reactor creates radioactive waste that proponents claim would only have to be isolated from the environment for 500 years, as opposed to the irradiated uranium-only fuel that remains dangerous for hundreds of thousands of years. This claim is wrong. The fission of thorium creates long-lived fission products like technetium-99 (half-life over 200,000 years). While the mix of fission products is somewhat different than with uranium fuel, the same range of fission products is created.

What Makhijani failed to recognize is that a mixed group of fission products come out of the reactor when the thorium fuel cycle is used. Once they leave the reactor they began to go through decay process that lead toward stability. After 300 - not 500 - years the decay process has gone far enough that the mixed group of fission products is no more radioactive than thorium ore was when it was dug out of the ground. The fact that technetium-99 has a half-life of over 200,000 years means it was not very radioactive to begin with. Technetium-99 is so safe that it is used in medical tests. Collins, as I noted, simply quotes Joiquin. The blind leading the blind. It is clear that neither Collins nor Joiquin knows anything about either the nuclear fuel cycle nor nuclear safety, but they both pose as nuclear safety experts, as if total ignorance was not a hazard to telling truth from lies.

Figures like Collins and "Joiquin" and organizations like the Sierra Club and Greenpeace are enemies of nuclear safety because they deny the very possibility that nuclear power can be made safe or even safer. As long as the public listens to such arguments, it runs the risk that nuclear power may be less safe than it could be.

## **INTERNATIONAL NUCLEAR NEWS:**

### **Japan Regulators Raise Severity Of Nuclear Accident (USAT/AP)**

USA Today, April 12, 2011

TOKYO (AP) — Japan's nuclear safety agency has raised the severity rating of the crisis at its nuclear plant to the highest level, on par with the 1986 Chernobyl disaster.

An official with the Nuclear Safety Commission of Japan, speaking on national television, said Tuesday the rating was raised from 5 to 7.

The official, who was not named, said the amount of radiation leaking from the Fukushima Dai-ichi nuclear plant was around 10% of that in the Chernobyl accident.

Meanwhile, workers at Japan's tsunami-stricken nuclear power complex discovered a small fire near a reactor building Tuesday but it was extinguished quickly, the plant's operator said.

Tokyo Electric Power Co., which operates the disabled Fukushima Dai-ichi nuclear power plant, said the fire at a box that contains batteries in a building near the No. 4 reactor was discovered at about 6:38 a.m. Tuesday and was put out seven minutes later.

It wasn't clear whether the fire was related to a magnitude-6.3 earthquake that shook the Tokyo area Tuesday morning. The cause of the fire is being investigated.

"The fire was extinguished immediately. It has no impact on Unit 4's cooling operations for the spent fuel rods," said TEPCO spokesman Naoki Tsunoda.

The plant was damaged in a massive tsunami March 11 that knocked out cooling systems and backup diesel generators, leading to explosions at three reactors and a fire at a fourth that was undergoing regular maintenance and was empty of fuel.

The magnitude-9.0 earthquake that caused the tsunami immediately stopped the three reactors, but overheated cores and a lack of cooling functions led to further damage.

Engineers have been able to pump water into the damaged reactors to cool them down, but leaks have resulted in the pooling of tons of contaminated, radioactive water that has prevented workers from conducting further repairs.

Aftershocks on Monday briefly cut power to backup pumps, halting the injection of cooling water for about 50 minutes before power was restored.

A month after the disaster, more than 145,000 people are still living in shelters, and the government on Monday added five communities to a list of places people should leave to avoid long-term radiation exposure.

A 12-mile radius has already been cleared around the plant.

The disaster is believed to have killed more than 25,000 people, but many of those bodies were swept out to sea and more than half of those feared dead are still listed as missing.

Aftershocks have taken more lives.

In Iwaki, a city close to the epicenter of a magnitude-7.0 tremor Monday, a landslide brought down three houses, trapping up to seven people. Four were rescued alive, but one of those — a 16-year-old girl — died at the hospital, a police official said. He would not give his name, citing policy.

Around 210,000 people have no running water and, following Monday's aftershocks, more than 240,000 people are without electricity.

In all, nearly 190,000 people have fled their homes, the vast majority of whom are living in shelters, according to the national disaster agency. About 85,000 are from the cleared zone around the nuclear plant; their homes may be intact, but it's not known when they'll be able to return to them.

Yutaka Endo said he feels like his life has been put on hold because of the nuclear crisis.

He fled Minami Soma and has been living in a shelter in Fukushima city for three weeks with his family.

"I can't make any plans because of the nuclear crisis. My home was fine, but I can't go back there because it is in a restricted area," said the 32-year-old, who used to tend bar. "I need to find a new job and a place to live so that we can get out of here. But I can't do anything until these zones are lifted."

Ryokou Sasaki said he and his elderly parents are in the same position. They've applied for temporary shelters, and are waiting to hear back.

He recently moved back home — to the northeastern port city of Kamaishi — to help his parents' with their fishing business.

"We're not in a place yet where we can even think about rebuilding the business yet," said the 40-year-old. "They seem to have given up."

## **Japan Rates Nuclear Crisis At Highest Severity Level (WP)**

By Chico Harlan

Washington Post, April 12, 2011

TOKYO — Japanese authorities raised Tuesday their rating of the severity of the Fukushima Daiichi nuclear crisis to the highest level on an international scale, equal to that of the 1986 Chernobyl disaster.

Officials with Japan's Nuclear Safety Commission reclassified the ongoing emergency from level 5, an "accident with off-site risk," to level 7, a "major accident." The reassessment comes at a time when the International Atomic Energy Agency says the plant is showing "early signs of recovery" but still in a critical condition.

The plant's debilitated reactors face constant threat of strong aftershocks, and the latest on Tuesday morning — a 6.2-magnitude temblor — caused a brief fire at a water sampling facility near Daiichi's No. 4 reactor. The Tokyo Electric Power Co., which operates the power plant, said that the critical process used to cool the hot fuel rods had not been interrupted, and radiation levels showed no signs of change.

A level 7 accident, according to the International Nuclear and Radiological Event Scale, is typified by a "major release of radioactive material with widespread health and environmental effects."

Previously only Chernobyl had been given a 7 rating. The 1979 Three Mile Island nuclear accident in Pennsylvania was rated a level 5 incident.

Radiation leaking from Fukushima Daiichi amounts to about 10 percent of that from the Chernobyl accident, a Nuclear Safety Commission official, who was not named, said on national television.

Nonetheless, the crisis has prompted the evacuation of tens of thousands who live within 19 miles of the plant. Japan's government had initially called for a mandatory evacuation within a 12-mile radius. But Japan on Monday widened its evacuation zone, selecting certain towns within 19 miles — those with higher radiation readings — for mandatory evacuation.

According to the Kyodo news agency, Japan's Nuclear Safety Commission reported Monday that the plant, at one point after the March 11 earthquake and tsunami, had been releasing 10,000 terabecquerels of radioactivity per hour. The report did not specify when those radiation readings occurred. A release of tens of thousands of terabecquerels per hour, though, corresponds with the radiation leakage level that the IAEA uses as a minimum benchmark for a level 7 accident.

"This corresponds to a large fraction of the core inventory of a power reactor, typically involving a mixture of short- and long-lived radionuclides," an IAEA document says. "With such a release, stochastic health effects over a wide area, perhaps involving more than one country, are expected."

## **Japanese Declare Crisis At Level Of Chernobyl (WSJ)**

By Phred Dvorak, Juro Osawa And Yuka Hayashi

Wall Street Journal, April 12, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Japan Nuclear Disaster Put On Par With Chernobyl (NYT)**

By Hiroko Tabuchi And Keith Bradsher

New York Times, April 12, 2011

TOKYO — Japan has decided to raise its assessment of the accident at the crippled Fukushima Daiichi nuclear power plant to the worst rating on an international scale, putting the disaster on par with the 1986 Chernobyl explosion, the Japanese nuclear regulatory agency said on Tuesday.

On the International Nuclear Event Scale, the rating, Level 7, is for a nuclear accident that involves "widespread health and environmental effects" and the "external release of a significant fraction of the reactor core inventory."

The scale, which was developed by the International Atomic Energy Agency and countries that use nuclear energy, leaves it to the nuclear agency of the country where an accident occurs calculate a rating based on complicated criteria.

Japan had rated its accident at Level 5, the same rating as the Three Mile Island accident in Pennsylvania in 1979. Level 7 has been applied only to the disaster at the Chernobyl nuclear plant in the former Soviet Union.

Japan's Nuclear and Industrial Safety Agency said at a news conference Tuesday that the rating resulted from new estimates that suggest that "tens of thousands of terabecquerels" of radioactive material per hour were released from the plant in the aftermath of the destructive March 11 earthquake and tsunami.

Still, the total amount of radioactive material released so far is equal to about 10 percent of that released in the Chernobyl accident, the agency said. (The measurement refers to how much radioactive material was emitted, not the dose absorbed by living things.)

The scale of the radiation leak has since dropped to a tiny fraction of those levels, the agency said.

The revised rating raised new questions about why the government has been so slow in releasing data and about whether the data continues to be underestimated.

Michael Friedlander, a former senior nuclear power plant operator for 13 years in the United States, said that the biggest surprise in the Japanese reassessment was that it took a month for public confirmation that so much radiation had been released.

Some in the nuclear industry have been saying for weeks that the nuclear accident released large amounts of radiation, but Japanese officials have played down this possibility.

The announcement came as Japan was preparing to urge more residents around the crippled nuclear plant to evacuate, because of concerns over long-term exposure to radiation.

Also on Monday, tens of thousands of people bowed their heads in silence at 2:46 p.m., exactly one month since the 9.0-magnitude earthquake and ensuing tsunami brought widespread destruction to Japan's northeast coast.

The mourning was punctuated by another strong aftershock near Japan's Pacific coast, which briefly set off a tsunami warning, killed a 16-year-old girl and knocked out cooling at the severely damaged Fukushima Daiichi power station for almost an hour, underscoring the vulnerability of the plant's reactors to continuing seismic activity.

On Tuesday morning, there was another strong aftershock, which shook Tokyo.

The authorities have already ordered people living within a 12-mile radius of the plant to evacuate, and recommended that people remain indoors or avoid an area within a radius of 18 miles.

The government's decision to expand the zone came in response to radiation readings that would be worrisome over months in certain communities beyond those areas, underscoring how difficult it has been to predict the ways radiation spreads from the damaged plant.

Unlike the previous definitions of the areas to be evacuated, this time the government designated specific communities that should be evacuated, instead of a radius expressed in miles.

The radiation has not spread evenly from the reactors, but instead has been directed to some areas and not others by weather patterns and the terrain. Iitate, one of the communities told on Monday to prepare for evacuation, lies well beyond the 18-mile radius, but the winds over the last month have tended to blow northwest from the Fukushima plant toward Iitate, which may explain why high readings were detected there.

Yukio Edano, the government's chief cabinet secretary, said that the government would order Iitate and four other towns to prepare to evacuate.

Officials are concerned that people in these communities are being exposed to radiation equivalent to at least 20 millisieverts a year, he said, which could be harmful to human health over the long term. Evacuation orders will come within a month for Katsurao, Namie, Iitate and parts of Minamisoma and Kawamata, Mr. Edano said.

People in five other areas may also be told to evacuate if the conditions at the Fukushima Daiichi plant grow worse, Mr. Edano said. Those areas are Hirono, Naraha, Kawauchi, Tamura and other sections of Minamisoma.

"This measure is not an order for you to evacuate or take actions immediately," he said. "We arrived at this decision by taking into account the risks of remaining in the area in the long term." He appealed for calm and said that the chance of a large-scale radiation leak from the Fukushima Daiichi plant had, in fact, decreased.

Mr. Edano also said that pregnant women, children and hospital patients should stay out of the area within 19 miles of the reactors and that schools in that zone would remain closed.

Until now, the Japanese government had refused to expand the evacuation zone, despite urging from the International Atomic Energy Agency. The United States and Australia have advised their citizens to stay at least 50 miles away from the plant.

The international agency, which is based in Vienna, said Sunday that its team measured radiation on Saturday of 0.4 to 3.7 microsieverts per hour at distances of 20 to 40 miles from the damaged plant — well outside the initial evacuation zone. At that rate of accumulation, it would take 225 days to 5.7 years to reach the Japanese government's threshold level for evacuations: radiation accumulating at a rate of at least 20 millisieverts per year.

In other words, only the areas with the highest readings would qualify for the new evacuation ordered by the government.

Mr. Friedlander, the former nuclear plant operator, who is a specialist in emergency responses to nuclear accidents, said that the Japanese decision to evacuate more communities made sense not just to protect people, but also to make the eventual decontamination of farms and communities easier.

Allowing people and nonemergency vehicles to continue moving through both radiation-contaminated areas and safer areas farther from the Fukushima reactors runs the risk of spreading radioactively contaminated particles, which could result in more square miles of territory ultimately being contaminated. "Unless you gain control, it will be like trying to mop your kitchen floor with the kids running in and out of the house," Mr. Friedlander said.

Masataka Shimizu, the president of Tokyo Electric, visited the tsunami-stricken area on Monday for the first time since the crisis began. He called on the governor of Fukushima Prefecture, Yuhei Sato, but was refused a meeting. He left his business card instead.

### **Strong Quake Jolts Tokyo (AP)**

Associated Press, April 12, 2011

TOKYO – A strong earthquake with a preliminary magnitude of 6.3 has jolted in Tokyo and its environs.

Japan's Meteorological Agency said the quake struck at 8:08 a.m. local time (2308 GMT) Tuesday. The epicenter of the quake was located just off the coast of Chiba, east of Tokyo.

There were no initial reports of injuries or damage in the prefecture. No tsunami warning was issued.

The agency said the quake was a string of strong aftershocks since the 9.0-magnitude earthquake and ensuing tsunami in northeastern Japan on March 11. The twin disasters decimated much of the region, killing up to 25,000 people and setting off radiation leaks at a coastal nuclear plant by knocking out its cooling systems.

### **Clinton To Visit Japan In Show Of Support (AFP)**

AFP, April 12, 2011

WASHINGTON (AFP) – Secretary of State Hillary Clinton will visit Japan in a show of support for the US ally as it recovers from a devastating earthquake, the State Department announced Monday.

Clinton will travel to Tokyo on Sunday, after stops in South Korea and in Germany where she is attending a NATO conference, State Department spokesman Mark Toner said.

Clinton's trip aims to "show the United States' support for the people of Japan and to highlight our long-standing commitment to the alliance," Toner said in a statement.

She will hold talks with Prime Minister Naoto Kan and other senior Japanese officials, Toner said.

The announcement comes on the one-month anniversary of Japan's worst disaster since World War II, which killed at least 13,000 people and left another 14,000 missing in a massive earthquake and debris-laden tsunami.

The United States, whose military presence in Japan has sometimes been controversial, deployed some 15,000 troops to assist in relief.

Senior US officials were also expected to participate in a memorial service later Monday at the Washington National Cathedral.

Clinton will take part in a NATO conference on Thursday and Friday in Berlin, where she will hold talks on alliance-backed military operations in Libya and Afghanistan, the State Department said.

She will head Saturday to South Korea for talks with President Lee Myung-Bak "as part of our ongoing efforts to strengthen the alliance and to discuss cooperation on regional issues," Toner said.

### **Clinton To Visit Germany, Japan, SKorea This Week (AP)**

Associated Press, April 12, 2011

WASHINGTON – Secretary of State Hillary Rodham Clinton will travel to Germany and Japan this week for talks on Libya and other crises with NATO allies in Berlin and to show support for the earthquake- and tsunami-stricken Japanese people. She also will visit South Korea.

The State Department announced Monday that Clinton will depart Wednesday for the German capital where she will attend a meeting of NATO foreign ministers and hold separate discussions with officials from Germany and other European nations on Thursday and Friday.

Over the weekend, she will visit South Korea and then Japan, which is recovering from a massive earthquake and resulting tsunami and aftershocks that have crippled the country's northeast. The events also damaged nuclear reactors that are now spewing radiation.

## **Clinton To Attend NATO Meeting, Visit Seoul, Tokyo (REU)**

Reuters, April 12, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Cleaning Up Fukushima: A Challenge To The Core (NPR)**

NPR, April 12, 2011

Nuclear engineers in Japan are dealing with two problems at the same time: They are working to fully stabilize the reactors at the Fukushima Dai-ichi plant, and they are trying to control the release of radioactive material.

It could take weeks or months to stabilize the reactors. And containing and cleaning up the radioactive material could take at least 10 years, at a cost of more than \$10 billion. Even though many of the details about what's happening at the reactors are not known, experts can predict the tasks ahead for workers.

Back in 1979, nuclear engineer Lake Barrett coordinated cleanup at Pennsylvania's Three Mile Island reactor for the Nuclear Regulatory Commission. He breaks down the cleanup challenge to the basic elements of ancient Greece. The Greeks had fire, air, water and earth. At Fukushima, it's pretty much the same: energy, air, water and solids.

A radiation decontamination area was built into the entrance of a building at the Fukushima Dai-ichi power plant. Damage to the facilities and the reactor buildings is slowing efforts to stabilize the nuclear crisis.

"So if you go back to the four basic principles, what the engineers are doing in Fukushima is first they have to deal with energy dissipation — that is the cooling of the decay products in the core — keep the core cool," Barrett says.

Over the past month, they've managed to do that pretty well, Barrett says, but at a price: They are cooling it with copious amounts of water, which has led to the continued venting of sometimes radioactive steam. It's nowhere near as bad as it was in the early days of the crisis, Barrett says, but gaseous releases will continue to be a problem until the complex can shift to a better cooling system.

For now, there's a watery mess at the plant.

"In the case of Three Mile Island, we had about half a million gallons of very highly radioactive water in the basement of the containment building," Barrett says. "It was about 10 feet deep. They're facing the same situation in Fukushima, but they have three of these cores that have severe damage to them, so they probably have tens of millions of gallons of the same highly radioactive water that they're dealing with."

That's a huge challenge, but engineers at Three Mile Island were able to decontaminate the radioactive wastewater.

"The very first systems we had within 10 days, and then we had a better system operating in a month," Barrett says. "And we had a better-yet system operating in about a year. That water was all cleaned up at Three Mile Island and it was safely discharged."

Fukushima Dai-ichi may or may not have any functioning systems to clean up its water, and there's no telling how much more radioactive water is going to be produced during the continuing operations there. But Barrett says the plant does have large tanks for storing contaminated water and a barge is on the way to store more.

Workers operate remote-controlled rubble-removing equipment at the Fukushima Dai-ichi nuclear complex. Though robotic machines will be able to clear some of the larger debris from the facility, some people will most likely be needed to work inside the reactor buildings.

### **Getting To The Core Of The Cleanup**

Once the energy, gas and water aspects of the nuclear crisis are under control, the most highly radioactive materials — the solids in the reactor cores — remain. Just getting to them is a problem.

After the Three Mile Island accident, the core was still intact, but overhead cranes that usually do the lifting work were damaged by fire. So workers first had to refurbish the cranes to lift the reactor's lid. In fact, it was five years until they could look inside the reactor; only then did they discover that 30 percent of the nuclear core had melted. Still, the engineers on the scene figured out how to deal with that.

"They worked down through 20 feet of water for shielding with long tools and started picking up the pieces of broken fuel in the core and placing it in special canisters with vents and filters on them," Barrett says. They put those canisters in a transport cask and shipped them to Idaho, where they are stored like other waste from nuclear reactors.

Japanese engineers will probably try to do the same basic thing at Fukushima Dai-ichi.

Leo Lessard, a nuclear engineer at the French company Areva, says just getting to the cores at Fukushima Dai-ichi is going to be much more difficult than it was at Three Mile Island. For starters, the tops of two buildings have collapsed, so that debris will have to be cleared.

## **Nuclear-Reactor Industry Faces Challenge (WSJ)**

Wall Street Journal, April 12, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Siemens, Areva End Nuclear JV, Legal Spat Goes On (REU)**

Reuters, April 12, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Anti-Nuclear Protesters Block Entry To EDF's London Offices (BLOOM)**

By Chris Spillane

Bloomberg News, April 12, 2011

Activists barricaded a road outside the London offices of Electricite de France SA today to protest plans by Europe's biggest power producer to build a new generation of U.K. nuclear power plants.

About ten demonstrators from the Boycott EDF group erected two 14-foot (4-meter) high tripods on Grosvenor Place by Victoria rail station at around 8:00 a.m. today and blocked cars and road access in the city for around six hours.

Between the structures hung a banner marked "nuclear disaster area." The road was reopened at 2:05 p.m. and two arrests were made, according to a Metropolitan Police spokesman, who declined to be identified, citing force policy.

"EDF has spent a massive amount of money marketing as an environment-friendly company," said Bella Benson, a spokeswoman for the activist group, in an e-mailed statement. "But the truth is that it's planning to lumber us with an outdated form of energy that is incredibly dangerous, extremely expensive and completely unnecessary."

The Paris-based utility, which is the world's largest operator of nuclear reactors, said nuclear energy has a "vital role" in maintaining the U.K.'s future electricity supply.

"That view is backed by the government and industry and a large proportion of the public," spokeswoman Phillippa Coates said in an e-mailed statement.

Around 3,800 people gathered at EDF's oldest nuclear plant at Fessenheim, France, yesterday to demand its shutdown, Le Monde reported, citing police estimates.

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To contact the editor responsible for this story: Andrew Blackman at [ablackman@bloomberg.net](mailto:ablackman@bloomberg.net) EDF FP CN

## **Iran Touts Major Advances In Nuclear Program (WP)**

By Joby Warrick

Washington Post, April 12, 2011

Iran is proclaiming significant gains in its nuclear program, progress that Western officials and experts say could effectively erase setbacks from recent cyber attacks and shorten the timeline for acquiring nuclear weapons.

Scientists from Iran's atomic energy program, in announcements over the past three days, said they have successfully tested advanced centrifuges for enriching uranium and are less than a month away from starting the country's first commercial nuclear reactor. The announcements, linked to the observance of "nuclear technology day" in Tehran, underscore recent assessments by intelligence officials and Western nuclear experts suggesting that Iran is preparing to speed up its production of enriched uranium.

Although many of the advances have not been fully implemented, the apparent progress has prompted some experts to redraw their forecasts for how quickly the country could build an atomic arsenal if it chose to do so.

The pronouncements also appear intended to counter perceptions that Iran's nuclear program has been hobbled by a computer worm that heavily damaged the country's main uranium enrichment facilities in a series of attacks in 2009 and 2010. During a weekend ceremony lauding the accomplishments, President Mahmoud Ahmadinejad declared that the "Iranian nation cannot be defeated," despite sanctions and other threats.

"Not only should we be able to use all our capacities and potentials in nuclear technology, we should also export nuclear know-how," Iran's semiofficial broadcaster Press TV quoted the Iranian leader as saying.

The advanced centrifuges tested by Iran have been under development for several years. Experts say the new machines are far more sophisticated than the 1950s-era technology Iran has been using and will be far more efficient than their predecessors. According to the first reliable published estimates, the increase in the production of enriched uranium could be huge — an increase in output of at least 600 percent per machine.

"If they can get the new machines performing well, and in large numbers, it will make a big difference," said Olli Heinonen, a former nuclear safeguards chief for the International Atomic Energy Agency, the U.N. nuclear watchdog agency.

In theory, a few hundred of the new machines could produce enough enriched uranium for a nuclear weapon in less than a year, he said.

Iran quietly notified U.N. inspectors in January that it was moving forward with plans to phase in hundreds of the sophisticated centrifuges — models dubbed IR-2M and IR-4 — at its main enrichment plant in the city of Natanz. On Saturday, Fereydoun Abbasi, the head of the Atomic Energy Organization of Iran, said the machines had been tested and were ready for use.

Abbasi also announced that Iran's first commercial nuclear reactor, at Bushehr, will begin operating as soon as May 5 after technicians overcome problems with the reactor's fuel. He disclosed the start of a new production line for uranium oxide, the material from which nuclear fuel rods are made.

Neither the United States nor the IAEA have published performance estimates for Iran's next-generation centrifuges, but a US intelligence official knowledgeable about Iran's nuclear program did not dispute Heinonen's observations.

"US intelligence officials share the IAEA's concern" about Iran's expanding capabilities, the official said, speaking on the condition of anonymity.

Natanz has more than 8,000 centrifuges to enrich uranium, ostensibly for nuclear reactor fuel. But those machines have been notoriously unreliable and prone to attack.

In late 2009 and early 2010, a computer worm known as Stuxnet penetrated the computer system at Natanz. Although the cyber attack appears to have damaged as many as 1,000 machines, Iran has moved quickly to replace broken equipment and has continued to process uranium at a steady pace.

Heinonen, who until last year oversaw the IAEA's teams of inspectors in Iran, recently presented performance estimates for the IR-2M during a seminar held by arms-control advocates in Washington.

Using an analysis that he said drew from "multiple sources," Heinonen calculated that the new machines would produce enriched uranium at a slightly higher rate than comparable machines made in Pakistan and North Korea and more than six times as fast as the IR-1 centrifuge currently used by Iran.

Iran, which began enriching uranium on an industrial scale in 2007, is now thought to possess enough low-enriched fuel to make at least two bombs if the material were processed further. The country has consistently maintained that it does not intend to make nuclear weapons.

Heinonen's figures are in line with Iran's estimates for the capability of the new machine, which Iranian scientists have been testing since 2009.

The IR-1 machines the nation uses are based on a 1950s Dutch design that was stolen by Pakistani scientist Abdul Qadeer Khan and sold to Iran decades ago. The IR-1 is relatively slow and inefficient and notoriously unreliable.

Although US officials have long suspected that Iran is capable of making better centrifuges, Iranian scientists have struggled to obtain the kinds of specialized materials needed to build them. The IR-2M, for example, is constructed largely from a carbon-fiber material similar to the Kevlar used in modern military helmets and body armor. Intelligence agencies think that Iran is not capable of making the material indigenously in significant quantities, and Iran has been repeatedly thwarted in its efforts to buy carbon fiber abroad.

Heinonen, however, noted that U.N. inspectors never were able to determine how much carbon fiber Iran managed to acquire before international sanctions dried up the market for such advanced materials. The IAEA also knows little about how and where the Iranians are building their new machines, he said.

"I think they're probably limited in their ability to get these materials," Heinonen said, "but the question is: How much do they already have?"

## **Iran To Build New Research Reactors (AP)**

Associated Press, April 12, 2011

TEHRAN, Iran — Iran will need more enriched uranium to fuel the "four or five" new research reactors it is planning on building, the country's nuclear chief said on Monday.

Fereidoun Abbasi told the semi-official ISNA news agency that Iran is planning to build the new research reactors "in the next few years" to produce medical radioisotopes for patients.

To fuel these reactors, Iran needs to continue enriching uranium to 20 percent — something which alarms the West because the process could eventually be used to produce material for a nuclear weapon.

Abbasi, a 52-year-old professor of nuclear isotopes at Tehran's Defense Ministry, was appointed Iran's nuclear chief in February after he survived an assassination attempt in November. He was wounded in the bomb attack.

Tehran contends its nuclear program is intended only for a civilian power.

The United States and its allies suspect is seeking to build nuclear weapons, and the United Nations has laid down four rounds of sanction to force Iran to stop its enrichment program.

### **Germany Rebuffs US Calls To Shut Iran Bank (WSJ)**

By David Crawford

Wall Street Journal, April 12, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

### **Iran Blames Pipeline Explosion On Western Enemies (NYT)**

By William Yong

New York Times, April 12, 2011

TEHRAN — A member of the Iranian parliament has blamed Western “enemies” for a blast on Friday that hit a major gas pipeline near the holy city of Qom.

The head of the parliament’s national security committee, Parviz Sorouri told reporters on Sunday that Western-backed “terrorists” were aiming to bring insecurity to Iran’s national energy transfer routes.

“By issuing resolutions and organizing terrorist activities, Western countries are aiming to redirect the events in Bahrain and Libya toward Iran,” Sorouri said.

Iranian officials continue to investigate the exact cause of the explosion, which struck a 56-inch diameter gas line near Qom early on Friday morning. No one was hurt in the blast.

The apparent bomb attack was the second incident in two months. Earlier, simultaneous explosions hit three different points on a gas pipeline within about 60 miles of the location of Friday’s blast.

The assertions of foreign interference came at a time when Iran is under increasing pressure from Persian Gulf states that accuse Iran of playing a role in the continuing unrest in Bahrain and after fresh accusations about the country’s nuclear program from an external opposition group.

Also on Sunday, Iran expelled three Kuwaiti diplomats in retaliation for Kuwait’s expulsion of three Iranian officials earlier this month, according to the Web site of Press TV, Iran’s state-financed satellite channel. The Kuwaiti government had accused the Iranians of spying on United States military bases.

Over the past week, top Iranian religious leaders have expressed anger over the involvement of Saudi Arabia, Kuwait and the United Arab Emirates in a combined regional military force to quell a civilian uprising in Bahrain, a Shiite majority state with which Iran has long historical and religious ties.

Fears over the development of Iran’s nuclear program were rekindled last Thursday, following a report from an exiled Iranian opposition group that said it revealed the location of a “secret” centrifuge factory 80 miles west of Iran’s capital, Tehran.

The National Council for Resistance in Iran — a lobby group associated with the banned leftist terrorist organization the People’s Mujahadeen — released what is said were satellite photographs of a facility that has produced parts for 100,000 uranium enrichment centrifuges over the past four years, though the group offered no further evidence.



# NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

THURSDAY, APRIL 21, 2011 7:00 AM EDT

[WWW.BULLETINNEWS.COM/NRC](http://WWW.BULLETINNEWS.COM/NRC)

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## NRC NEWS:

**Feinstein Wants NRC To Boost Relicensing Criteria.** Reuters (4/20, Rampton) reports that Sen. Dianne Feinstein (D-Calif.) suggested that the NRC should be more demanding in their reviews of US nuclear plants for

relicensing. Sen. Feinstein wants the NRC to change its review criteria and reassess exterior threats to the facility along with the impacts of natural aging. "I believe that our understanding of many threats -- especially seismic threats, tsunami threats, spent fuel risks, and terrorist threats -- has improved dramatically since most nuclear power plants were originally designed and licensed thirty or more years ago,"

Sen. Feinstein said in a letter to the NRC. Reuters says Feinstein's concern harkens back to the days after September 11, 2001, when some lawmakers suggested that relicensing reviews should require proof that the facility can withstand a direct hit from an airliner.

Southern California Public Radio (4/20, Felde) reports, "California's senior US senator wants federal nuclear regulators to update their re-licensing process to consider possible dangers from earthquakes and tsunamis." In a "letter to the Chairman of the NRC Gregory Jaczko, the California Democrat says we've learned a lot since the San Onofre nuclear power plant came online three decades ago. 'Recent events,' she says, referring to the ongoing crisis at the Fukushima nuclear power plant in Japan, 'demonstrate that 30-year-old threat assessments can be devastatingly inaccurate.'" SCPR adds Feinstein wants the NRC to consider new data, including newly discovered fault lines near nuclear facilities, before relicensing facilities.

**Risks Of Radiation Exposure Examined.** On a "Healthland" blog entry for Time (4/20, 3.31M), Bonnie Rochman writes of her concerns for her kids' health on their spring vacation to Hawaii, what with the radiation coming from the Fukushima Daiichi plant disaster. As "news reports showed images of radioactive water first gushing from a leak at the reactor site then being intentionally dumped into the Pacific in order to make room for even more radioactive contents, I started to wonder whether it made sense for my family to transport ourselves six hours closer to the crisis unfolding on the other side of the pond." Rochman adds that as she sought information, she ran into confusing blizzard of data, "presented in various measurements, making it difficult to compare, and there was no baseline, making it tough to discern how alarming the increase actually was." Rochman learned that no one can say for sure whether any level of radiation exposure is safe.

**Inhofe Touts Safety Of US Reactors.** In an op-ed for the Oklahoma Gazette (4/21, 55K), Sen. Jim Inhofe, writes that in the wake of the Fukushima Daiichi plant crisis in Japan, many Oklahomans are wondering: "What does this accident mean for them?" and what is the US response to the accident. Inhofe adds that with the "confidence" of what he has "learned in the days and weeks following" the accident, the two "operating nuclear plants in California can withstand the impacts of an earthquake greater than the one in Japan, and, closer to home, the Wolf Creek nuclear plant in southeastern Kansas can weather an EF5 tornado with over 360 mph winds." US reactors, Sen. Inhofe says, "are constructed according to a 'defense-in-depth' approach, with multiple, independent safety systems in place so that if one safety system breaks down there are several backups."

**NRC Chairman To Speak At Johns Hopkins Carey Business School.** The Baltimore Messenger (4/21) reports that NRC Chairman Gregory Jaczko will speak at Johns Hopkins Carey Business School, 100 International Drive, "on the 'The Past, Present, and Future of Nuclear Power: A Regulator's Perspective,'" Thursday April 21, 8-9 a.m., with breakfast at 7:30 am.

**Teachers Complain About Seabrook Station Evacuation Plan.** The Hampton (NH) Union (4/20, Cronin) reported, "The town's middle school teachers should not be responsible for caring for children in a nuclear emergency, and they want a realistic plan from the state should an event at the Seabrook nuclear power plant require evacuation." The Union adds, "Middle school teachers met Tuesday with state officials to address" what they say is a "critical flaw" in the state's emergency evacuation plan, which calls for teachers to accompany "students to a designated reception center." But a "1987 state Supreme Court ruled teachers cannot be required or obligated to assume the role of providing assistance to school children in the event of an evacuation." New Hampshire Homeland Security and Emergency Management director Chris Pope, acknowledged the plan "needs to be examined."

The Manchester (NH) Union-Leader (4/21, MacAlaster) reports, "Seventh-grade science teacher Dianne Dunfey is leading the charge for clarification of the plan and said she appreciates the extent to which" Gov. John Lynch "responded, after years of feeling like no one was listening. She said there are 'significant and serious' gaps in the existing plans for evacuating children in a radiological emergency." The Union-Leader adds, "Seabrook Middle School Principal Leslie Shepard said that in the age of instant alert phone systems and digital media, parents are going to know if there is an emergency and is concerned they will flock to the schools despite a plan that advises otherwise."

WMUR-TV Manchester, NH (4/20) added on its website, "Both sides have agreed to work together to improve the plan."

New Hampshire Public Radio (4/21, Wood) also covered the meeting.

**Groups Ask NRC To Halt All Licensing Activities Until Review Finished.** The Hampton (NH) Union (4/21, Haberman) reports, "The Portsmouth-based Seacoast Anti-Pollution League and 44 other nuclear safety and watchdog groups around the country have signed on to a petition asking the US Nuclear Regulatory Commission (NRC) to immediately suspend all licensing activities at nuclear power plants until a full analysis of the Japanese nuclear disaster is completed." Doug Bogen, executive director of Seacoast Anti-Pollution League said, "With the still unfolding Fukushima disaster — and with at least one of those reactors

being exactly the age Seabrook would be when due to be re-licensed — it's clearly time to re-think the wisdom of signing up our local nuclear reactor for another couple of decades of questionable service at this time."

**Missouri Senate Defeats CWIP Measure On Costs Of New Callaway Reactor.** The Kansas City Citizen (4/20, Sampson) reported, "Efforts to rewrite state law so power companies could transfer to consumers preconstruction permitting costs of a second nuclear power plant in Missouri already faced significant headwinds heading into the legislative session." Those odds steepened significantly with the Fukushima nuclear crisis and disagreements over Missouri's long-term energy policy. "Senate Bill 48, which would have allowed a consortium of energy companies led by Ameren Missouri to increase rates on customers up to \$45 million to finance an early-site permit for the Callaway II nuclear plant, was shot down Tuesday on the Senate floor."

The Jefferson City (MO) News Tribune (4/20, Watson) reported that Tuesday, "Several Missouri senators, led by Mike Kehoe, R-Jefferson City, and Robin Wright-Jones, D-St. Louis, spent about 80 minutes explaining the bill that would allow a utility company to get Public Service Commission approval to charge ratepayers for the company's successful effort to win a US Nuclear Regulatory Commission early site permit — a first step toward building and operating a nuclear reactor to generate electricity."

**Anti-Nuclear Groups To Protest During Ameren Shareholders' Meeting.** The St. Louis Business Journal (4/21, Volkman, Subscription Publication) reports, "Opponents of legislation that would allow Ameren and other utilities to recoup \$45 million from customers for the cost of a new nuclear plant in Callaway County plan to protest at the St. Louis company's shareholders' meeting Thursday." Groups including the Missouri Coalition for the Environment, Gateway Green Alliance, Missouri Votes Conservation, Veterans for Peace, Environment Missouri and Missourians Organizing for Reform and Empowerment, plan to "give Ameren an invoice for the 'future costs of using nuclear power including nuclear waste storage, emergency response, emergency preparedness, long-term health and environmental monitoring, health impacts on communities and workers, hundreds of years of site security and the lost revenues and economic damages of a nuclear accident.'"

**Coverage Continues Of NRG Decision To Halt STP Reactor Expansion.** In a piece similar to one appearing yesterday in the San Antonio Express-News, the Houston Chronicle (4/20, B1, Idell Hamilton, 342K) reports, "NRG Energy will no longer invest in the South Texas Project nuclear expansion near Bay City and will write down its

investment in the face of deeply diminished prospects for the project since Japan's worst-ever nuclear accident." CEO David Crane said that while the project is "not dead," neither is it "moving forward at this point, and to be frank, under the current circumstances, the reality of it moving forward in the foreseeable future is not high."

The Austin (TX) Business Journal (4/20, Subscription Publication) reported, NRG Energy Inc.'s "move comes just after affiliate Nuclear Innovation North America LLC (NINA) made a similar announcement, and just a few months since NRG began courting Austin Energy to start buying new nuclear power. 'The tragic nuclear incident in Japan has introduced multiple uncertainties around new nuclear development in the United States which have had the effect of dramatically reducing the probability that STP 3&4 can be successfully developed in a timely fashion,' NRG President and CEO David Crane said."

The Houston Business Journal (4/21, Wooten, Subscription Publication) reports, Crane said, "We have concluded that, financially, this is the end of the line for us," and added, "Even if the project restarts, it will have to be fueled by someone else's capital." NRG, "which maintains partial ownership in the plant's two original reactors, said NINA will continue to pursue obtaining regulatory licensing and federal loan guarantees, though Crane said a successful outcome for the project is 'extremely daunting and at this point not very likely.'"

On its website, KUT-Radio Austin, Texas (4/20, Chavez) noted that "NRG has been investing in the expansion over the past five years."

Japan's Yomiuri Shimbun (4/21, Koyano) reports, "NRG's decision, which came as Japan has been struggling to deal with a nuclear crisis at the Fukushima No. 1 nuclear plant in Fukushima Prefecture, will likely deal a great blow to Japan's joint public-private sector efforts to increase nuclear power plant exports, industry sources said."

On its website, JapanToday (4/21) adds that through the "deal, Toshiba landed an order for two 1.35 million-kilowatt advanced boiling water reactors. The new power units were to begin operating in 2016 or 2017 at a total estimated investment cost of 1 trillion yen." NRG said it "expects to write down its investment in the project worth some \$481 million" for the January-March quarter.

On its "City of Industry" blog, the Vancouver Sun (4/21, Penner, 178K) writes that for some American power firms "looking to develop a huge nuclear power plant, I guess the 20-kilometre exclusion zone around Tokyo Electric Power Co.'s tsunami-damaged reactors isn't exactly the best advertising." NRG's announcement is "perhaps a further blow to the image of atomic power as the clean, non-GHG source of electricity a lot of environmentalists have touted it as." But, the Sun notes, the NRG project "had other problems," including a market surplus of power, "extremely

cheap natural gas" prices among them. The World Nuclear News (4/21), EnergyOnline (4/21), Environmental Leader (4/21), Burnt Orange Report (4/21) also reported on the move.

**Analyst Doubts NRG Move Reflects Market Trend.** Greenwire (4/21, Northey) reports NRG CEO Crane said, "The extraordinary challenges facing US nuclear development in the present circumstance and the very considerable financial resources expended by NRG on the project over the past five years make it impossible for us to justify to our shareholders any further financial participation in the development of the [Texas] project," ClearView Energy Partners analyst Kevin Book "cast doubt on whether NRG's decisions reflect a trend in the market, saying that a significant number of existing plant operators forgoing relicensing would have a much larger impact than a small number of would-be nuclear plant developers backing out on expansion plans."

**Surry Station Recovering From Virginia Tornadoes.** On its website, WTVR-TV Richmond, Virginia (4/20) reported that the "The weekend storm that produced deadly tornadoes over parts of North Carolina and Virginia [also] knocked out electricity to two nuclear units at Dominion Virginia Power's Surry Power Station near Newport News." The NRC is "no longer monitoring the facility after they say all safety systems operated as needed." Surry Power Station Vice President Jerry Bischof says the plant is prepared for the "worst case scenario in every kind of natural disaster. 'We have multiple generators and we can afford to have 2 of our generators fail and still maintain the plant in a safe condition.'"

WTVR-TV Richmond, Virginia (4/20, 5:42 p.m., EDT) broadcast an interview with Jerry Bischof, the Vice President of the Surry Power Station, who discussed damage done to the plant by last Saturday's storms, emphasizing, "Our operators are trained to ensure that we can maintain the plant in a safe condition even if we lose offsite and onsite power." WTVR went on to state that the NRC is no longer monitoring the Dominion Virginia Power's Surrey Power Station "after they say all safety systems operated as necessary."

The Washington Business Journal (4/21, Subscription Publication) and WAVY-TV Norfolk (4/21) also report on the situation at Surry Power Station.

**NAS Cancer Risk Study Groups Meets With Residents In Suburban Chicago.** Voice of America (4/21, Farabaugh) reports on a meeting in suburban Chicago of the National Academy of Sciences' cancer risk study group, which gathering "information to help us write a report that will look at the cancer risk assessment of individuals living near nuclear facilities," according to Chairman John Burris. The NAS study will assess the risk of nuclear facilities

to those people who live near them. VOA notes NRC spokeswoman Viktoria Mitlyng, "said much of the information the NRC relies on to determine regulatory limits, and how releases might impact health, is several decades old. 'The last study was done about twenty years ago' and some "methodologies are outdated."

**Activists Counter Entergy's Assurances On Safety Of New England Reactors.** In the second of two articles, Massachusetts' Old Colony Memorial (4/21, Mand) reports that in a meeting between state officials, and representatives of New England's nuclear power plants, political leaders released 22 questions they asked NRC Chairman Gregory Jaczko to address. Several questions specifically referenced the "Japanese disaster and how Pilgrim and other New England nuclear facilities" would respond. Concerning any adjustments being made to allow Seabrook and Vermont Yankee to handle the kind of pressure build-ups that resulted in explosions at Fukushima, Town Manager Mark Stankiewicz said Entergy officials gave assurances that as far as the containment structures, Pilgrim's design is superior to those of the Daiichi plant, though Mary Lampert of Pilgrim Watch disagreed, saying "that in exchange for greater protection against pressure-related explosions, the modified design of the Mark-1 plant at Pilgrim would instead, vent that pressure – and radioactive materials – into the air."

**NRC: US Reactors Can Withstand Earthquakes, Tornadoes, Hurricanes And Floods.** Mid-Hudson (NY) News (4/21) reports that in a letter to Greenburgh Town Supervisor Paul Feiner, the NRC said US "nuclear reactors are designed to withstand natural events, including earthquakes, tornadoes, hurricanes and floods, 'based on the specific site where the reactor is located, without loss of capacity to perform their safety functions.'" Feiner wrote the NRC about his concerns "about the safety of Indian Point following the nuclear disaster in Japan in March." Eric Leeds, the NRC's director of the Office of Nuclear Reactor Regulation also said the agency will "create a task force to conduct short-term and long-term analyses of the lessons that can be learned from the situation in Japan."

**NRC, Army Corps Issues Final EIS For VC Summer Station Expansion.** The Columbia (SC) State (4/20, Fretwell) reports, "Efforts to build two nuclear reactors northwest of Columbia won an important victory this week, with a report concluding the project won't take a substantial toll on the environment." The NRC and the Army Corps of Engineers issued their "final environmental impact statement Tuesday for the expansion of SCE&G's V.C.

Summer nuclear power station in Fairfield County." NRC spokesman Scott Burnell said that the statement "doesn't say there are no impacts, but in the overall analysis, there no impacts so large they would preclude the NRC from approving the project." While Burnell said the agency won't issue a decision on Summer station's application until the end of the year at the earliest, the final EIS is a major step forward.

WIS-TV Columbia, South Carolina (4/20, 6:04 a.m., EDT) broadcast, "Federal nuclear regulators say two proposed nuclear reactors in Jenkinsville will not impact the environment. SCE&G is applying for a license to build the reactors at the V.C. Summer Nuclear Station. The Nuclear Regulatory Commission and US Army Corps of Engineers released its environmental review of the proposal. If the permits get final approval, the reactors will be the first built in the US in more than 20 years. The first reactor is expected to go on-line by 2016."

**Groups Want NRC To Slow Down Uprate Approval For Point Beach Plant.** On his "Plugged In" blog for the Milwaukee Journal Sentinel (4/21, 202K), Thomas Content writes, "Citing the nuclear crisis in Japan, an environmental group and consumer advocacy group on Wednesday asked the Nuclear Regulatory Commission to postpone a final decision on a plan to increase the power generated by the Point Beach nuclear plant." According to the Citizens' Utility Board and Clean Wisconsin, the delay "wouldn't pose any harm" since the state has "more than enough power to meet its needs." The NRC's staff gave preliminary approval for the plant to increase output by 17%, but Katie Nekola of Clean Wisconsin said that given the recent concerns "about the safety of pushing these old reactors to get more power, we're asking the NRC to take a 'go-slow' approach."

**Nukewatch Members To March Near Wisconsin Plants.** In its "Lakeshore Update" the Manitowoc Herald Times Reporter (4/21) reports, "Members of Nukewatch are planning a 'Walk for a Nuclear-Free Future' beginning at noon Saturday near the Kewaunee Power Station and proceeding south along Wisconsin 42 arriving outside Point Beach Nuclear Plant at about 3 p.m." According to a press release "the organization states the event comes three days prior to the 25th anniversary of the explosions and fire at the Chernobyl reactor in Russia."

**NRC Says Sequoyah, Watts Bar Plants Operated Safely.** The Chattanooga Times Free Press (4/21, Sohn, 78K) reports, "Despite the recent federal arrest of a safety contractor who allegedly falsified inspection reports at Watts Bar, the Nuclear Regulatory Agency has given TVA's 2010 operation of Watts Bar and Sequoyah

nuclear plants a 'green' rating." Green is the agency's highest rating, signaling that a plant is safe. Roger Hannah, a NRC spokesman, said federal inspectors "looked specifically at safety performance and at [plant officials'] corrective actions rather than the behavior of this individual." According to the report, "Contract electrician Matthew David Correll, 31, was charged in March with falsely indicating he had inspected and measured cables meant to provide electric power for safety systems in the nuclear reactor containment structure of the new \$2.5 billion Watts Bar reactor."

**Sequoyah Nuclear Plant to Hold Open House.** WTVC-TV Chattanooga, Tennessee (4/20, 11:08 p.m., EDT) broadcast, "An open house will be held next week at the Sequoyah Nuclear Plant, focusing on the safety of the plant. The meeting is sponsored by the Nuclear Regulatory Commission, which oversees the country's nuclear plants. Commission staff will answer people's questions about the plant's safety performance. They will also talk about the agency's role in making sure the plant is safe. The meeting will run from 1:00 p.m. until 3:00 p.m., at the Sequoyah Training Center on Igou Ferry Road in Soddy-Daisy."

**North Anna Power Keeps Prices Low For Customers.** In an article about Rappahannock Electric Cooperative electricity rates, the Clarke Daily News (4/21, Leonard) reports, CEO Kent D. Farmer "said that REC's electricity procurement strategy, which includes an 11% ownership stake in power provider Old Dominion Electrical Cooperative which runs the nuclear North Anna Power Station located in Louisa County in central Virginia, is key to keeping power rates manageable." Farmer said, "The North Anna plant is producing power at half the price of electricity on the open market."

**Key Republican Criticizes "Millstone Tax."** A blog appearing on the Hartford Courant (4/21, 143K) website reports, "House Republican leader Larry Cafero strongly criticized the so-called 'Millstone tax' that the legislature's energy committee approved that would directly impact operators of the nuclear plants" and "predicted that the bill would fail from inaction and would face a veto if the bill reaches Gov. Dannel P. Malloy's desk." The blog adds, "Millstone officials have said that the tax would be disastrous for the company, and they have threatened to close down the plant."

**NRC Holds Safety Meeting At Oconee Nuclear Plant.** WYFF-TV Greenville, South Carolina (4/20, 6:54 a.m., EDT) broadcast, "The Federal agency that oversees all nuclear power plants in the US says the one in Oconee County is safe. The Nuclear Regulatory Commission met with residents at the plant near Seneca yesterday. To go over the findings of their annual inspection, full performance report

findings for all three units at the Oconee Nuclear Plant are on our website [WYFF4.com](http://WYFF4.com)." [WSPA-TV](#) Greenville, South Carolina (4/20, 6:25 a.m., EDT)

### **Former NRC Official Discusses Nuclear Energy.**

[WBIR-TV](#) Knoxville, Tennessee (4/20, 5:05 p.m., EDT) broadcast, "Meantime, a nuclear expert who played a role in the clean-up of sites like Chernobyl and Three Mile Island says it's still a viable energy source but he expects its popularity to die down over the next few years. Today Harold Denton spoke at the East Tennessee History Center. Denton has more than three decades of experience with the US Nuclear Regulatory Commission and he says if the country's serious about producing clean energy it's definitely the best option." Harold Denton, former NRC employee: "In the short term we'll use a little less as these plants begin to age and be replaced by modern plants. Nuclear is still an expensive option but the advantage is they don't release any carbon dioxide." [WBIR-TV](#) continues, "When asked how safe America's current nuclear system is to date, Denton believes performance and safety have never been better."

### **Prospects For Yucca Project Discussed.**

During a speech before the Aiken Republican Club, the [Aiken \(SC\) Standard](#) (4/21) reports South Carolina Attorney General Alan Wilson discussed several issues, including the Yucca Mountain nuclear waste repository, saying, "The D.C. Court of Appeals has serious concerns about the White House unilaterally stopping Congressional wishes. I'm sick and tired of the ever-growing federal government reaching beyond the will of the people."

Meanwhile, [Politico](#) (4/21, Staff) reports that former Minnesota Gov. Tim Pawlenty "gave ginger answers to questions about...the Yucca Mountain waste depository and more on a visit to the early primary state of Nevada." He "acknowledged a comment in 2002 that he wanted Yucca Mountain to open as a nuclear repository to handle waste from Minnesota. But circumstances have changed since then, including the question of seismic activity around the Nevada site."

### **Shimkus Discusses Planned Yucca Mountain Trip.**

[KMOV-TV](#) St. Louis, Missouri (4/20, 7:45 a.m.) broadcast an interview with Congressman John Shimkus, head of the House Subcommittee on Environment and Economy, regarding the Congressman's planned fact finding trip to investigate Yucca Mountain as a place to store nuclear waste. Shimkus states, "Politics has stopped the process, we spent \$14.5 billion and now we still have high level nuclear waste, instead of at one location, we have it at 69 locations." Shimkus counters Congressman Waxman's argument that it would cost "\$200,000 to open the mountain and clear the radon" by pointing out that NRC members were at the Yucca site recently and were able to go 1,000 feet into the mountain.

### **Greenville News Urges Plutonium**

### **Reprocessing Plant.**

The [Greenville \(SC\) News](#) (4/21) reports, "New questions in the wake of the Japanese nuclear disaster are once again raising the possibility that the mixed-oxide reprocessing plant at the Savannah River Site near Aiken is in jeopardy." Recent questions have been raised "because a reactor at the Fukushima Daiichi nuclear plant in Japan that was damaged by the March earthquake uses the same type of mixed-oxide, or MOX, fuel that would be manufactured at the Savannah River Site." This has led TVA to decide that it will postpone "any decision about purchasing MOX fuel until after it sees how the fuel performed in Japan."

### **ExxonMobil CEO: Nuclear Power Will Hold Its Own Over The Next 30 Years.**

ExxonMobil CEO Rex Tillerson thinks nuclear power will maintain its share of energy output worldwide at least for the next three decades, [Financial Times](#) (4/21, Blair, Pfeifer, Subscription Publication, 448K) reports. Tillerson, in an interview with the Times, suggested that policymakers would not allow for any significant decline of nuclear energy and thinks that the Fukushima plant disaster will likely amount to little more than a short-term delay for nuclear power. Still, he said that governments will have to persuade their populations that nuclear is safe, and foresees a "big educational process that's going to have to be undertaken by the industry and policymakers" if nuclear is to be a major component of future energy policy, "and I personally believe it has to be."

### **US Nuclear Output Hovers Near 4-Year Low.**

[Bloomberg News](#) (4/21, Clark) reports, "US nuclear-power output remained near a 4½-year low for a third day," according to the NRC. With 29 of 104 US reactors offline, nuclear output "increased 57 megawatts to 72,319 megawatts, or 71 percent of capacity." Constellation Nuclear "boosted output at its 621-megawatt Nine Mile Point Unit 1 to 34 percent of capacity from 1 percent yesterday." The unit was shut down for refueling March 21.

### **LATimes References Biden, Peach Bottom Incidents In Editorial On Sleep Deprivation.**

The [Los Angeles Times](#) (4/21, 657K), in an editorial on the recent spate of incidents involving sleeping air traffic controllers, notes that, "of course, they're not the only workers who get so fatigued that they fall asleep on the job. In 2007, a videotape was released of guards sleeping on duty at a Pennsylvania nuclear power plant," and in 2008, "two pilots flying a small commercial jet from Honolulu to Hilo fell asleep and overshot the airport by 15 miles. ... Less dangerously -- except, perhaps, in terms of his image -- Vice President Joe Biden was seen either briefly nodding off or meditating as he sat in

the audience at President Obama's speech on the deficit last week."

**PNNL Celebrates Completion Of \$300 Million Lab Project.** In continuing coverage from Thursday's briefing, the Tri-City (WA) Herald (4/21, Cary) reports that the Pacific Northwest National Laboratory celebrated the completion of the largest construction project in its 46-year history. The \$300 million project "was a massive undertaking -- from getting money from a collection of federal agencies that depend on the lab to planning environmentally friendly laboratory space flexible enough to meet future needs, to moving all the workers and their complex research projects." But PNNL director Mike Kluse assured the crowd of about 300 people at the celebration that "we completed it on schedule and budget." Anne Harrington, deputy administrator for defense nuclear nonproliferation at the National Nuclear Security Administration, told the celebrants, "Investing in a modern, 21st century nuclear security enterprise is essential to preventing nuclear terrorism or nuclear proliferation, and that is why this (project) is so important."

**After Cyber Attack, ORNL Expects To Restore Internet Access Next Week.** According to Oak Ridge National Laboratory spokeswoman Barbara Penland, the Knoxville (TN) News Sentinel (4/21, Munger) reports, the lab "expects to restore Internet access for lab employees by the first of next week." Penland "the investigation of a very sophisticated cyber attack on lab systems is ongoing, headed by ORNL Chief Information Officer Mike Bartell," and including a team with experts from the Los Alamos and Pacific Northwest national laboratories, as well as DOE headquarters. When asked whether this attack was worse than a cyber attack in 2007, ORNL Director Thom Mason said, "If we are successful in preventing exfiltration, then in terms of impact it's obviously less damaging," adding, "But this APT is an evolved threat compared to what we faced four years ago. It's smarter and faster, but fortunately we're also smarter and faster."

**New Report Finds Critical Industries Lagging In Efforts To Deal With Cyberattacks.** Christian Science Monitor (4/21, Clayton, 48K) says that a new report indicates that "industries crucial to the functioning of society -- such as water treatment systems, power plants, and oil and gas facilities -- use computer-controlled systems that are under fast-growing cyberattack by hackers, often affiliated with government and organized crime groups." These industries, according to the new report, are often not increasing their security efforts to respond to the threat. The article cites that "In the Dark: Crucial Industries Confront

Cyberattacks,' a global survey of 200 computer security professionals working in critical infrastructure industries, sends up another warning flare." Data from the survey indicates that "Stuxnet wormed its way into computer networks at companies of about 40 percent of respondents."

## IN THE BLOGS:

**Blog: New York State Senator Polls Manhattan Residents On Indian Point.** On her "Daily Politics" blog for the New York Daily News (4/20, 506K), Celeste Katz wrote that Manhattan State Sen. Liz Krueger, who has "already made her views on the Indian Point nuclear power plant clear (she wants to close it)," now "wants to hear from you. The senator's online survey, 'Where Do You Stand On Indian Point?' asks participants to vote whether they feel Indian Point should remain open or be shuttered."

The blog website, Politics on the Hudson (4/20, Matthews) reported, "Sen. Liz Krueger, D-Manhattan, is conducting an online poll asking people whether the US Nuclear Regulatory Commission should renew the license of Indian Point in Buchanan, Westchester County. Krueger said she has been calling for the plant to be closed since 2003 and thinks the recent earthquake and tsunami in Japan underscore the need to do that." In the wake "of the natural disasters in Japan, Indian Point, which is owned by Entergy, has been defending the safety of its plant and running commercials on the issue."

## INTERNATIONAL NUCLEAR NEWS:

**Japan Bans Access To 12-Mile Zone Around Troubled Reactors.** The New York Times (4/21, Bradsher, Subscription Publication, 950K) reports that "after weeks of trying to prevent the Japanese public from panicking about the damaged Fukushima Daiichi nuclear plant, the government now has the opposite problem: worries have faded so much that people are slipping back into the evacuation zone." Early today, Yukio Edano, chief cabinet secretary, "said...that beginning at midnight, no one would be allowed to enter the 12-mile zone around the reactors without official permission." Officials "took pains not to suggest that they had identified any new dangers at the power plant," but "have warned with increasing urgency that the site remains extremely vulnerable to aftershocks."

The AP (4/21, Yamaguchi, Kurtenbach) notes that "people who enter the zone would be subject to fines of up to 100,000 yen (\$1,200) and possible arrest. Up to now, defiance of the evacuation order was not punishable by law."

The Wall Street Journal (4/21, A10, Obe, Sekiguchi, Subscription Publication) reports that the government will allow displaced families to send one person per family to visit their homes in order to retrieve their belongings for two-hour periods.

Bloomberg News (4/21, Hirokawa, Sakamaki) adds that "Residents whose homes were within three kilometers of the plant, though, won't be permitted to make a temporary visit," according to Edano. The article also reports that "Prime Minister Naoto Kan visited the area today and met with Fukushima Governor Yuhei Sato." AFP (4/21) also reports this story.

**Doctor Warns Of Health Risks Facing Stricken Plant's Workers.** The AP (4/21) reports that epidemiologist Takeshi Tanigawa, who has met with workers at the Fukushima Daiichi nuclear plant, said that they "suffer from insomnia, show signs of dehydration and high blood pressure and are at risk of developing depression or heart trouble." Tanigawa, the Public Health Department chairman at Ehime University's medical school, "said he met and spoke with 80 of the workers over four days when he was allowed into another nearby nuclear plant where many of them take their breaks," but he did not carry out full physical exams because of time constraints. "His findings relate to the health risks workers face due to fatigue, rather than from any exposure to radiation."

**TEPCO Cautioned To Cover Reactors Before Typhoon Season.** Bloomberg News (4/21, Inajima, Okada) reports that engineering professors are warning that "Tokyo Electric Power Co. must speed up plans to cover reactors at its crippled nuclear plant and drain tainted water to prevent more radiation leaks as Japan's typhoon season approaches." Tadashi Narabayashi, a professor of nuclear engineering at Hokkaido University, said, "The buildings should be covered at least before the typhoon season is in full swing by late July." TEPCO "plans to install temporary covers within nine months, and concrete ceilings over the 'medium term,'" but a spokesman said they may install them faster than originally announced.

**UN Chief Says Improvements In International Nuclear Cooperation Needed.** The AP (4/21) reports, UN Secretary-General Ban Ki-moon said the world must "prepare for more nuclear accidents on the scale of Chernobyl and Japan's Fukushima Dai-ichi plant," because "grim reality will demand sharp improvements in international cooperation." Ban "portrayed the growth of nuclear power plants as inevitable in an energy-hungry world" and noted that many consider the source a "relatively clean and logical choice in an era of increasing resource scarcity. Yet the record requires us to ask painful questions" because the "unfortunate truth is that we are likely to see more such disasters."

**NYTimes Urges Ad Hoc Talks To Ban Production Of Nuclear Weapons Fuel.** Under the headline "Time For Plan B," the New York Times (4/21, Subscription Publication, 950K) editorializes, "A 14-year effort to negotiate an international treaty banning the production of nuclear weapons fuel is getting nowhere," and as a result "we are encouraged that the Obama administration has begun discussing with Britain and France and others the possibility of negotiating a ban outside the [UN] conference [on the treaty], much like the 2008 convention on cluster munitions and the 1997 land-mine treaty." The Times further argues that "a ban would give the United States and others more leverage to pressure North Korea and Iran to abandon their nuclear efforts. Serious negotiations need to start now."

**Japan Nuclear Crisis Prompts Nuclear Energy Debate In Australia.** The Sydney Morning Herald (4/21, Cubby) reports the "nuclear industry is calling for renewed public debate about atomic energy in Australia, and says the Fukushima reactor disaster in Japan will not affect the future of the nuclear energy or uranium mining industries." Selena Ng, the regional director of the French nuclear company Areva, said, "The events of Fukushima were a huge wake-up call for people in my generation, born in the '80s."

**Romania Plans Nuclear Power Expansion.** Bloomberg News (4/21, Timu, Savu) reports "Romania plans to expand its nuclear power generation in the next 24 years by building two reactors at its only atomic plant and building a new facility," citing the country's Economy Ministry. Bloomberg says Romania "plans to add as much as 4,600 megawatts of nuclear capacity by 2035 to its existing output of 1,400 megawatts." Notably, "the country aims to install the two reactors at its Cernavoda plant, operated by atomic-power company Nuclearelectrica SA, by 2020 and complete the new facility by 2030."

**RWE AG Renews Criticism Of German Government For Suspending Nuclear Reactors.** The Wall Street Journal (4/21, Hromadko) reports that the German government is facing strident criticism from RWE AG for its decision to suspend the nation's seven oldest nuclear reactors in view of the nuclear disaster in Japan.

**Areva Expects India Nuclear Deal Despite Violent Protests.** The Financial Times (4/21, Kazmin) reports that a violent protest at the site of a proposed nuclear power plant in India spotlights the challenge facing the country as it tries to ramp up power production. Despite the protests, Areva, the French provider of nuclear equipment and services, expects to complete a \$10 billion deal with India, the paper added.

### **South Korea To Inspect Gori Nuclear Reactor.**

The Korea Times (4/21, Kim) reports that in view of "the recent shutdown of the No. 1 reactor of the Gori nuclear power plant in Busan," South Korea "plans to review the safety of the country's Gori nuclear facility in response to nationwide concerns." The Korea Hydro & Nuclear Power (KHNP), "which operates the nation's 21 nuclear reactors, said Thursday that both government and private experts will team up in order to intensively examine the 33-year-old No. 1 reactor," the paper adds.

### **Canada Sets Up Task Force To Evaluate Nuclear Power Plants.**

Power-Gen Worldwide (4/20) reported that "the Canadian Nuclear Safety Commission (CNSC) has established an operational task force to evaluate the operational, technical and regulatory implications of the" nuclear disaster in Japan "in relation to Canadian nuclear power plants." The article said "the task force members will review licensee's responses to the CNSC's request for information to re-examine the safety cases of their nuclear facilities, the underlying defense-in-depth against external hazards, severe accident scenarios and emergency preparedness procedures and guidelines."

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# NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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**NRC NEWS:**

**Business & Financial News, Breaking US & International News (REU)**

By Roberta Rampton  
Reuters, April 21, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

**Sen. Feinstein Wants New Protocol For Renewing Nuclear Power Licenses (SCPR)**

By Kitty Felde  
Southern California Public Radio, April 21, 2011

California's senior US senator wants federal nuclear regulators to update their re-licensing process to consider possible dangers from earthquakes and tsunamis.

When nuclear power plants want to renew their operating license, the Nuclear Regulatory Commission looks at the "detrimental effects of aging plant facilities." US Sen. Dianne Feinstein says that ignores the danger posed by natural disasters and terrorism.

In a letter to the Chairman of the NRC Gregory Jaczko, the California Democrat says we've learned a lot since the San Onofre nuclear power plant came online three decades ago.

"Recent events," she says, referring to the ongoing crisis at the Fukushima nuclear power plant in Japan, "demonstrate that 30-year-old threat assessments can be devastatingly inaccurate."

Feinstein wants the NRC to consider new information, including newly discovered fault lines near nuclear facilities, before granting license extensions.

The NRC says it's reviewing Feinstein's letter and will respond to the senator.

**Should Radiation From Japan Scuttle Spring Break In Hawaii? A Mom Agonizes (TIME)**

By Bonnie Rochman  
Time, April 21, 2011

There's something about having kids that can turn a fairly rational person into a neurotic worrywart. So it was with our spring break trip to Hawaii, planned long before Japan trembled, flooded and announced that the emissions from its devastated nuclear reactors shared the same disaster category as Chernobyl.

We live in Seattle, so we're already pretty close to the action. Radioactive milk was detected in eastern Washington, and atmospheric monitors had registered elevated levels of radioactive isotopes, so I was already uneasy. But as news reports showed images of radioactive water first gushing from a leak at the reactor site then being intentionally dumped into the Pacific in order to make room for even more radioactive contents, I started to wonder whether it made sense for my family to transport ourselves six hours closer to the crisis unfolding on the other side of the pond. (More on Time.com: How Useful Are Stem Cell Transplants for Fukushima's Workers?)

For days, I haunted the US Environmental Protection Agency's website showing results of its radiation monitors stationed throughout the US. The data was presented in various measurements, making it difficult to compare, and there was no baseline, making it tough to discern how alarming the increase actually was.

Fortunately, my job covering parenting, among other topics, for Healthland offered the perfect solution. I didn't have to simply stress out; I could actually lay out my dilemma for experts in the name of work. Instead of asking friends what they would do in my situation, I could ask people who actually knew the difference between a millisievert and a millirem. And so I did.

I had so many questions: is it okay to drink the water? The milk? Was it okay to play in the ocean or would it be akin to marinating in a toxic swimming pool? (More on Time.com: Radiation May Be a Greater Cancer Risk for Adults Than Doctors Thought)

In the course of trying to answer those questions, I learned lots of interesting information about radiation. Bananas are a mainstay in my household and will continue to be, but I will never look at them the same now that I know, thanks to the US Nuclear Regulatory Commission (NRC), that they, along with brazil nuts, "contain higher levels of radiation than other foods. Brick and stone homes have higher natural radiation levels than homes made of other building materials such as wood. Our nation's Capitol, which is largely constructed of granite, contains higher levels of natural radiation than most homes."

Mostly what I learned is that no one can really say for sure whether any radiation exposure is safe. The NRC says that the "radiation protection community conservatively assumes that any amount of radiation may pose some risk for causing cancer and hereditary effect, and that the risk is higher for higher radiation exposures."

Great. So where does that leave my three kids, my husband and me? Is traveling to Hawaii safe?

David Brenner, director of the Center for Radiological Research at Columbia University, rephrased my question. It's not a matter of whether Hawaii is safe in terms of radiation; scientifically speaking, safe implies zero risk, and that's not the case. In general, the risk of developing cancer in the US is in the range of 40%; tacking on whatever additional exposure we'd receive in Hawaii would be akin to increasing our risk to 40.001%.

"My analogy is the lottery," says Brenner. "Your chances of winning are exceedingly small but because lots and lots of people buy lottery tickets, some people will win. You can never say who they are. The expectation is there will be some extra cancers due to the overall increase in radiation exposure from the scenario in Japan. There's a population consequence, but I don't think there's really an individual consequence."

In any case, radioactivity doesn't always follow a predictable path, says Joseph Ring, a certified health physicist who did environmental monitoring during Chernobyl and helps laypeople understand radiation safety. He saw data showing higher radioactivity content in Boston's rainwater than Seattle's; go figure. (More on Time.com: Do TSA Pat-Downs Work? Even Kids Know How to Blow Up a Plane)

"The problem with radioactivity is we don't understand it as a population," says Ring. "We know it's connected to the bomb and therefore it's scary. My advice I give to people on the West Coast who have bought potassium iodide is put it in a box and mail it to someone in Japan."

Henrietta Dulaiova, a professor of geography and geophysics with masters in nuclear engineering and PHD in oceanography at the University of Hawaii Manoa made me feel better. She uses naturally occurring radioactive isotopes to study ocean processes — how water mixes, for example. By the time radioactivity is carried on currents to Hawaii, she said, it would be at "negligible" levels compared to the vast volume of water in the Pacific. Who knew ocean water was radioactive, infused with potassium uranium? "The ocean has so much radioactivity in it, and it's normal," she says. "That's how the ocean has existed for many millions of years, and we know it's not harmful for the fish or for us."

James Cox, a radiation oncology professor at the MD Anderson Cancer Center in Houston, emphasized that we're surrounded by ionizing radiation all the time. "If you take a trip to Tokyo on a plane you are increasing your amount of exposure to cosmic radiation substantially and people don't ever think about that," he says. "Radiation is a fact of life. Go on your trip and don't worry."

In the end, my 6-year-old daughter had the last word. When she heard we were considering canceling our trip, she shot me a withering look and, arms akimbo, said, "Hello? Japan is not Hawaii!"

She, of course, was right. And so we came. The tops of the volcanic countryside are foamy with clouds, the water has more shades of blue than a Crayola box and the sun dapples the waves.

Hawaii feels nice and safe to this anxious American mom, and to the scores of camera-toting Japanese tourists we've seen who've apparently come here to forget for a few days their own, far more justified, worry.

## **Counterpoint: 'Clean, Reliable And Affordable' Power (OKG)**

**We should learn from Fukushima, not prevent nuclear development**

By Sen. Jim Inhofe

Oklahoma Gazette, April 21, 2011

In March, Japan suffered from a devastating earthquake followed thereafter by a massive tsunami. In its aftermath, the world witnessed a nuclear accident at the Fukushima nuclear power plant.

This accident left many Oklahomans wondering: What does this accident mean for them? What is the role of nuclear energy in the US? What is our response to the accident?

First, our thoughts and prayers are with the Japanese people. We will continue to stand with them throughout the response and provide assistance as they struggle to recover.

I agree with the Obama administration that our nuclear plants are indeed safe and that we should continue to develop new nuclear plants. Reactors built in the US are robust and designed to withstand significant natural disasters, including earthquakes, tornados and hurricanes. Two operating nuclear plants in California can withstand the impacts of an earthquake greater than the one in Japan, and, closer to home, the Wolf Creek nuclear plant in southeastern Kansas can weather an EF5 tornado with over 360 mph winds. All of our reactors are constructed according to a "defense-in-depth" approach, with multiple, independent safety systems in place so that if one safety system breaks down there are several backups.

My confidence comes from what I have learned in the days and weeks following the Japanese accident.

The safety of our reactors has long been one of my top priorities. When I served as the chairman of the Subcommittee on Clean Air and Nuclear Safety, I learned that the committee had not held a hearing on the NRC in years, so we held several hearings each year to ensure that the agency was reaching the highest standards of safety and efficiency, and was capable of handling the workload of preparing for new nuclear plant development.

The NRC and the industry continually ask themselves, "What if...?" There is a systematic process in place to incorporate lessons learned from events worldwide to update and improve plant safety and security.

Shortly after learning of the accident, I spoke with NRC Chairman Greg Jaczko to discuss the necessary steps forward for nuclear power in the short term. A week after the accident, I had the chance to question Chairman Jaczko and the nuclear industry. I have been assured our plants are safe, and that the industry and the NRC are conducting systematic reviews of the protections currently in place. Both are working together to determine whether changes are needed.

There will certainly be lessons the industry can learn from Japan. Those lessons will no doubt help make nuclear energy safer for the American public. It is important, however, that any immediate scrutiny by the NRC should be focused on improvements that provide real safety benefits, not just red tape.

Nuclear power is a key element of our energy future: It is clean, reliable and affordable. We should learn from the accident at Fukushima, but it shouldn't prevent us from harnessing the benefits of nuclear energy to power this great machine called America.

US Sen. Inhofe, R-Okla., is a ranking member of the Senate Committee on Environment and Public Works.

## **Explore Baltimore County: Best Bets: Library's Hairy Situation (BALTMESS)**

Baltimore Messenger, April 21, 2011

3641 Falls Road, presents "A Hairy Situation," April 1, 1 p.m., a program of hair-related fairy tales, songs, and poems for children ages 6-12, Thu., April 21, 1 p.m. Call 410-396-6043.

Johns Hopkins Carey Business School -- 100 International Drive, presents speaker Gregory Jaczko on the "The Past, Present, and Future of Nuclear Power: A Regulator's Perspective," Thu., April 21, 8-9 a.m., with breakfast at 7:30 a.m. \$35. Call 410-516-4905 or go to [www.carey.jhu.edu/leadersandlegends](http://www.carey.jhu.edu/leadersandlegends).

Walters Art Museum -- 600 N. Charles St., presents:

\* "Is This the Face of Christ? A Good Friday Lecture," Fri., April 22, 12:15-1:15 p.m., on the 'canonical' face of Christ during medieval times. Free. Call 410-547-9000 or go to [www.thewalters.org](http://www.thewalters.org).

\* Medieval Family Festival, Sun., April 23, 10 a.m.-4 p.m. Free. Call 410-547-9000 or go to [www.thewalters.org](http://www.thewalters.org).

Roland Park Branch Library -- 5108 Roland Ave., presents poet Virginia Crawford reading from her new collection, "Touch," Sun., April 23, 2 p.m. Call 410-396-6099.

Maryland Science Center -- 601 Light St., presents an Earth Day celebration Sun., April 23, noon-4 p.m., with hands-on activities and experiments. Free with paid admission. Call 410-685-5225 or go to [www.marylandsciencecenter.org](http://www.marylandsciencecenter.org).

St. John's Episcopal Church -- 3009 Greenmount Ave., hosts the "Baltimore Blue Mass," a service of prayer for Baltimore City police, firefighters and paramedics, Wed., April 26, 6:30 p.m. A dinner reception will follow. Call 410-467-4793.

Friends School -- 5114 N. Charles St., presents "From the Dressup Corner to the Senior Prom: Navigating Gender and Sexual Identity in a K-12 School," Wed., April 26, 7-8:30 p.m., in Forbush Auditorium. Free. A reception will be held in the lobby first. Free. Call 410-649-3216, go to [www.jenniferbryanphd.com](http://www.jenniferbryanphd.com) or e-mail [hblalock@friendsbalt.org](mailto:hblalock@friendsbalt.org).

Hampden Branch Library -- 3641 Falls Road, presents "Don't Trust a Billy Goat, a puppet show adaptation of "The Three Billy Goats Gruff," for children ages 6-12, Wed., April 26, 10:30 a.m. Call 410-396-6043.

College of Notre Dame of Maryland -- 4701 N. Charles St., hosts Sister Kathleen Feeley, SSND, sharing reflections on her career in service in "My Odyssey: Ghana to IND," April 27 in the Doyle Formal Lounge in Doyle Hall. A reception is at 5:30 p.m., dinner at 6 p.m., and the program and a discussion at 7 p.m. \$35 for the dinner and program; \$15 for the program only. Call 410-532-5542 or go to ndmalum@ndm.edu.

## **Teacher: We Can't Care For Students In Nuclear Emergency (YCCSTAR)**

### **We can't care for students in nuclear emergency**

By Patrick Cronin

Hampton (NH) Union, April 21, 2011

SEABROOK — The town's middle school teachers should not be responsible for caring for children in a nuclear emergency, and they want a realistic plan from the state should an event at the Seabrook nuclear power plant require evacuation.

Teachers are parents, too, and they have their own children or relatives with disabilities to attend to in an emergency, according to Dianne Dunfey, a Seabrook Middle School social studies teacher.

Middle school teachers met Tuesday with state officials to address for the first time what they call a critical flaw in the state's emergency evacuation plan for emergency events at Seabrook Station.

While the plan states teachers are charged with accompanying students to a designated reception center, a 1987 state Supreme Court ruled teachers cannot be required or obligated to assume the role of providing assistance to school children in the event of an evacuation.

Teachers made it clear Tuesday they are not part of the plan and said state officials need to once and for all determine who would take on the responsibility to ensure students are safe.

"I think the real extraordinary development today is the acknowledgment by these representatives and the governor that we have a problem here and there are significant deficiencies in the plan," Dunfey said.

"The reason we brought this forward is because we care about the children and their safety."

Chris Pope, director of the state's Homeland Security and Emergency Management, said the purpose of meeting was to hear the teachers' concerns and take notes. But he acknowledged the plan calling for teachers to evacuate students and watch over them at the reception center during the duration of the emergency needs to be examined.

When asked why it wasn't updated after the state Supreme Court decision, Pope said he did not know.

"That decision is 25 years old, and our state attorney general's office is currently reviewing that decision," Pope said. "Regardless of what the legal issues are, we need to move forward and make this plan better."

The meeting came on the heels of Dunfey and 47 of her colleagues at Seabrook Middle School sending a letter to Gov. John Lynch asking him to address the 1987 plan.

Representatives from the state Division of Homeland Security and Emergency Management, Department of Health and Human Services, state police and the Department of Education were in attendance.

Dunfey said teachers have brought up these concerns numerous times over the years.

The teachers decided to try again, she said, after the recent events in Japan where the Fukushima Dai-ichi nuclear power plant is still leaking radioactive material in the aftermath of a powerful earthquake and tsunami struck the island nation on March 11.

Dunfey said when teachers were assigned responsibility of evacuating students in the plan, a survey revealed that 97 percent of the teachers within the entire evacuation zone said they would be unable to assume that task for family reasons.

Dunfey said the plan states teachers are trained to react in the event of a radiological emergency and that is not the case.

"I can tell you that the staff of the school doesn't know how to proceed. I can tell you that the children of the school do not know how to proceed," Dunfey said.

While local emergency management officials said they have a contingency plan if teachers do not participate in the evacuation in case of an emergency, Dunfey said that is not the answer.

"The problem is we need a primary plan," Dunfey said. "A contingency plan suggests that we will wait and see what happens. That doesn't sound like emergency preparedness to me."

Others brought up concerns in the plan that bars parents from picking up their children, calling it unrealistic, and the fact that Seabrook schools do not have any iodine pills on hand.

Dunfey hopes the state agencies who attended the meeting will act on their concerns and develop a real plan.

"I hope the governor will have a very high standard for how his agencies move forward and I hope he will hold them accountable for a real plan rather than illusionary one," Dunfey said.

Seabrook Middle School Principal Les Shepard called the meeting productive.

"I think the next step is up to the state," Shepard said. "I thought we had a group of reasonable people here, and I thought we had informative discussion. I thought the folks from state were reasonable and they should be able to come up with a reasonable solution. Everyone wants a plan that works. The teachers want one, and the public wants one."

Pope said while the issues raised need to be looked at, he still has complete confidence in the plan— that consists of 53 ring binders— if an emergency arose tomorrow.

"I'm confident this plan will do what its designed to do," Pope said. "I believe if the kids need to be evacuated at the school, the buses will arrive and they will get on the buses and (go to the) reception area."

## **Officials Respond On Seabrook Nuclear Accident Plan (NHUNIONL)**

By Gretyl MacAlaster

New Hampshire Union Leader, April 21, 2011

SEABROOK – A letter sent by 48 teachers to Gov. John Lynch last week garnered a quick response, with officials from a variety of state agencies meeting with teacher representatives yesterday to discuss a plan for safely evacuating and caring for students in the event of a nuclear emergency.

In the letter, teachers expressed concern with the lack of plan and unclear guidelines as to who would be in charge of students.

Christopher Pope, director of Homeland Security and Emergency Management for the state, said they are looking for recommendations and suggestions to improve the plan to ensure the safety of students.

He said Tuesday's meeting was the first step in the process.

Seventh-grade science teacher Dianne Dunfey is leading the charge for clarification of the plan and said she appreciates the extent to which Lynch responded, after years of feeling like no one was listening.

She said there are "significant and serious" gaps in the existing plans for evacuating children in a radiological emergency.

She said there has been much turnover in both state government and school leadership since the plan was completed in 1987, after a New Hampshire Supreme Court decision.

The New Hampshire Radiological Emergency Response Plan originally assigned public school teachers the responsibility of evacuating students to "reception centers" and supervising them for the duration of the emergency, or until each is released to an authorized adult.

A New Hampshire Superior Court decision in 1987 established that teachers cannot be required and have no obligation to take on that role, calling it "conscription of private citizens."

The plan was changed to put "school officials" in charge, but those people are not identified.

"We have been appealing for a number of years to have emergency evacuation personnel clearly designated," Dunfey said.

Under the current plan, parents are directed not to go to the schools to pick up their children and "school officials" have supervisory responsibility during an evacuation and once students have been relocated, but teachers want this clarified.

Seabrook Middle School Principal Leslie Shepard said that in the age of instant alert phone systems and digital media, parents are going to know if there is an emergency and is concerned they will flock to the schools despite a plan that advises otherwise.

Teacher Tricia Valcich said her biggest concern is that after 27 years teaching at Seabrook Middle School, she is still not trained in how to handle a nuclear emergency.

"I am trained in fire drills and in a lockdown situation, but I am not trained in a nuclear emergency drill at all and I want to be. If it is going to happen we need to be," Valcich said.

She said when the sirens go off during regular testing at the station, she just keeps teaching.

"I would have no idea what to do if those were real," she said.

Winnacunnet High School teacher Ed Beattie, representing the Seacoast Education Association, said the current plan creates "illusionary preparedness."

Pope said a small working group will be formed to look at the plan more closely and see if changes need to be made.

"We have to move forward in a positive way to come up with solutions," Pope said.

Teacher Rebecca Scherbon said the teachers will continue to be vocal to make sure there is a response to their concerns.

## **Seabrook Teachers, State Officials Rework Emergency Plan (WMUR)**

## **Middle School Teachers Raise Concerns On Radiological Evacuation Plans**

WMUR-TV Manchester, NH, April 20, 2011

SEABROOK, N.H. -- Teachers in Seabrook are getting the attention of top government officials after raising concerns about radiological evacuation plans for their school.

Seabrook Middle School is less than a mile from Seabrook Station, and teachers said in the case of a nuclear crisis, there isn't a solid plan in place to get kids to safety. Photos: Seabrook On List Of 'Most Vulnerable' Nuclear Sites

Teachers and state officials sat down at Seabrook Middle School on Tuesday to discuss emergency planning in case the school's neighbor, a nuclear power plant, has an accident.

"I think that the state has acknowledged, to their credit, that we do have deficiencies in our radiological emergency evacuation plan," said teacher Dianne Dunfey.

State Homeland Security officials admitted that the existing plan can be improved, but they believe it still works.

"I have absolute confidence in the plan as it exists now," said Chris Pope, director of the New Hampshire Homeland Security and Emergency Management.

Pope said the current plan calls for teachers to handle the evacuation of students, potentially staying with them for hours or even days.

Seabrook teachers, however, said a court decision voided that responsibility, but the state never changed its plan. Now, after the teachers appealed directly to the governor's office, attention is re-focusing on that discrepancy.

"Especially with what's going on in Japan, it is very much on peoples' minds. And that's why this is a great opportunity for us to look at the plan and find out what we can do specifically to improve it," Pope said.

Pope said some problems are obvious, such as getting the elementary school nurse crucial emergency supplies. Contingency plans do exist, but teachers said contingency doesn't mean preparedness.

Both sides have agreed to work together to improve the plan.

## **Seabrook Teachers Want Information On Evacuation Process (NHPR)**

### **Middle School Teachers Raise Concerns On Radiological Evacuation Plans**

By Roger Wood

New Hampshire Public Radio, April 20, 2011

Seabrook Middle School teachers worried about safety at the Seabrook Nuclear Power plant have brought their concerns to state officials.

NHPR Correspondent Roger Wood reports.

The Middle School is less than a mile from the Seabrook Nuclear Plant. In response to heightened fears in the wake of the Japanese disaster, 48 teachers signed a letter to Governor Lynch seeking answers on what school staffers are ultimately responsible for evacuating children in a nuclear emergency. Teacher Diane Dunfey told New Hampshire Emergency Management officials that its unclear who would assume that responsibility.

"We can't get an answer to that," she said. "We've tried for I can't tell you how many years, how many Governors we've addressed. And we can't get an answer. And to me, it's reprehensible that we've let it go like this."

New Hampshire Emergency Management Agency Director Chris Pope, along with other state officials listened to their concerns during a meeting at the school library. He offered no immediate solutions, but promised to work with them and others in a process to clarify the issue.

## **SAPL: Don't Renew Nuke License (HUNION)**

### **Asks NRC to heed lessons of Japan**

By Shir Haberman

Hampton (NH) Union, April 19, 2011

SEABROOK — The Portsmouth-based Seacoast Anti-Pollution League and 44 other nuclear safety and watchdog groups around the country have signed on to a petition asking the US Nuclear Regulatory Commission (NRC) to immediately suspend all licensing activities at nuclear power plants until a full analysis of the Japanese nuclear disaster is completed.

"With the still unfolding Fukushima disaster — and with at least one of those reactors being exactly the age Seabrook would be when due to be re-licensed — it's clearly time to re-think the wisdom of signing up our local nuclear reactor for another couple of decades of questionable service at this time," said Doug Bogen, executive director of Seacoast Anti-Pollution League. "As the Japanese are probably thinking about now, we need to be giving greater consideration to other safer, more reliable

sources of electric power, as well as a comprehensive and independent analysis of future safety at all our nuclear plants, including Seabrook."

The Seabrook Station nuclear power plant has applied for an extension of its operating license through the year 2050. SAPL, along with other local watchdog groups, has been accepted as an intervener in the re-licensing process.

The NRC is currently involved in licensing activities at 21 existing and new nuclear power plants in 15 states across the country. The petition asks the NRC not only to suspend those activities, but to begin an investigation into what caused the Japanese reactor disaster and the lessons to be learned for US nuclear plants, and to empower an independent commission to review those findings.

The petition explains the action is needed to review "the safety and environmental implications of the ongoing catastrophic radiological accident at the Fukushima Daiichi Nuclear Power Station, Units 1-6, in Okuma, Japan." According to the petition, the NRC review should include a close look at "whether the March 11, 2011 Tohoku-Chihou-Taiheiyo-Oki earthquake and ensuing radiological accident poses new and significant information that must be considered in environmental impact statements to support the licensing decisions for all new reactors and renewed licenses."

Nuclear safety proponents have criticized the NRC recently for extending the operating license of another older local power plant — Vermont Yankee — in the midst of the Japanese crisis.

"(The) NRC violated the law by re-licensing the Vermont Yankee reactor at the same time it launched an investigation into whether US safety and environmental standards are strong enough in light of the Fukushima accident," said attorney for the petitioners, Diane Curran of Harmon, Curran Spielberg & Eisenberg LLP. "The National Environmental Policy Act requires the NRC to learn and apply the lessons of Fukushima before it allows another reactor to operate."

Mary Lampert is the director of Pilgrim Watch, which oversees the operation of another local nuclear plant, Pilgrim in Duxbury, Mass. Her organization is also a signatory to the petition.

"Pilgrim, located in 'America's Hometown,' is the same design as the Fukushima plants, is older than most of them and has even more spent fuel in its single spent fuel pool," Lampert said. "The major cause of the Fukushima disaster was the loss of off-site power; but it doesn't take a tsunami to cause that."

The petition is available for review at [www.nuclearbailout.org](http://www.nuclearbailout.org).

## **Nuclear Power-Boosting Bill Melts Down On Senate Floor (KCC)**

By Tim Sampson

Kansas City Citizen, April 21, 2011

Efforts to rewrite state law so power companies could transfer to consumers pre-construction permitting costs of a second nuclear power plant in Missouri already faced significant headwinds heading into the legislative session.

Toss in disagreements over Missouri's long-term energy policy, a nuclear disaster abroad and the end-of-session time crunch and odds steepened.

Against these circumstances, Senate Bill 48, which would have allowed a consortium of energy companies led by Ameren Missouri to increase rates on customers up to \$45 million to finance an early-site permit for the Callaway II nuclear plant, was shot down Tuesday on the Senate floor.

"This session, with only three weeks left, I just don't think we can breathe life into it," said Sen. Robin Wright-Jones, D-St. Louis, one of the sponsors of the bill who conceded that the legislation was likely dead for the session.

Floor debate lasted more than an hour, before it was killed by a procedural "point-of-order" maneuver by Sen. Jason Crowell, R-Cape Girardeau. He successfully argued to Senate President Pro Tem Robert Mayer, R-Dexter, that several provisions in the bill — including a measure to increase funding to the Public Service Commission's Office of Public Council — went too far beyond the original scope of the bill.

Similar legislation exists in the House of Representatives, but with less than four weeks left, many lawmakers consider the proposal finished for the session.

Consumer advocates and anti-nuclear groups have argued against the bill, which would undo Missouri's long-standing construction-work-in-progress law that forbids utility companies from raising rates to finance the construction of a new plant before it goes online. The so-called CWIP law was passed shortly after the first Callaway plant's approval.

Advocates for a new nuclear plant say CWIP unfairly targets utility companies, and that virtually all other industries are allowed to factor the cost of building new manufacturing facilities into the price of their product.

Despite the long odds, one sponsor held out hope that some form of the bill could be approved by the General Assembly this year.

Sen. Mike Kehoe, R-Jefferson City, introduced the original legislation and argued passionately in favor of provisions contained in the bill. He noted the addition of three key consumer protections added to the original bill managed to garner the support of the Consumers Council of Missouri.

Also coloring the nuclear power narrative are the ongoing challenges facing Japan in the wake of radiation releases at Fukushima Dai-ichi nuclear power plant. The Nuclear Regulatory Commission is in the midst of a large-scale review of more than 30 nuclear plants operating in the United States.

Kehoe argued that the Fukushima Dai-ichi plant was an older model – pre-dating the first Callaway plant by 14 years – and that a new facility would feature much safer engineering. He also said that polling since the accident shows Missourians favor a new nuclear facility.

“The unfortunate incidents (in Japan) didn’t change the fact that in 15 or 20 years we’re going to be in a jam for power,” Kehoe said. Related posts:

### **Nuclear Bill Stalled In Missouri Senate (JCNT)**

By Bob Watson

Jefferson City News Tribune, April 21, 2011

A procedural motion late Tuesday afternoon may have killed the nuclear early site permit bill for this legislative session — although some lawmakers think the plan still has a small chance of being passed.

Several Missouri senators, led by Mike Kehoe, R-Jefferson City, and Robin Wright-Jones, D-St. Louis, spent about 80 minutes explaining the bill that would allow a utility company to get Public Service Commission approval to charge ratepayers for the company’s successful effort to win a US Nuclear Regulatory Commission early site permit — a first step toward building and operating a nuclear reactor to generate electricity.

The debate was on a substitute bill that combined Wright-Jones’ one-page bill over utility consumers’ deposit payments with Kehoe’s much larger measure covering the early site permit process.

### **Nuclear Bill Protest Planned At Ameren Shareholders' Meeting (STLBIZ)**

By Kelsey Volkman

St. Louis Business Journal, April 21, 2011

Opponents of legislation that would allow Ameren and other utilities to recoup \$45 million from customers for the cost of a new nuclear plant in Callaway County plan to protest at the St. Louis company’s shareholders’ meeting Thursday.

The demonstrators said they plan to give Ameren an invoice for the “future costs of using nuclear power including nuclear waste storage, emergency response, emergency preparedness, long-term health and environmental monitoring, health impacts on communities and workers, hundreds of years of site security and the lost revenues and economic damages of a nuclear accident.”

Several groups, including the Missouri Coalition for the Environment, Gateway Green Alliance, Missouri Votes Conservation, Veterans for Peace, Environment Missouri and Missourians Organizing for Reform and Empowerment, plan to participate.

The shareholders’ meeting is scheduled for 8:30 a.m. at Powell Hall on Grand Boulevard.

Opponents of Senate Bill 48 say the measure erodes the law against Construction Work In Progress (CWIP) ratepayer financing, which makes it illegal to charge customers for a power plant before it is delivering power.

The bill has advanced through the legislature but was derailed on the floor of the Missouri Senate this week when it was ruled out of order by Senate President Pro Tem Rob Mayer.

Supporters say the bill keeps open the option of nuclear power in Missouri. “We are deeply disappointed that Senate President Pro Tem Mayer missed the opportunity to move this important legislation forward,” said Irl Scissors, executive director of Missourians for a Balanced Energy Future.

### **STP Plant Expansion Loses NRG As Investor Japan's Nuclear Crisis Took Toll On Outlook For Plant In Bay City Area NRG: Push For License Continues (HC)**

By Tracey Idell Hamilton , Staff Writer

Houston Chronicle, April 21, 2011

NRG Energy will no longer invest in the South Texas Project nuclear expansion near Bay City and will write down its investment in the face of deeply diminished prospects for the project since Japan's worst-ever nuclear accident.

“The project is not dead,” CEO David Crane said Tuesday, “but it’s not moving forward at this point, and to be frank, under the current circumstances, the reality of it moving forward in the foreseeable future is not high.”

The company plans to record a first-quarter pre-tax charge of roughly \$481 million from Nuclear Innovation North America, its joint venture with Toshiba Corp., NRG said.

NINA will continue to seek an operating license from the Nuclear Regulatory Commission, Crane said, as well as federal loan guarantee from the Department of Energy.

Crane said he can envision a time when the project, with a license and loan guarantee in hand, will be attractive to new investors.

Toshiba, which holds a 12 percent stake in NINA, will take over the costs to continue to pursue the NRC license. But Crane acknowledged that any roadblocks in that process could cause Toshiba to drop its funding.

CPS Energy, which retains a 7.6 percent stake in the expansion, said it will continue to support efforts to secure the federal loan guarantee and operating license. It stopped its investment, which totaled about \$386 million, more than a year ago.

The municipal-owned utility would receive \$80 million from NRG if the project receives the loan guarantee.

Spokeswoman Lisa Lewis said it's too soon to tell whether CPS will ultimately lose its investment. She noted that there were times during the development of STP's original two reactors when the project looked dead, only to be revived by new partners and new circumstances.

CPS is a 40 percent owner in STP 1 and 2; Austin Energy owns 16 percent and NRG has 44 percent.

Critics: Pull the plug

Anti-nuclear activists cheered Tuesday's announcement, but expressed dismay that NRG didn't pull the plug entirely.

Karen Hadden of the SEED Coalition, an Austin-based environmental group, said her organization and others would continue to fight the project's licensing efforts.

NRG recognized last month that it likely lost a major investor in the expansion after Tokyo Electric Power Co.'s Fukushima Daiichi plant was crippled by a tsunami spawned by an earthquake. NRG indefinitely suspended all detailed engineering work and other pre-construction activities.

That reduced the workforce on the project from 1,000 to about 350.

Crane said many of those were engineers working for other partners, and so he did not know how many would be retained after Tuesday's announcement.

NINA will keep three employees on the project, he said.

The South Texas Project Nuclear Operating Co. had about 120 workers assigned to the expansion at its peak; the number is now 24.

Tokyo Electric Power's president confirmed Monday, according to a story on Nikkei.com, that the company will reconsider its overseas business strategy as it focuses on bringing the damaged reactors under control.

## **NRG Energy Halts S. Texas Nuclear Plant Expansion (AUSTBJ)**

By Ashley Furness

Austin (TX) Business Journal, April 21, 2011

NRG Energy Inc. has pulled funding to expand a massive nuclear plant in South Texas, officials announced on Tuesday citing events from Japan's recent tsunami and earthquakes.

A press release said recent nuclear meltdown threats in Japan have "diminished prospects for the South Texas Project nuclear development," and the company will write down its investment in the Texas project. The move comes just after affiliate Nuclear Innovation North America LLC (NINA) made a similar announcement, and just a few months since NRG began courting Austin Energy to start buying new nuclear power.

"The tragic nuclear incident in Japan has introduced multiple uncertainties around new nuclear development in the United States which have had the effect of dramatically reducing the probability that STP 3&4 can be successfully developed in a timely fashion," NRG President and CEO David Crane said.

NINA is jointly owned by NRG and Toshiba American Nuclear Energy Corp., and was leading development of the two, 1,350-megawatt nuclear reactors at the South Texas Project near Bay City. The companies said while they will not spend any more on the project right now, they will cooperate with partners wanting to continue work.

The decision will cost NRG and Toshiba about \$481 million for all of NINA's net assets. The expansion was slated to cost between \$10 billion and \$13 billion.

CPS Energy was also a partner. Officials released in March a statement that San Antonio's municipally owned utility decided to suspend discussions indefinitely with NRG Energy, regarding buying additional supplies of nuclear power from the South Texas Project. CPS Energy owns a 40 percent interest in South Texas Project and a 7.625 percent minority ownership in two units that have yet to be constructed.

## **NRG Halts Bay City Nuke Plant Expansion (HOUBIZ)**

By Casey Wooten

Houston Business Journal, April 21, 2011

NRG Energy Inc. is pulling out of future investment in the proposed expansion of the South Texas Project nuclear plant and has made a \$481 million writedown of its current investments, the company said Tuesday.

Citing public and regulatory backlash from the ongoing incident at Japan's Fukushima nuclear plant, Princeton, NJ-based NRG (NYSE: NRG) said it would not commit any new capital to add two additional reactors to the South Texas Project, located in 90 miles south of Houston in Bay City, Texas.

"We have concluded that, financially, this is the end of the line for us," said NRG chief executive David Crane in a conference call. "Even if the project restarts, it will have to be fueled by someone else's capital."

NRG wrote down its \$481 million investment in New York-based Nuclear Innovation North America, its joint venture with Falls Church, Va.-based Toshiba American Nuclear Energy Corp. to build the expansion.

NRG, which maintains partial ownership in the plant's two original reactors, said NINA will continue to pursue obtaining regulatory licensing and federal loan guarantees, though Crane said a successful outcome for the project is "extremely daunting and at this point not very likely."

Toshiba will fund the continuing licensing process.

When announced in 2006, backers said the expansion project would bring some 4,000 construction jobs and 800 permanent jobs to Bay City.

NRG said in March that it had halted most operations save for obtaining regulatory and financial approval for the project, scaling its staff down to less than 50.

In an exclusive article published in the print edition earlier this month, the Houston Business Journal examined how the potential cancellation of the project might affect the economy of the surrounding community.

## **NRG Exiting Nuclear Expansion In South Texas (KUTN)**

By Crystal Chavez

KUT News, April 21, 2011

Japan's nuclear troubles appear to have put the brakes on the expansion of a nuclear plant in South Texas. NRG Energy has announced it's not investing any more money to add two new reactors to the South Texas Project it partly owns in Matagorda County. NRG has been investing in the expansion over the past five years.

The company says the uncertainties created by the Japan incident make it impossible to justify any more spending. Austin Energy co-owns 16 percent of the South Texas Project's existing nuclear units. NRG had approached the city to possibly buy power from the two proposed reactors.

## **Toshiba N-reactor Contract For US Plant Seen As Kaput (YOMIURI)**

By Taro Koyano, Yomiuri Shimbun Correspondent

Yomiuri Shimbun (Japan), April 21, 2011

NRG Energy Inc., a leading US utility, announced Tuesday that it would not spend any more money on a project it has been promoting with Toshiba Corp. to build new reactors at the South Texas Project nuclear power station.

The announcement effectively means that NRG has given up on plans to build two additional reactors at the plant. Toshiba had contracted to build the two reactors single-handedly, in what would have been a first for a Japanese nuclear plant maker.

NRG's decision, which came as Japan has been struggling to deal with a nuclear crisis at the Fukushima No. 1 nuclear plant in Fukushima Prefecture, will likely deal a great blow to Japan's joint public-private sector efforts to increase nuclear power plant exports, industry sources said.

NRG and Toshiba jointly established a nuclear development company--Nuclear Innovation North America--in February 2008 to build two new reactors with a combined capacity of 2.7 million kilowatts at the plant, which has two reactors already.

Tokyo Electric Power Co. agreed last year to invest up to 155 million dollars (about 12.8 billion yen) in the Texas project.

But given the crisis at its Fukushima plant, which was crippled in the aftermath the March 11 earthquake and tsunami, TEPCO recently announced a plan to freeze foreign investments.

## **Toshiba's US Partner Withdraws From Texas Nuclear Power Project (JapanToday)**

Japan Today, April 21, 2011

NRG Energy Inc, Toshiba Corp's partner in the ongoing nuclear power project in Texas, said Tuesday it has decided not to invest more money in it due to the massive radiation leak at a crippled nuclear power plant in Japan.

"NRG will not invest additional capital" in the project, the major US energy firm said in a release, a sign that the crisis at the crippled Fukushima Daiichi plant has directly affected the US nuclear power industry.

David Crane, president of the company, also said, "The tragic nuclear incident in Japan has introduced multiple uncertainties around new nuclear development in the United States which have had the effect of dramatically reducing the probability that (the facilities) can be successfully developed in a timely fashion."

With a view to launching the South Texas Nuclear Development Project to expand an existing power plant, Toshiba and NRG formed a joint venture in 2008, and Tokyo Electric Power Co, the operator of the Fukushima plant, had intended to buy into the firm.

Through the deal, Toshiba landed an order for two 1.35 million-kilowatt advanced boiling water reactors. The new power units were to begin operating in 2016 or 2017 at a total estimated investment cost of 1 trillion yen.

NRG said it expects to write down its investment in the project worth some \$481 million (about 40 billion yen) for the January-March quarter.

## **Nuclear's Woes Has US Power Firm Saying Whoa (VANSUN)**

By Derrick Penner

Vancouver Sun (blog), April 21, 2011

If you are an American power firm looking to develop a huge nuclear power plant, I guess the 20-kilometre exclusion zone around Tokyo Electric Power Co.'s tsunami-damaged reactors isn't exactly the best advertising.

So in the wake of that disaster, New Jersey-based NRG Energy has announced it is halting development of the South Texas Project near Bay City, Tex. And is prepared to take a \$481-million write down on the development.

"The project is not dead," CEO David Crane said to the Houston Chronicle in this story, "but it's not moving forward at this point, and to be frank, under the current circumstances, the reality of it moving forward in the foreseeable future is not high."

An understatement, and perhaps a further blow to the image of atomic power as the clean, non-GHG source of electricity a lot of environmentalists have touted it as.

However, the NRG project, which was proceeding in a partnership with Toshiba, had other problems, according to this story in the New York Times.

The Texas electricity market already has a healthy surplus of power, and any new sources would have a tough time competing against extremely cheap natural gas - a proxy for electricity prices in the region.

And South Texas isn't the only nuclear power project to run into problems. The Times noted that a project called Calvert Cliffs 3 proposed by Constellation Energy is the second of four projects singled out for Energy Department loan guarantees to die.

Other projects are potentially going forward, but as Washington Lawyer Charles A. Zielinski told the Times, the American public's appetite for nuclear power projects resembles the situation right after the 1979 Three Mile Island accident.

For nuclear power, the Times came up with what we call in the news business a dire kicker quote from a long-time opponent of the South Texas nuclear project.

"The wheels are starting to fall off the nuclear renaissance," Tom Smith said.

One wonders how true this is, and how long it will take to put the wheels back on.

## **NRG Withdraws From Texan Project (WRLNUKE)**

World Nuclear News, April 21, 2011

The future development of South Texas Project (STP) units 3 and 4 looks unlikely after majority shareholder NRG Energy announced that it will write down its investments so far in the project and make no further investment.

The project to construct two Advanced Boiling Water Reactors (ABWRs) at STP is being developed by Nuclear Innovation North America (Nina) - jointly owned by NRG Energy and Toshiba. It had been considered among the leading new build projects in America, and was one of the few that had survived both the financial crisis and the new availability of cheap natural gas.

NRG noted that it does not have the unilateral right to cancel the project, only the right to terminate its participation in it. The company said, "while it will cooperate with and support its current partners and any prospective future partners in attempting to develop STP 3 and 4 successfully," it will not invest additional capital in the STP effort. NRG will write down its investment so far in STP units 3 and 4 and record a first-quarter 2011 pre-tax charge of some \$481 million, for "the impairment of all of the net assets of Nina." The write down consists of \$331 million of Nina net assets funded by NRG, together with \$150 million of net investment contributed by Toshiba.

The company blamed the move on the continuing emergency at the tsunami-hit Fukushima Daiichi plant in Japan and the subsequent safety review by the US Nuclear Regulatory Commission (NRC) that could lead to modified design requirements for

the STP units. Although an engineering, procurement and construction (EPC) contract for the project has already been awarded, it is impossible to finalize a price without the final design, said NRG. Furthermore, discussions about power purchasing agreements are "pointless" without a firm price for the new units. In addition, NRG said that planned Japanese financial participation in the project is "now significantly in doubt."

David Crane, chairman of Nina and CEO of NRG, said: "The tragic nuclear incident in Japan has introduced multiple uncertainties around new nuclear development in the United States which have had the effect of dramatically reducing the probability that STP 3 and 4 can be successfully developed in a timely fashion."

He added, "We continue to believe both in the absolute necessity of a US nuclear renaissance and that STP 3 and 4 is the best new nuclear development project in the country bar none. However, the extraordinary challenges facing US nuclear development in the present circumstance and the very considerable financial resources expended by NRG on the project over the past five years make it impossible for us to justify to our shareholders any further financial participation in the development of the STP project."

Last month, Nina announced that development of the new STP units had been slowed in response to regulatory uncertainty following recent events at Fukushima Daiichi. At that time, the company said that it was reducing the scope of development of the units "to allow time for the US NRC and other nuclear stakeholders to assess the lessons that can be learned from the events in Japan." For the time being, it had said, work related to development of the two new units would be limited to licensing and securing a federal loan guarantee for the project.

Nina will continue work on securing a combined construction and operating licence (COL) from the NRC and on obtaining a loan guarantee from the US Department of Energy, as these "two assets are absolutely essential to the success of any future project development." It noted that Toshiba will be responsible for funding ongoing costs to continue the licensing process. NRG said that it expects to incur one-time costs, related to a contribution to Nina, of up to \$20 million.

Toshiba received a 12% stake in Nina, in return for a \$300 million investment over six years. Half of this investment is to support the proposed new ABWRs at STP through Nina Investments Holdings. The other half is for new ABWR projects in North America with other potential partners. Nina holds a 92.4% stake in the project to build STP Units 3 and 4, with the remaining 7.6% held by CPS Energy (which owns 40% of the existing STP units). The project had originally been a 50-50 venture between Nina and CPS, but CPS decided to withdraw from the project altogether. However, in February 2010 an agreement was reached under which CPS would retain a small stake. CPS recently announced that it was indefinitely suspending all discussions with NRG regarding a power purchase agreement for electricity from the planned new STP units.

In May 2010, Japanese utility Tokyo Electric Power Company (Tepco) - owner of the stricken Fukushima Daiichi plant - agreed to invest \$155 million for a 9% stake in the project to construct the new STP units, with an option to later increase this stake to some 18% for an additional \$125 million within about one year. Tepco has been providing technical consulting services to the project since March 2007. The extent of the company's future involvement in the STP project is uncertain.

The South Texas Project currently consists of two pressurized water reactors (PWRs), which together produce some 2700 MWe. The reactors were brought online in August 1988 and June 1989. The facility is operated by STPNOC and owned by NRG Texas (44%), CPS Energy (40%) and Austin Energy (16%).

Although the COL for STP is not anticipated until 2012, an engineering, procurement and construction (EPC) contract for the project has been awarded to a consortium of the Shaw Group and Toshiba America Nuclear Energy Corporation, and an order for one of the reactor pressure vessels has already been placed with Japanese engineering company IHI. Construction of the two new ABWRs at STP was expected to begin next year, with the first 1358 MWe unit coming online in 2016 and the second in 2017.

## **NRG Backs Out Of Nuclear Expansion Project In Texas (ENRGYONLN)**

EnergyOnline, April 21, 2011

NRG Energy, Inc. (NRG) yesterday announced that it will write down its investment in the development of South Texas Project (STP) units 3 and 4. Moreover, NRG stated that it will not invest additional funds in the STP development effort.

Last month the United States Nuclear Regulatory Commission (NRC) issued a favorable final environmental impact statement (EIS) for building the two, 1,350-MW Advanced Boiling Water Reactors (ABWRs) at the South Texas Project, an existing nuclear station located approximately 90 miles southwest of Houston. Nuclear Innovation North America (NINA), a partnership between NRG and Toshiba Corp., applied for the permits in late 2007. NINA had planned to receive a construction license next year and commence operations of the two units in 2016 and 2017, respectively.

NRG's backing out of the STP project is driven by the recent events in Japan. NRG's President and CEO stated, "The tragic nuclear incident in Japan has introduced multiple uncertainties around new nuclear development in the United States which have had the effect of dramatically reducing the probability that STP 3 and 4 can be successfully developed in a timely

fashion. We continue to believe both in the absolute necessity of a US nuclear renaissance and that STP 3 and 4 is the best new nuclear development project in the country bar none. However, the extraordinary challenges facing US nuclear development in the present circumstance and the very considerable financial resources expended by NRG on the project over the past five years make it impossible for us to justify to our shareholders any further financial participation in the development of the STP project."

NRG stated that NINA has suspended indefinitely all detailed engineering work and other pre-construction activities and will be focused solely on securing (i) a combined operating license (COL) from the NRC and (ii) a loan guarantee from the US Department of Energy (DOE).

The South Texas Project Nuclear Operating Company currently operates units 1 and 2, which are 1,410-MW pressurized water reactors that commenced operations in the late 1980s. STP ownership is divided among NRG at 44 percent, San Antonio municipal utility CPS Energy at 40 percent, and Austin Energy at 16 percent.

## **Renewable Briefing: Cape Wind, Bloom Boxes, NRG (ENVIRONLEAD)**

Environmental Leader, April 21, 2011

Here is a briefing on the latest news in renewable power – plus an update on nuclear.

Cape Wind, the 468 MW wind farm planned for Nantucket Sound in Massachusetts, has received the country's first-ever construction and operation plan (COP) approval for an offshore wind project. Construction on the project could begin this year, Windpower Monthly reports.

The COP approval follows permits from the Environmental Protection Agency and US Army Corps of Engineers, and a lease from the Department of the Interior. In November the project also received regulatory approval for a 15-year power purchase agreement with National Grid, for half the wind farm's output.

But the project does not yet have a buyer for the second half of its capacity, presenting a financial hurdle. And several lawsuits and appeals against Cape Wind remain.

"Today's announcement was nothing more than the same political posturing from the Obama and Patrick Administrations that we have seen for years, a blatant attempt to declare victory in a battle that is far from over," Audra Parker, the president and CEO of opposition group the Alliance to Protect Nantucket Sound, said.

Bloom Energy, the supplier of Bloom Box fuel cells to companies including Google, eBay, Staples, FedEx and Coca-Cola, has said that it will quadruple the size of its Silicon Valley factory. Bloom Boxes cost \$700,000 to \$800,000 and provide 100 kW of energy while taking up an area the size of a parking space, Reuters said.

Finally, NRG Energy and Toshiba are canceling plans for two nuclear reactors in Texas, the New York Times reports. Doubts arose after the partial meltdown of the Fukushima nuclear reactor in Japan last month.

NRG said the South Texas Project 3 and 4 reactors were considered for the chopping block even before the Japanese nuclear crisis, because of Texas's electricity surplus and low natural gas prices. But analysts said the Japanese situation may have been the project's undoing.

The company said it is writing off investments of \$331 million.

## **Fukushima To San Antonio (BORANGE)**

Burnt Orange Report (TX), April 21, 2011

Even if you are not among the crush of avant-garde shrewdly cramming Japanese in order to be on a first named basis with the radioactivity arriving from the Land of the Rising Sun, you may, nevertheless, find yourself pondering the meltdown that is launching those particles in our direction.

Then, once you have learned that the corporation whose irresponsible behavior is most responsible for that situation, Tokyo Electric (TEPCO), has been given a sweetheart deal

to join the syndicate that is expanding the nuclear complex known as the South Texas Project (STP), despite its long and public record of cutting corners on plant safety, surely you will recognize the need to understand what the push towards more nuclear power has meant for the Americans who call San Antonio home.

The macro-economic environment that our public utility (CPS) entered in 2009 was (and is) characterized by the dynamics of industry trying to outperform mature economies. In the United States, even in the best of times, we no longer expect growth to average much above three percent a year. In Japan, even such modest numbers are a fantasy. For a nation whose economy has produced a stagnation dubbed "the lost decades", any real growth at all would be heartening. While Japan and the USA may remain blue-chips, they are no longer growth stocks. The low-hanging fruit has all been picked. To satisfy the demands for high returns, these societies have supplemented normal business acumen with new areas of heightened profit: technological revolution and overhaul, investment in overseas "growth" markets (typically "emerging" or "third world" nations), financial chicanery, and privatization. In regards to overseas investment, Japan has, at the highest levels of business and government,

formed a consortium of six of its most powerful corporations. What they are exporting to emerging and Third World markets is nuclear development. With a moribund and withered domestic nuclear industry emasculated by Three Mile Island coupled with the largest demand for energy on the planet offering almost unlimited profit potential, the United States fits neatly into the description of an emerging or Third World market. NRG Energy, of New Jersey, is the American face on this invasion. Their job, in a financial environment reluctant to take a flyer on risky nuclear deals in an uncertain market, is to "privatize" by leveraging their existing relationship with a public utility to provide the heavy lifting necessary to both pay for the project and the political cover to get the Federal loan guarantees without which the entire idea is a dead letter. These are the interlocutors with which the representatives of the people of San Antonio have decided to joust.

Steve Winn heads the syndicate created by NRG energy to get this deal done. It's called "Nuclear Innovation North America" (NINA). Mr. Winn is a top man in his field, formerly a senior vice-president at Lehmann Brothers, whose specialty was financing energy deals. This top pro earns his money by getting the best deal for the stockholders of NRG.

San Antonio is, when ranked by population, among America's top ten cities. As cities go, it is an above average place to live. Some decades ago, inspired by the abundance of natural gas hereabout, the city leaders decided our public utility, CPS, would rely, almost entirely, on gas. Unfortunately, when that deal went sour because our supplier of choice would not deliver at the promised price, it was determined that we would never again put all our eggs in one basket.

This resolved into our (CPS') involvement in the original development of the STP project that produced the reactors known as STP 1 and STP 2. These were eventually completed way behind schedule and fantastically over cost. If we flash forward to current time, with those reactors approaching the halfway point in their life expectancy, we find once again our city leaders pondering which direction to go to meet the expanding energy needs generated here by our steady growth in population.

Before the public was consulted, and hearings held, a consensus was formed among the city's aristocracy. These included our public utility, our mayor and city council, the media including the editor and reporters of our only real daily paper, the usual Chamber of Commerce types, and those that see nuclear energy as clean and not contributing to global warming. Most of all, electricity generated by nuclear reactors was touted as the cheapest alternative.

Once this decision was made, the hard sell was on. Predictions of population growth were used to heighten the urgency of acting: buy now. Unless we did this deal quickly, the lights would go off, and our jobs would become tumbleweed. The second part of the hard sell was the "come-on" price. A neat number, a cool ten billion, plus the obligatory three billion additional for financing, was floated. Despite its having been around this track before, the pro-nuclear group assured the public that these numbers were written in stone.

Suffice to say, that in the whole wide world, the only people who believed that the first "price" would actually be the real price, and that a nuclear project would be completed on time and on budget, were the "Happy Talk Chorus" (HTC) cheerleading this deal in San Antonio.

Perhaps, because no firewalls were ever erected between the public utility and the private developer in the initial deal, and in a general atmosphere where "public" is increasingly a dirty word; the initial plan developed by CPS was not received with incredulity: San Antonio was going into the energy business. We were going to buy

a full fifty percent interest, even though this would be way more electricity than even the most alarmist cheerleaders had claimed we would need. When questioned about a plan that had San Antonio buying more energy than she needed, the boosters blithely assured the public that excess capacity could easily be disposed of on the energy market. Little was said about the wisdom of a public utility going into the energy business; and less about the fact that it seemed that, once again, most of our eggs were going into a single basket. Perhaps discussion of these points was limited because another overriding problem made them moot. San Antonio simply did not have 6.5 billion dollars to buy a half share of the then 13 billion dollar project.

As the months passed, and the anti-nuclear crowd argued for alternative energy, those that had decided, in advance, for expanding the South Texas Project, began to retreat from the full level of partnership first proposed. The share we could afford to buy got progressively smaller. First it went to 40%, then 20%, and finally 10%. At all times, based on a continuing faith in the "come on" price of 13 billion, each ten percent was valued at 1.3 billion.

At the same time, rumors began to appear, out of town, that the real cost of building nuclear reactors in Texas was known to Mr. Winn and his bosses at NRG. Nonetheless,

The Happy Talk Chorus in San Antonio pushed ahead with the final plan of buying in at the fantasy price of 1.3 billion per ten percent.

The assets San Antonio controlled included the land and water rights at the proposed site. No water, no nuclear. NRG, and its instrument, NINA, couldn't build an outhouse unless they got those rights from San Antonio. In addition, as if holding all the aces was not enough, CPS agreed to supplement its tender with cash. This cash was steadily handed over to NINA, in advance, even though the percentage of ownership that CPS would assume was still up in the air.

The problem for NRG, and Mr. Winn at NINA, was how to get those water rights (and as much cash as possible) out of San Antonio after the truth about the come-on price was made public. The foil they chose was San Antonio's mayor, Julian Castro. With the city council on the verge of authorizing the final one hundred million in cash, an agent of NRG contacted the mayor's office and officially informed him the original cost estimate was just a fantasy number. San Antonio may be off, off, off Broadway, but you can't beat the drama caused by this little bird singing in the midnight hour, or the performances of the members of the HTC as they (to a man), suddenly and self-righteously transformed themselves overnight from confident cheerleaders to indignant victims.

Predictably, rather than admit that the entire aristocracy that comprised the HTC had made an awful error, the CEO of CPS and a board member were forced out. As scape-goating goes, the script of polite society was followed meticulously, and both individuals were praised for their service as they were thrown under the bus. With this tawdry bit of business accomplished, the Happy Talk Chorus, having escaped its own responsibility, now proclaimed a "new era" of truth and transparency at CPS, and renewed the push for nuclear expansion.

The high-point of the drama came in a hysterical law-suit filed by CPS against NRG and NINA. In the suit, CPS charged that San Antonio had been deliberately defrauded

because NRG had known all along that the project would cost much more than the come-on price, demanded thirty-two billion in damages, the right to withdraw from the project, and their four hundred million in cash returned. They did not get one red cent in damages,

were not allowed to withdraw from the project, did not get their cash refunded, and their claim that the water rights were worth two billion was reduced to one billion. Despite this total defeat, the "media" and "journalists" here, all charter members of the original consensus and active members of the HTC, broadcast the result to the people of San Antonio as a victory.

The chief beneficiary of this new consensus was our designated knight on a white horse, the mayor, Julian Castro. Rather than being seen as a tool used by NRG to chivy San Antonio out of full partnership (after all, the last thing they wanted to do was actually sell at the come-on price), he was seen as a hero for pulling CPS back from the brink of disaster. Although he actually did no negotiating, he was also credited with the final deal into which San Antonio was forced to enter.

Until the recent disaster in Japan and the resulting failure of safeguards at the six reactors run by TEPCO at Fukushima, the deal credited to Mr. Castro, but more properly the result of the skill of Mr. Winn and his lawyers, was hailed in San Antonio as "a great deal" and Mr. Castro as "a hero". NINA did agree to kick-back almost one hundred million to San Antonio on the condition that blue-state San Antonio agrees to join the other elements of the nuclear coalition in lobbying the Obama administration for loan guarantees. That would reduce our cash outlay to three hundred million and together with the reduced one billion dollar value assigned to our land and water rights, would produce a final cost to San Antonio of 1.3 billion. However, if the deal doesn't fly, San Antonio will have to kiss its cash good-bye.

Yet, we did not get the 10% share that was the rate before our "victory" in court. We only got 7.6%, which reflects the more honest price for the reactors, but is a third higher

than the come-on rate. The excited "buy now" estimates of future energy needs have been scaled back to make the smaller purchase look more significant. We are now told that where once we needed to buy 40%, 7.6% is adequate.

CPS has a new chairman for the new era of transparency. He has no experience in running a public utility, or in representing any public interest, and is actually a highly successful corporate flak. Up until Fukushima, he had actually re-started negotiations

with NINA to buy an even larger share, despite the fact that he was hired at a time CPS was charging NINA of defrauding San Antonio.

Subsequent to finalizing the 7.6% sale to CPS, NINA cut TEPCO a sweetheart deal.

They were allowed to buy a 10% share in the project for only 180 million dollars. That TEPCO got a larger share for one-tenth the price that CPS was snookered into paying has barely been mentioned in San Antonio. What once would have been a cause for clearing

leather now doesn't rate a yawn in Texas.

Since San Antonio paid in full and in advance for its share, no other investor has paid anywhere near the rate CPS termed "a great deal". Aside from the slice slipped to TEPCO, NINA has not been able to interest anyone else in injecting cash into the syndicate, after they burnt through San Antonio's cash, they declined to spend their own money, and work at the site was drastically reduced.

For the fourth quarter of 2010, NRG declared a loss. For the entire year, this leading energy conglomerate declared a profit of only 485 million dollars. In other words, if it were not for the four hundred million advanced by the public utility CPS, the private energy giant NRG would barely have shown any profit at all for 2010.

The events at Fukushima today may very well lead to San Antonio tomorrow. Of the six members of the powerful consortium designed to revive the Japanese economy by exporting nuclear construction to Third World markets such as the United States, two;

Toshiba and TEPCO are already involved in Texas. TEPCO, Asia's largest utility, has been welcomed with a sweetheart deal that makes a mockery of the people of San Antonio, despite its long and well-documented record of cutting corners on safety. The clouds of radioactivity spreading from its most recent failure at Fukushima have shined a new light on the Texas project.

CPS has backed off buying a larger share, pending future developments.

In fact, the entire project in Texas is now in doubt. This is not because the people of San Antonio, or Texas, are up in arms. It's because of Fukushima.

In an April 13th, 2011 article, Reuters reported that prospects for completing the project are bleak. It quoted the CEO of NRG Energy, David Crain, as saying "the project's odds of success have dropped substantially". He went on to say that even if they get loan guarantees, it will be "an uphill battle". Translation: unless they can find more "investors" like the HTC in San Antonio, they can't build the reactors. They are certainly not going to use their own money. These remarks are consistent with reports since the March 11th disaster in Japan. None of these reports even mention San Antonio, recognizing that the people here, thanks to the Happy Talk Chorus, have been played, and are not players worth noting.

For San Antonio and its hardworking ratepayers, most of whom slog through on very modest incomes, this is a disaster. The unthinkable may very well happen. Our entire

four hundred million may go straight down the toilet. CPS had to borrow that money.

Electric rates in San Antonio, deal or no deal, have been projected to rise up to forty percent in the next ten years.

Mr. Crain's remarks of the 13th were not reported in San Antonio.

## **NRG Energy Moves Away From Nuclear, Heads Toward Gas (GWIRE)**

By Hannah Northey

Greenwire, April 21, 2011

NRG Energy Inc. is brooking legal and regulatory challenges to build a natural gas-fired plant in New Jersey, even as the Japanese nuclear crisis has prompted the company to back out of expanding its nuclear fleet in Texas.

The Princeton, N.J.-based utility is building a 660-megawatt, combined-cycle natural gas plant in Old Bridge, N.J., under a state law that is facing legal challenges in federal court. The state is providing NRG guaranteed revenue for building the gas plant through a 15-year capacity agreement, but a group of utilities and generators says the state is overstepping its authority and that the law is illegal.

Federal regulators last week also acknowledged concerns about the effects of the state's program on power markets in the Northeast and said market rules must be implemented to protect capacity prices in the region.

Even so, David Gaier, a spokesman for NRG's Northeast region, said the Oak Bridge site is ideal for a gas plant and the facility is expected to receive all necessary permits by midyear 2012 and be fully operational by 2015.

But challenges in the wake of the Japanese nuclear crisis are too great to continue investing in two nuclear reactors at its South Texas nuclear plant near Bay City, in Matagorda County, NRG President David Crane told reporters yesterday on a conference call.

NRG is pulling its financial backing for building Units 3 and 4 at the site but will continue to operate the 2,600-megawatt Units 1 and 2.

The utility is evaluating impacts across its energy portfolio from the March 11 earthquake and tsunami that severely damaged the Fukushima Daiichi nuclear complex in Japan and fueled concerns around nuclear safety in the United States, Crane said.

"The extraordinary challenges facing US nuclear development in the present circumstance and the very considerable financial resources expended by NRG on the project over the past five years make it impossible for us to justify to our shareholders any further financial participation in the development of the [Texas] project," Crane said.

Kevin Book, an analyst with ClearView Energy Partners, cast doubt on whether NRG's decisions reflect a trend in the market, saying that a significant number of existing plant operators forgoing relicensing would have a much larger impact than a small number of would-be nuclear plant developers backing out on expansion plans.

N.J. challenges

Meanwhile, NRG's plan to press ahead with its proposed natural gas plant in New Jersey is under scrutiny.

Gov. Chris Christie (R) signed a law in January that creates a state program to offer long-term capacity agreements to generators. The state wants to encourage construction of up to 2,000 megawatts of in-state, gas-fired generation.

The long-term agreements provide developers with guaranteed revenue, allowing them to build facilities or undertake projects that would not have been feasible otherwise:

In March, New Jersey regulators chose NRG subsidiary New Jersey Power Development LLC -- along with Hess Newark LLC and Competitive Power Ventures LLC -- to enter into long-term capacity agreements and build three gas-fired combined cycle projects in Newark, Old Bridge and Woodbridge. Together, the plants will generate almost 2,000 megawatts.

Under the program, utilities would make net payments to eligible generators through the long-term agreements, and generators would then recover the costs from customers through rates.

New Jersey regulators have said the new gas generation would reduce emissions equivalent to a 250-megawatt coal-fired power plant running at full capacity for one year. Competitive Power Ventures could not be reached for comment, but Hess Newark said the company is moving forward with constructing a natural gas-fired facility in Newark, N.J.

Generators and utilities -- including Calpine, PSEG and Exelon -- are suing the state in the US District Court for the District of New Jersey, challenging the legality of the New Jersey law (Greenwire, March 2).

The lawsuit charges that the Federal Energy Regulatory Commission, not the state, has exclusive authority to regulate those markets and that state law cannot dictate how the generators interact in wholesale capacity auctions, which grid operator PJM oversees.

PJM oversees wholesale power markets in New Jersey and 13 other states and conducts the capacity markets to determine the cost of constructing new generation in the region.

The state has long been frustrated by PJM rules and FERC, and the law seeks to circumvent existing federal rules and undermine PJM's wholesale capacity market, the lawsuit says.

While the lawsuit is ongoing, opponents of the New Jersey law have also lodged complaints at FERC and last week received some assurance the markets will be protected.

The PJM Power Providers Group -- whose members include Calpine Corp., Constellation Energy Group Inc., Exelon Corp., NRG Energy Inc. and PSEG -- had filed complaints, raising concerns that the law would artificially suppress capacity clearing prices in the PJM, which would ultimately damage the region's competitive market structure.

FERC ruled on April 12 that PJM must impose market rules to limit the minimum prices for new capacity offered into the market.

Glen Thomas, president of PJM Power Providers Group, said FERC sent a clear message that the agency is willing to protect the region's wholesale capacity markets.

## **VA Nuclear Power Plant Recovers From Tornado (WTVR)**

WTVR-TV Richmond (VA), April 21, 2011

The weekend storm that produced deadly tornadoes over parts of North Carolina and Virginia knocked out electricity to two nuclear units at Dominion Virginia Power's Surry Power Station near Newport News.

The US Nuclear Regulatory Commission is no longer monitoring the facility after they say all safety systems operated as needed.

Following the events at a nuclear power plant in Japan when it was damaged by an earthquake and tsunami, CBS 6 wanted to know what Dominion Virginia Power is doing to prevent a similar disaster.

In a live interview with Anchors Bill Fitzgerald and Reba Hollingsworth, the Vice President at Surry Power Station says the plant is prepared for the worst case scenario in every kind of natural disaster.

"We have multiple generators and we can afford to have 2 of our generators fail and still maintain the plant in a safe condition," said Jerry Bischof. "We also have other procedures and our operators are trained to ensure that we can maintain the plant in a safe condition even if we lose offsite and onsite power."

To see more of Jerry Bischof's interview with Bill and Reba, click "play" on the video link above.

## **Dominion Nuclear Plant May Be Offline For Days (WASHBIZ)**

Washington (DC) Business Journal, April 21, 2011

Dominion Virginia Power's Surry nuclear power plant could be out of service for several days, WTOP reported. The shutdown is required to an electrical switchyard damaged by a tornado.

## **Study Assessing Risk Of Nuclear Plants In US State Of Illinois (VOA)**

By Kane Farabaugh

Voice of America, April 21, 2011

The Midwest state of Illinois, with six nuclear power plants, is home to the largest network of nuclear facilities in the United States. The US Department of Energy says Illinois' nuclear-generation capacity is greater than that of any other state, and of most nations in the world. A current study by the National Academies of Sciences is assessing the risk those nuclear facilities pose to the people who live near them.

The Braidwood Generating Station began operations in Illinois in 1988. The facility can produce enough electricity to power two million homes.

Almost five million people live within 80 kilometers of the plant, including Maureen Heddington. "I think that there is a level of mistrust that runs so deeply," she said.

Some of that mistrust stems from radioactive tritium leaks. In 2007, residents and local governments near the plant sued Exelon, the company that runs Braidwood. They claimed the tritium leaks had contaminated drinking wells. In 2010, Exelon settled the suit by providing money for environmental cleanup projects in the affected communities.

But the US Nuclear Regulatory Commission, or NRC, which oversees facilities in the United States, said the tritium leaks fell below the federal safety limits. "Every nuclear power plant has radioactive material - effluents - very small amounts released that are under the federal regulatory limits, said Viktoria Mitleyng, a Public Affairs Officer for the Nuclear Regulatory Commission.

She said much of the information the NRC relies on to determine regulatory limits, and how releases might impact health, is several decades old. "The last study was done about twenty years ago. Some of the methodologies were outdated. And so we thought it was time to really get a closer look at the information available today and we asked the National Academies of Sciences to conduct the study as a neutral scientific body," she said.

John Burris is the chair of the National Academy of Sciences' cancer risk study, sponsored by the NRC. "This meeting is part of five meetings that we're using to gather information to help us write a report that will look at the cancer risk assessment of individuals living near nuclear facilities," he said.

The study group's latest meeting in suburban Chicago comes in the wake of the tsunami in Japan, which damaged the Fukushima-Daiichi nuclear plant, resulting in dangerous radiation leaks. The crisis, which continues to unfold, has raised global awareness of the perils of nuclear energy.

But Burris says the committee, which includes scientists, doctors and radiation experts from around the world, is not necessarily focused on catastrophic releases of radiation. "We're talking about the normal day-to-day activities of nuclear power plants and the people that live near them. Certainly, incidents like Fukushima and Chernobyl alert the public, but those will probably provide very limited input into this particular study," he said.

What Burris says will not be limited in the study is input from the public. Members of nearby communities in the shadow of one of Illinois' six nuclear plants - like Braidwood - were invited to attend the meeting and express their concerns.

Viktoria Mitleyng says she hopes public access to the meetings will help repair some of the mistrust that exists. "The mere fact that we are commissioning this study, (and that it) should be conducted by an independent, highly esteemed, scientific body should say something about where our priorities are," she said.

The Committee will hold similar meetings in Atlanta and Los Angeles later this year. They hope to conclude the study and issue a final report to the Nuclear Regulatory Commission by the end of the year.

## **Nuclear Matters: State Leaders Ask NRC Chief Tough Questions; Local Officials, Residents Provide Local Answers (WALPOLE)**

By Frank Mand

Walpole (MA) Times, April 21, 2011

As the state met with representatives of New England's nuclear power plants and their critics in Boston earlier this spring, Gov. Deval Patrick, Senate President Therese Murray and Speaker of the House Robert DeLeo released a series of 22 questions they asked Nuclear Regulatory Commission Chairman Gregory Jaczko to address.

We posed those same questions to local officials and critics of the plant, and asked them to comment or to offer what they would consider a satisfactory response to each.

Several of the questions posed by the State House leaders specifically reference the Japanese disaster and how Pilgrim and other New England nuclear facilities may or may not be responding to the lessons we are learning from the ongoing problems at Fukushima.

What adjustments are being made that will allow Seabrook and Vermont Yankee to handle the kind of pressure build-ups that resulted in explosions at Fukushima?

Town Manager Mark Stankiewicz was present at a special hearing that Entergy officials gave for town leaders and others in Plymouth, a few weeks after the Fukushima disaster began. He said Entergy officials assured those in attendance that, at least as regards avoiding the explosions that rocked several of the containment structures in Japan, Pilgrim's design is superior.

But Mary Lampert of Pilgrim Watch said that in exchange for greater protection against pressure-related explosions, the modified design of the Mark-1 plant at Pilgrim would instead, vent that pressure – and radioactive materials – into the air.

"Reactor operators (at Pilgrim) now have the option by direct action to expose the public and the environment to unknown amounts of harmful radiation in order to "save containment," Lampert asserted.

"As a result of GE's design deficiency, the original idea for a passive containment system has been dangerously compromised and given over to human control with all its associated risks of error and technical failure."

What adjustments to emergency planning are being contemplated, in light of Fukushima?

Stankiewicz said the town is not committed to a particular plan. Rather it are committed to doing whatever it takes to keep residents safe.

"We will make adjustments to our emergency plans as necessary, or on the advice of experts," he said.

Nuclear Matters Committee Chairman Jeff Berger said that any tinkering with the emergency planning is pointless, unless and until the plant installs real-time meteorological and radiological monitoring.

"Until it does so, current evacuation plans could evacuate people directly into the path of a lethal radioactive plume," he said.

In light of the 50-mile evacuation zone that American officials recommended for Japan, is the ten-mile evacuation zone at Pilgrim still valid?

Stankiewicz said he would like more information on this specific aspect of the evacuation plans.

"The NRC and other regulatory agencies need to explain the differences and adjust as necessary to protect the public safety," he said

"Now that we know 10 miles isn't a big enough evacuation zone it will be interesting to see how the NRC spins it," Plymouth resident Wedge Bramhall said. "If they are doing their job they will require at least a 25 mile zone with real time monitoring of the radiation levels out to 50 miles."

Pilgrim Watch agrees the present evacuation zone is too small, and offers a few specific recommendations: "Emergency Planning zones should be increased to a 25 mile minimum radius; those further out should receive public education that in the event of a nuclear reactor accident shelter with potassium iodide until instructed that core has evacuated on major evacuation routes and now those routes are available to those at a further distance."

Berger is less diplomatic. "Who knows," he says. "In the case of a meltdown a 50-mile radius could be impacted – and that includes Boston, Providence and all of Cape Cod."

The legislature's letter suggests that at present only 20 percent of the targeted population could be housed at the designated evacuation reception centers.

Berger said the NRC's philosophy in this case is, "in case of disaster, punt."

"Current evacuation plans are obsolete based upon population increases," Berger said. He said changes are not likely to happen in the near future which, he acknowledged, "is not comforting to anyone who wants everything take care of in advance, just in case."

Lampert elaborated. "This policy," she writes, "leaves 80 percent without the ability to be monitored and decontaminated. This places citizens at an undue health risk and risks spreading contamination."

Lampert noted that the Town Meeting in Duxbury approved an article calling for reception centers to be equipped to deal with 100 percent population. The Duxbury school children alone, she noted, account for more than 20 percent.

Stankiewicz said that all of the organizations who would manage evacuations, if ever they were necessary – MEMA, FEMA, the NRC and Entergy – "need to properly fund and assist all local emergency planning zone communities to insure that there are adequate reception areas."

And what, specifically, is the purpose of the president's 90-day review of commercial nuclear facilities in the US, and will public input be part of that review?

"The rumor, that we hope is false," Lampert said, "is that the NRC inspectors slated to go to each plant only have been given very vague directions for inspecting each reactor, and that between the lines is an understanding to find only the small stuff and overlook anything of substance."

Lampert said she has no confidence in the process.

"Previously problems are met by NRC – such as the tritium leaks or non-qualified submerged electric cables – by establishing NRC task forces."

Those task forces typically produce very good reports, Lampert said. But, "the NRC then fails to make recommendations into regulations and enforce them; instead, the NRC issues information notices to the licensees that require no action."

Stankiewicz was concerned but a bit more optimistic.

"My understanding is that the delay is to assess the current situation in Japan, and incorporate safety concerns to our own nuclear power plants."

"What assurances can the NRC provide," the question was posed to Jaczko, that Yankee and Pilgrim are not just meeting current NRC standards for safety and security, "but that there are material differences in the way the plants were designed, upgraded and regulated that will reduce the risk of what is happening in Japan, as they are being re-licensed?"

Stankiewicz agreed the public's need to have adequate oversight is key to the future of the industry and the safety of the public.

Lampert's response was wistful.

"One day after Fukushima," she noted, "the Nuclear Regulatory Commission approved Vermont Yankee's application after five years of litigation."

## **NRC Says US Nuclear Plants Can Withstand Earthquakes, Tornadoes, Hurricanes And Floods (MIDHUD)**

Mid-Hudson News, April 21, 2011

The Nuclear Regulatory Commission says US nuclear reactors are designed to withstand natural events, including earthquakes, tornadoes, hurricanes and floods, "based on the specific site where the reactor is located, without loss of capacity to perform their safety functions."

The agency's comments come in a letter to Greenburgh Town Supervisor Paul Feiner, who wrote to the NRC expressing his concerns about the safety of Indian Point following the nuclear disaster in Japan in March.

Eric Leeds, the director of the NRC's Office of Nuclear Reactor Regulation also told Feiner in a letter obtained by MidHudsonNews.com that it is going to create a task force to conduct short-term and long-term analyses of the lessons that can be learned from the situation in Japan. "As part of this assessment, the NRC will determine if there are changes that should be made to our programs and regulations to enhance protection of public health and safety and the environment," Leeds wrote. The investigation will look at the ability to protect against natural disasters, response to station blackouts, severe accident and spent fuel accident progress, and emergency preparedness, among other things.

Feiner and Westchester County officials have called on the NRC to expand the 10 mile evacuation area to 50 miles. Leeds wrote that the plume exposure pathway emergency planning zones around US commercial power plants is 10 miles in radius and is designed, "in the unlikely event of an emergency, to safeguard the population most at risk from direct exposure to radiation levels in excess of US Environmental Protection Agency's Protective Action guidelines."

He said the ingestion exposure pathway emergency planning zone is about 50 miles in radius and is designed "in the unlikely event of an emergency, to protect the public from secondary exposure to radiation through the food chain or public water supplies."

## **SCE&G Nuclear Expansion Wins Key Approval (TSSC)**

By Sammy Fretwell

The State (SC), April 21, 2011

Efforts to build two nuclear reactors northwest of Columbia won an important victory this week, with a report concluding the project won't take a substantial toll on the environment.

Two federal agencies -- Nuclear Regulatory Commission and Army Corps of Engineers -- issued their final environmental impact statement Tuesday for the expansion of SCE&G's V.C. Summer nuclear power station in Fairfield County.

"It doesn't say there are no impacts, but in the overall analysis, there no impacts so large they would preclude the NRC from approving the project," NRC spokesman Scott Burnell said.

The NRC could issue licenses for the plant expansion as early as next year. The design for the reactor still needs approval and the NRC must consider the findings of a safety evaluation report before making a decision.

"The bottom line is all those things are going to require the remainder of the year to work through," Burnell said. "We won't see a final agency decision on the Summer application until at least the end of the year."

Still, Burnell said issuance of the environmental impact statement is a major milestone.

Such reports are exhaustive reviews of how development projects affect an array of ecological impacts, including those on rivers, wetlands, air quality and groundwater. Such reports can delay projects by years, so having one completed is significant.

The Nuclear Regulatory Commission issued a draft environmental impact statement in April 2010 and held a public meeting the following month.

The reactors are part of a \$9.8 billion joint project by SCE&G and Santee Cooper. They are scheduled to come online in 2016 and 2019.

Anti-nuclear activists oppose the expansion, saying two new nuclear plants could harm the environment. They have raised concerns recently in light of the tsunami-driven radiation leak in Japan, arguing that SCE&G and other utilities need to slow down their push for nuclear expansion as they learn lessons from the Asian nuclear disaster.

Company officials say the existing and future plants won't hurt the environment or compromise public safety.

The two new reactors at Jenkinsville are among four proposed for South Carolina. Duke Energy also wants to build two new plants near Gaffney, but is not as far along in the process. Power company officials in Georgia also want to build new reactors just across the Savannah River near Aiken.

SCE&G officials were not immediately available Wednesday. The existing reactor at Jenkinsville was licensed in 1982.

## **Groups Seek Delay In Bid To Increase Power From Nuclear Plant (MJS)**

By Thomas Content

Milwaukee Journal Sentinel, April 21, 2011

Citing the nuclear crisis in Japan, an environmental group and consumer advocacy group on Wednesday asked the Nuclear Regulatory Commission to postpone a final decision on a plan to increase the power generated by the Point Beach nuclear plant.

The action comes as the agency's staff has given its OK for license amendments that would accommodate the 17% increase in power that can be generated by the two-reactor plant, located just north of Manitowoc along Lake Michigan.

A delay in the decision wouldn't pose any harm, the Citizens' Utility Board and Clean Wisconsin contend, because the state has more than enough power to meet its needs.

"Given our concerns about the safety of pushing these old reactors to get more power, we're asking the NRC to take a 'go-slow' approach," said Katie Nekola, Clean Wisconsin general counsel, in a statement.

The two groups have raised concerns with the NRC about the proposed expansion in power output. Meanwhile, safety ratings that govern the operation of the Point Beach and Kewaunee plants have recovered from poor performance earlier in the past decade.

The NRC has continued to process applications to extend the life of US reactors and to expand the power output from domestic reactors following the March earthquake and tsunami that have led to the worst nuclear industry event since the Chernobyl meltdown.

The letter to the NRC was drafted because the groups believe a final decision on the power output expansion, or uprate, is imminent, said Charlie Higley, executive director of the Citizens' Utility Board.

Given that the plant will run harder as a result of expanding the power output, Higley said, "It just seems like it's an appropriate time to see if anything can be done to improve safety of these plants."

In their letter to the NRC, the groups say, "In light of the significant and tragic events currently taking place at the Fukushima-Daiichi nuclear units, a pause in decision-making by the NRC regarding nuclear power plant uprates is warranted."

Viktoria Mityng, an NRC spokeswoman, said the agency will review the letter. There is no set time frame for a decision on the Point Beach application, though the review is in its final stages, she said.

"We will review the request, but the NRC's review of power uprates takes into account the plant's ability to safely handle the impact of increasing power on the plant's equipment, during normal and accident conditions," Mityng said.

The Point Beach plant is operated by NextEra Energy Resources Inc. of Florida, which is working during a refueling outage to make modification to the plant to help accommodate the power output increase.

"The process used by the US Nuclear Regulatory Commission (NRC) to evaluate NextEra Energy Point Beach's request to amend its operating license is an extremely comprehensive assessment -- in fact, the [Point Beach] request was more than 1,850 pages long," said Sara Cassidy, NextEra spokeswoman. "Over the last two years, the NRC and its technical experts have conducted a thorough safety review to make a final decision" on the company's plan.

"We would expect that the lessons learned from the situation in Japan will be factored into the NRC's overall regulatory responsibilities," Cassidy said.

The power generated by the reactors is sold to Milwaukee-based We Energies, the former owner of the nuclear plant. We Energies has been in talks with NextEra concerning a purchase of power from the expansion, but no deal has been reached, We Energies spokesman Brian Manthey said.

## **Wisconsin Nuclear Expansion Plan -- Groups Advise Caution (WISBIZ)**

Wisbusiness.com, April 21, 2011

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Madison, WI - As Japanese workers continue to struggle to gain control over radiation leaking from the Fukushima Daiichi reactors, the Citizens Utility Board (CUB) and Clean Wisconsin urge the Nuclear Regulatory Commission (NRC) to postpone its decision on expanding the Point Beach Nuclear Plant by 17%, or 90 megawatts at each of the two reactors.

In a letter filed today with the NRC, the consumer and environmental groups asked the agency to postpone acting on NextEra Energy's application to increase the output of the two reactors until NRC completes its analysis of the lessons learned from the severe nuclear disaster in Japan. The NRC recently convened a Task Force to conduct both short-term and long-term analyses of US reactor safety in light of concerns about the reliability of cooling systems, spent fuel pools, and reactor designs.

"The NRC responded quickly and efficiently to the crisis by sending experts directly to Fukushima and convening a Task Force to analyze what the US can learn from the catastrophe there," said Charlie Higley, executive director of CUB. "The results of their work will be invaluable to improve the safety of reactors in this country, and it only makes sense that we see those results before expanding the output of the Point Beach reactors."

A delay in the decision to expand Point Beach won't harm anyone, say the groups, because the extra power is not needed.

"Wisconsin and the Midwest have an oversupply of electric generation for the foreseeable future. Given our concerns about the safety of pushing these old reactors to get more power, we're asking the NRC to take a 'go-slow' approach," said Katie Nekola, attorney for Clean Wisconsin. In fact, it is uncertain whether any Wisconsin utility will purchase the extra power that would be produced if Point Beach is expanded. The plant's owner, NextEra Energy, is a Florida-based merchant company which could sell the excess power to other states.

The NRC Task Force's short-term analysis could be published as early as July of this year, and its long-term analysis will be important to improve the safety of reactors in the United States.

## **Nuclear Power Critics To Host Walk Saturday (MHTR)**

Manitowoc (WI) Herald Times Reporter, April 19, 2011

TWO RIVERS — Members of Nukewatch are planning a "Walk for a Nuclear-Free Future" beginning at noon Saturday near the Kewaunee Power Station and proceeding south along Wisconsin 42 arriving outside Point Beach Nuclear Plant at about 3 p.m.

A news release from the organization states the event comes three days prior to the 25th anniversary of the explosions and fire at the Chernobyl reactor in Russia. Society to host history night in Reedsville

MANITOWOC — The Manitowoc County Historical Society will host a special Reedsville community history program at 6:30 p.m. May 3 at Reedsville Elementary School, 350 S. Park St.

The program will include tidbits of local gossip and a brief overview of Reedsville's early history. The public is invited to come and share their stories of Reedsville and see early village photos and artifacts. The program is free.

For more information, call (920) 684-4445. Pruning workshop set for May 14

## **Sequoyah, Watts Bar Get NRC's Top Safety Rating (CHTNGA)**

By Pam Sohn

Chattanooga Times Free Press, April 21, 2011

Despite the recent federal arrest of a safety contractor who allegedly falsified inspection reports at Watts Bar, the Nuclear Regulatory Agency has given TVA's 2010 operation of Watts Bar and Sequoyah nuclear plants a "green" rating.

Green is the NRC's best rating and means the plants are safe.

NRC officials have scheduled two public meetings, one for each plant, to discuss the agency's annual inspections and assessments.

NRC spokesman Roger Hannah said federal inspectors "looked specifically at safety performance and at [plant officials'] corrective actions rather than the behavior of this individual."

Contract electrician Matthew David Correll, 31, was charged in March with falsely indicating he had inspected and measured cables meant to provide electric power for safety systems in the nuclear reactor containment structure of the new \$2.5 billion Watts Bar reactor near Spring City, Tenn. He issued the inspection reports in August.

Hannah and Tennessee Valley Authority spokesman Ray Golden said representatives of their agencies will present the assessment reports and answer questions at the public meetings later this month.

TVA's third operating nuclear plant, Browns Ferry in Athens, Ala., has not yet received its final NRC 2010 assessment, Golden said.

Last month, the NRC demanded a special meeting with TVA about a stuck valve at Browns Ferry that could have hindered a safe shutdown of the plant's unit 1 reactor. The stuck valve was discovered in December and may have been inoperable since March 2009.

Golden said the Browns Ferry problem may result in more frequent inspections there by the NRC.

Even with the green ratings, the NRC will continue inspections at Watts Bar and Sequoyah, Hannah said, but they'll be baseline inspections.

## **Electricity Rates Slated For 30% Increase (CDN)**

By Edward Leonard

Clarke Daily News, April 21, 2011

Rappahannock Electric Cooperative sent a high-powered team of executives to Clarke County on Tuesday to address both its billing rates and electricity reliability. However, REC's availability to field questions and concerns failed to lure any members of the public to attend the meeting.

Rappahannock Electrical Cooperative president and CEO Kent D. Farmer - Photo courtesy REC

REC president and chief executive officer Kent Farmer in his address to the Clarke County Board of Supervisors used the opportunity to recap of his company's first year as power-provider at a 1:00 pm public meeting.

"We are back in Clarke County today to see if we are meeting your expectations," Farmer told the supervisors.

On June 1, 2010, REC took over management of power operations after purchasing the electricity service area formerly administered by Allegheny Power. The service area, which includes most but not all of Clarke County, includes portions of 22 Virginia counties and provides power to 155,000 customers.

Farmer, accompanied by a team of REC executives ready to field questions from Clarke residents and the supervisors, recounted that REC got off to a shaky start in its first few weeks on the job.

REC board member and Clarke County resident, Christopher G. Shipe also attended the meeting.

"We had an immediate problem with equipment last summer," Farmer said. "Then later we were hit by snowstorms in February. We can't do much about the snow, but we are continuing work on improving the right of ways for our power lines," Farmer said.

Farmer said that he believes that it will take three to five years to improve the power line right of ways to the level that REC requires.

In addressing electricity rates and complaints by local residents of unexpectedly high power bills, Farmer said that rates had not changed because REC rates are governed by state regulators.

However, Farmer said that rate increases are just around the corner.

"We have not increased our rates," Farmer assured the supervisors. "REC is still billing at the same rates as when you were with Allegheny Power. The problem is that when it is a lot hotter or colder consumers use more kilowatt hours of electricity." Farmer blamed the increased power usage on extreme weather conditions.

(CLICK TO ENLARGE) - REC says electrical rate increases would have been more aggressive under a plan by former electricity provider Allegheny Power - graph courtesy REC

"It was a lot hotter last summer and a lot colder last winter than it has been in the last three to four years," Farmer said.

Given that extreme temperatures can play an unpredictable role in power bills, a more predictable, if unwelcome factor, is about to be added to the power usage formula. Farmer said that REC's rates will increase by 7.5% on July 1st for Clarke County residents and other REC members. Farmer added that consumers will see a 30% rate increase over the next four to five years.

At least one county supervisor was alarmed by the projected rate hikes.

"How did you manage to get a 30% raise in your rates in hard times like these?" exclaimed supervisor Pete Dunning (White Post).

"The rate increase is based on what had already been negotiated by Allegheny Power before we purchased the service area," Farmer replied. "Right now you have a better rate than what you would have had under Allegheny Power's plan which would have immediately raise rates by 30%."

Farmer said that REC customers are benefiting from its decision to spread the already-approved 30% rate increase over several years. "Right now you're paying 30% less than everyone else in the state for your electricity," Farmer said.

Farmer added that some of the local concern about higher bills may be caused by REC's accounting process which emphasizes actual monthly meter reports instead of Allegheny Power's approach which often produced bills based on estimated power meter readings.

"That may be, but a lot of people right now are having a rough time making ends meet," Dunning replied. "What are the main things that people can do to lower their electricity bills?"

Farmer said that REC customers had several options for decreasing electricity bills including increasing home insulation, installing "smart" switches on water heaters and purchasing energy efficient appliances.

"But whatever you do," Farmer said to Dunning. "Do not take that old refrigerator that you replace and put it in the garage to keep your beer cold. If you do you're not going to see your bill go down."

Farmer told the supervisors that REC will install smart switches on water heaters at no cost to consumers as a painless way of reducing energy bills.

"The hot water switch allows REC to remotely turn of a hot water tank during peak demand periods," Farmer said. "40% of our peak power demand costs are based on just one hour of each day. Our intention is to manage that peak demand with the help of our members in ways that they never have to see."

Farmer said that 30,000 REC members are already allowing REC to manage their hot water heaters through remote access using smart switches. Farmer also said that REC members can receive a free energy audit from the utility provider to help pinpoint energy saving opportunities within a home or business.

"One of our people will come to your home and go through it with you to help pinpoint places where you are losing energy," Farmer offered.

Farmer described other innovative technologies strategies that REC is using to improve its operating efficiency like smart power meters that can be read remotely and that automatically report power outages. Farmer also said that REC's electricity procurement strategy, which includes an 11% ownership stake in power provider Old Dominion Electrical Cooperative which runs the nuclear North Anna Power Station located in Louisa County in central Virginia, is key to keeping power rates manageable.

"The North Anna plant is producing power at half the price of electricity on the open market," Farmer said.

But Supervisor David Weiss (Buckmarsh) appeared unconvinced after listening to Farmer's explanation for service outages and power bill increases.

"The machinery on my farm is handled by a separate meter," Weiss noted. "The electricity bill for my machinery went up and it had nothing to do with the cold or the heat. Maybe some of it had to do billing estimates but Allegheny Power came out pretty regularly."

Weiss also pointed out that he rarely lost power under Allegheny Power but power outages are more frequent now that REC has taken over the service area.

(CLICK TO ENLARGE)

"We are trying to invest our money in better equipment and maintaining the right of way,s" Farmer replied. "It's going to take a while to get the system up to REC's standards. Our goal is to provide reliable, environmentally friendly power at the lowest possible cost."

Supervisor Chairman, Michael Hobert (Berryville) asked Farmer whether REC was working on other initiatives that might assist county residents, like broadband access.

Farmer replied that while REC is looking at providing broadband services, its most recent foray into the market had not been very successful.

"REC is an investor in an initiative called Virginia Broadband, but it hasn't worked very well," Farmer said. "We are now looking at other alternatives for offering broadband to our members. We haven't given up yet."

Hobert also pointed out that REC's smart meter service, for which members pay \$3 per month so that the utility provider is automatically notified of power disruptions, has a benefit to REC as well the consumer.

"I ask that you reconsider the monthly charge for the smart meter service because consumers are already paying REC to provide their power and it's in your best interest to know as soon as possible when power is out to a customer."

Farmer agreed with Hobert's premise and promised that the company would give the request further consideration.

As a member-owned cooperative, REC is managed by directors elected by its customers. According to "Rappahannock Currents," REC's newsletter, three positions for board of director will be filled at its annual meeting in August. Completed nomination forms for board of director candidates must be endorsed by at least 25 signatures of other REC members in good standing and be returned to the office of president of REC no later than 5:00pm on May 5, 2011.

Rappahannock Electric Cooperative's annual meeting will be held on August 13th and is open to all members. Details of the meeting location will be available on the REC website or by calling 800.552.3904.

## **House GOP Leader Larry Cafero On Millstone Tax: "I Think It's Going To Die. He Isn't Going To Sign That." (HARTC)**

**"I Think It's Going To Die. He Isn't Going To Sign That."**

By Christopher Keating

Hartford Courant, April 21, 2011

House Republican leader Larry Cafero strongly criticized the so-called "Millstone tax" that the legislature's energy committee approved that would directly impact operators of the nuclear plants.

Lawmakers are debating the next move on the proposed tax, which would amount to about \$330 million for the owners of the two Millstone nuclear reactors along Long Island Sound in Waterford.

Cafero predicted that the bill would fail from inaction and would face a veto if the bill reaches Gov. Dannel P. Malloy's desk.

"I think it's going to die," Cafero told The Hartford Courant's editorial board Wednesday. "He isn't going to sign that."

Cafero charged that the legislature's Democratic-controlled energy committee, which passed the tax on a 12 to 9 vote last month, is guilty of "dysfunctionality."

He mentioned previous bills, which did not become law, that were debated by competing factions on the committee without any overall agreement.

"This is ridiculous. C'mon. This isn't a game," Cafero said of the committee. "Give me a break. It's disgraceful."

Millstone officials have said that the tax would be disastrous for the company, and they have threatened to close down the plant. But state Rep. Vickie Nardello, a Prospect Democrat who co-chairs the committee, and some Wall Street insiders believe that Dominion would not shut down the plant.

"Millstone, even after the tax, would still have a rate of return of 27 percent," Nardello told Capitol Watch.

She added, "They can't shut down" because Millstone is committed to supply power to ISO New England, which oversees electricity in the region.

Millstone has been paying for full-page newspaper advertisements, telling ratepayers to "contact your legislators and tell them to vote against Senate Bill 1176" on the Millstone tax. "All it will do is cost Connecticut hard-earned money and important jobs," the ad states.

## **State Attorney General Talks Health Care, Yucca Mountain In Aiken (AIKSTD)**

By Rob Novit , Senior Writer

Aiken (SC) Standard, April 21, 2011

The nation's new health care reform act is the largest federal reach in 150 years, S.C. Attorney General Alan Wilson told Aiken Republican Club members Wednesday.

"Nothing has reached so far than when the federal government can make you enter a private contract," he said. "They can make you do anything."

South Carolina has joined 26 other states in a lawsuit that's headed to the Court of Appeals in the 11th Circuit, Wilson said. He's hopeful that the suit and another similar one can come up in the US Supreme Court in the midst of the presidential election in 2012.

"I'm passionate about this," Wilson said. "It's not about politics. It's about freedom. We are citizens under a Constitution, but we have King Obama."

Wilson is a son of US Rep. Joe Wilson, R-S.C. Other guests at the meeting were Chad Connelly and Bill Connor - two of the three candidates for the S.C. Republican Party chairman's position.

Another important issue, said Wilson, is the status of Yucca Mountain in Nevada, which for years has been under consideration as a nuclear waste repository for material from the Savannah River Site and other locations. The White House has opposed the project, and US Sen. Lindsey Graham is among senators seeking "refunds" for the billions of dollars ratepayers have put into impact studies on the location.

"This is the single most studied and researched piece of real estate in the world," Wilson said. "The D.C. Court of Appeals has serious concerns about the White House unilaterally stopping Congressional wishes. I'm sick and tired of the ever-growing federal government reaching beyond the will of the people."

The Attorney General's office, however, is representing the state's side of a lawsuit from the Greenville Republican Party. That organization contends that the open primary system is unconstitutional, that voters should have to declare party affiliation before casting a ballot in a party primary.

A federal judge appointed by President Obama ruled against the Greenville Republicans, "but she gave a fair opinion that the open system is constitutional," Wilson said.

The existing law has been on the books for 62 years, allowing supporters of one party to vote in the other's primary as a potential political advantage.

"Even if it's bad law, I'm not going to pick and choose the law," he said. Still, Republicans have the legal right to choose to select primary nominees through the convention process as an option, Wilson said.

Chad Connelly, a Prosperity resident, has worked on Republican campaigns at all levels for 20 years. He has received endorsements for party chairman from new Third District Congressman Jeff Duncan and State Treasurer Curtis Loftis.

"I have a knack for getting things done," said Connelly, who works as a speaker, author and business consultant. "It's about team-building and my party experience puts me in the best spot to lead our party."

Connor, a Columbia attorney, spent a yearlong combat deployment to Afghanistan in 2008. He ran for lieutenant governor in 2010 and that statewide experience would serve him well as the state party chairman, he said.

"I learned the in's and out's of what is needed to fix the party," Connor said. "There are roadblocks to people like us to run for office," he said.

## **Morning Score: Pawlenty Hits Silver State (POLITCO)**

Politico, April 21, 2011

From today's edition:

NEVADA-FRIENDLY PAWLENTY – The former Minnesota governor gave ginger answers to questions about legalized gambling, the Yucca Mountain waste depository and more on a visit to the early primary state of Nevada. From the Nevada News Bureau: "Pawlenty, in Las Vegas to meet with local Republicans, also said gambling has a 'corrosive' effect on some people's lives, but that legalized gaming is a local issue that should not be under the control of the president or federal government. Pawlenty was interviewed on Jon Ralston's Face to Face television program ... Pawlenty acknowledged a comment in 2002 that he wanted Yucca Mountain to open as a nuclear repository to handle waste from Minnesota. But circumstances have changed since then, including the question of seismic activity around the Nevada site." <http://bit.ly/hQPPNB>

CABLE BAIT – TRUMP TO VEGAS – If he weren't toying with the idea of a presidential run, that might be the ultimate "dog bites man" headline. But as Donald Trump courts 2012 buzz, the Review-Journal's Laura Meyers reports that the reality TV start is headed to the early primary state of Nevada: "Trump is scheduled to speak to several GOP women's groups on April 28 at Treasure Island, a person familiar with his schedule said Tuesday ... Trump already is scheduled to be in Las Vegas next week to help his billionaire buddy Steve Wynn celebrate his April 30 wedding to Andrea Hissom, a British divorcee." <http://bit.ly/gG7NBr>

TONIGHT – NEWT TO MANCHESTER: Former House Speaker Newt Gingrich will headline the first event in the New Hampshire Republican Party's "Live Free or Die" speaker series, addressing a crowd at Piccola Italia in Manchester. The event is billed as "the first in a series featuring influential national speakers to address critical issues facing our Nation and the Granite State. Topics will include individual freedom and a return to our founding principles; the role that limited government plays in our lives, free markets and the effect on taxpayers and business owners." <http://bit.ly/hzlxxyB>

AYRES FOR HUNTSMAN – Republican pollster Whit Ayres has signed on to help Horizon PAC, in a recruitment coup for the campaign-in-waiting of Ambassador Jon Huntsman. Chris Cillizza interprets: "Ayres has also pledged to poll for Huntsman if and when he decides to run for president ... The addition of Ayres is the latest in a series of moves that suggest that decision is a foregone conclusion despite the fact that Huntsman has not said anything publicly about his interest in the race." <http://wapo.st/ewXuSB>

## **Greenville News Editorial: South Carolina Needs Plutonium Reprocessing Plant (GRNVN)**

**Editorial**

Greenville (SC) News, April 21, 2011

New questions in the wake of the Japanese nuclear disaster are once again raising the possibility that the mixed-oxide reprocessing plant at the Savannah River Site near Aiken is in jeopardy. This site needs to be finished to ensure South Carolina does not become the long-term dumping ground for plutonium that was to be processed at the site.

South Carolina agreed to have plutonium from nuclear weapons construction shipped here for disposal after the Bush administration promised the material would be transformed into a fuel that could be used in commercial nuclear reactors rather than be stored here indefinitely. There was economic promise in that decision — such a facility would create many jobs both in the construction and operations phases.

Recent questions have come because a reactor at the Fukushima Daiichi nuclear plant in Japan that was damaged by the March earthquake uses the same type of mixed-oxide, or MOX, fuel that would be manufactured at the Savannah River Site, according to a report in The Greenville News.

That has led would-be MOX buyers to back away from potentially using the fuel, the newspaper reported. The Tennessee Valley Authority says it will delay any decision about purchasing MOX fuel until after it sees how the fuel performed in Japan, according to The News.

These questions — on top of the escalating \$5 billion price tag for the SRS reprocessing facility that initially was to cost \$1 billion — are troubling for South Carolina. The state needs this project to be completed or it needs another alternative for getting rid of this radioactive material.

Right now, no alternatives exist. In 2002, President George W. Bush took the only other option off the table — encasing the material in glass for long-term storage.

If the reprocessing facility is deemed too risky or too expensive to complete or if no one wants to buy the reprocessed fuel, the dangerous plutonium would essentially wind up being stored at SRS indefinitely if another option is not developed. That is unacceptable for South Carolina. Our congressional delegation needs to work to ensure that the facility does not become a de facto plutonium repository.

(2 of 2)

Jim Hodges, who as governor of South Carolina reluctantly agreed to have the waste shipped here, recently told The New York Times that storing the waste here is problematic. "That site never was designed for long-term plutonium storage," he is quoted as saying in the newspaper report.

This project is important to South Carolina on the economic front, too. It will provide jobs. The construction phase alone has provided more than 2,000 jobs in the Aiken area, according to a recent report in The New York Times. Certainly the job creation does not justify tremendous cost overruns that have quintupled the cost of the project, but a significant investment already has been made in the facility. Plus, there's no doubt those construction jobs have contributed to the Aiken area's — and the entire state's — economy.

But it bears repeating that the overriding concern is to not let South Carolina become a dumping ground for dangerous plutonium.

This state agreed to accept tons of plutonium with the understanding that it would be reprocessed or rendered safe. If the reprocessing facility is not going to become functional, then it's imperative for the federal government to find a way to permanently dispose of this dangerous material in a way that does not pose risks for the residents of South Carolina. There is no other acceptable alternative.

## **Exxon Sees Nuclear Power Holding Its Own (FT)**

By David Blair And Sylvia Pfeifer

Financial Times, April 21, 2011

Full-text stories from the Financial Times are available to FT subscribers by clicking the link.

## **US Nuclear Output Little Changed, Remains Near 4-Year Low (BLOOM)**

By Aaron Clark

Bloomberg News, April 21, 2011

US nuclear-power output remained near a 4½-year low for a third day, the Nuclear Regulatory Commission said.

Power generation nationwide increased 57 megawatts to 72,319 megawatts, or 71 percent of capacity, according to an NRC report today and data compiled by Bloomberg. Output sank yesterday to the smallest since Oct. 22, 2006. Twenty-nine of the nation's 104 reactors were offline.

Constellation Nuclear Energy Group LLC, a joint venture of Constellation Energy Group Inc. (CEG) and Electricite de France SA, boosted output at its 621-megawatt Nine Mile Point Unit 1 to 34 percent of capacity from 1 percent yesterday.

The reactor is located about 6 miles northeast of Oswego, New York, and was shut for refueling on March 21. Another unit at the site, the 1,140-megawatt Unit 2, is operating at full power.

Some reactors close for maintenance and refueling during the spring and fall in the US, when demand for heating and cooling is lower. The outages can increase consumption of natural gas and coal to generate electricity.

The average US reactor refueling outage lasted 41 days in 2009, according to the Nuclear Energy Institute.

## **What You Have In Common With Air Traffic Controllers: Sleep Deprivation (LAT)**

**Well-publicized incidents of air traffic controllers and others sleeping at inappropriate times point us to science that suggests most people need at least eight hours of sleep a night.**

Los Angeles Times, April 21, 2011

There seems to be an epidemic of under-sleeping these days. This year alone, seven air traffic controllers have been caught sleeping on duty. In two well-publicized cases, pilots were heard nearly pleading with control towers to guide them in. (The planes landed safely.) The most recent incident occurred Saturday, when a controller was observed sleeping at a Florida tower. (He did not miss any calls from pilots.) In response, the FAA has adjusted controllers' schedules and mandated that additional controllers be assigned during sleepy midnight shifts. Bob Hope Airport in Burbank, Los Angeles/Ontario International Airport in Ontario and San Diego International — among 27 airports nationwide with a single controller on duty during the midnight shift — will be assigned more controllers.

Of course, they're not the only workers who get so fatigued that they fall asleep on the job. In 2007, a videotape was released of guards sleeping on duty at a Pennsylvania nuclear power plant. In 2008, two pilots flying a small commercial jet from Honolulu to Hilo fell asleep and overshot the airport by 15 miles before returning and landing safely. Less dangerously — except, perhaps, in terms of his image — Vice President Joe Biden was seen either briefly nodding off or meditating as he sat in the audience at President Obama's speech on the deficit last week.

A sleep study cited in the New York Times on Sunday says the overwhelming majority of people need eight hours of sleep. Not seven. Eight. And most of those who get less and think they're operating fine on it turn out to be too sleep-deprived to realize how sleep-deprived they are.

It's tough to make sleep a priority when juggling job responsibilities, family obligations, gym workouts and social engagements. But more than that, there's a certain who-needs-sleep bravado in our culture. When he was first elected mayor, Antonio Villaraigosa bragged that he went to bed after midnight and was up at 5 for a morning hike. Medical residents proudly recount how little sleep they get. On a TV reality show a few years ago, contestants aspiring to work for music mogul and entrepreneur Sean "P. Diddy" Combs breathlessly embraced their idol's mantra that "sleep is forbidden." President Clinton famously slept little. President Reagan, on the other hand, famously got lampooned for sleeping too much.

Fortunately for them, high-ranking elected officials and entertainment titans who brag about not sleeping get chauffeured around. The rest of us have to drive ourselves. For our own safety, instead of glorifying how little sleep we get, we should make eight hours a night a point of pride.

Just sleep on it.

**PNNL Celebrates Huge Face-lift - Business | Tri-City Herald : Mid-Columbia News (TRICITYH)**

By Annette Cary

Tri-City Herald (WA), April 21, 2011

Pacific Northwest National Laboratory celebrated the completion of the Department of Energy national lab's largest construction project in its 46-year history.

About 750 staff are working today in renovated buildings or in new state-of-the-art offices and laboratories designed to provide space for the nation's cutting-edge science for decades to come. The project cost more than \$300 million.

PNNL began discussing new offices for the employees as early as 2003 as DOE planned to speed up demolition of buildings in the Hanford 300 Area just north of Richland as part of environmental cleanup of the Hanford nuclear reservation. The project from planning to completion took about six years.

It was a massive undertaking — from getting money from a collection of federal agencies that depend on the lab to planning environmentally friendly laboratory space flexible enough to meet future needs, to moving all the workers and their complex research projects.

But "we completed it on schedule and budget," Mike Kluse, PNNL director, told a crowd of about 300 people who gathered to celebrate Tuesday.

The odds were unbelievable at times, with challenges including administration budget requests not sufficient to keep the project on schedule, Sen. Patty Murray, D-Wash., said in a proclamation read by her staff at the ceremony.

A new funding model was used to pay for the project, said Julie Erickson, acting manager of the DOE Pacific Northwest Site Office. It required \$99 million from DOE's Office of Science, \$69 million from the National Nuclear Security Administration and \$56 million from the Department of Homeland Security. In addition, \$77 million of private money was used to build laboratories that are leased to Battelle, which operates PNNL for DOE.

The focus of the new laboratories is on biological, physical and computational science, a three-pronged approach the should have an enormous impact on the nation's research goals, such as advancing clean energy, said William Brinkman, director of the DOE Office of Science.

The most recently completed was the Physical Sciences Facility, a complex of new buildings on Horn Rapids Road that now is home to about 250 staff who support PNNL's energy research, and national and homeland security research. It cost about \$224 million.

It includes a Materials Science and Technology Laboratory used to develop and test high performance materials for new energy, construction and transportation technologies and systems. It also includes Radiation Detection Laboratory and Ultra-Trace Laboratory to develop radiation detection methods needed for identifying weapons of mass destruction and terrorist activities.

In addition, a Large Detector Laboratory and outdoor test track are being used to develop and test radiation detection technologies designed for US border entry points. An Underground Lab supports homeland and national security research.

"Investing in a modern, 21st century nuclear security enterprise is essential to preventing nuclear terrorism or nuclear proliferation, and that is why this (project) is so important," said Anne Harrington, deputy administrator for defense nuclear nonproliferation at the National Nuclear Security Administration.

James Johnson, director of the Office of National Laboratories for the Department of Homeland Security, had been involved in planning the facility from its start and said as an engineer, it was hard not to be excited by its capabilities as he toured the finished project.

Southwest of the complex is the new Biological Sciences Facility and Computational Sciences Facility, built at a cost of \$77 million. About 300 staff there work on biological systems science and use its computer capabilities for data-intensive research.

In addition, four 300 Area buildings were renovated to allow nuclear, national security, environmental and other research to continue there.

"Central Washington is better off and the nation is safer because of the excellent work you do at Pacific Northwest National Laboratory," said Rep. Doc Hastings, R-Wash., in a statement read at the celebration.

## **ORNL Networks To Be 'Back To Normal' Next Week; Investigation Ongoing (KNOXNS)**

By Frank Munger

Knoxville News Sentinel (TN), April 21, 2011

Oak Ridge National Laboratory expects to restore Internet access for lab employees by the first of next week, a spokeswoman said Wednesday.

ORNL spokeswoman Barbara Penland initially said Internet access would likely be back on Friday, a holiday, with testing throughout the low-traffic weekend, but she later clarified that statement.

"I think it's still safe to say that most of our business networks will be back to normal, so to speak, by the beginning of next week," Penland said.

The investigation of a very sophisticated cyber attack on lab systems is ongoing, headed by ORNL Chief Information Officer Mike Bartell, she said.

The actual number of people working on the investigation has not been disclosed, but Penland described it as "fair-sized tiger team." She said there were experts in town from Los Alamos and Pacific Northwest national laboratories, as well as Department of Energy headquarters. There are also representatives from computer companies, she said.

ORNL management made the decision late last Friday to shut down the lab's Internet connection after it became apparent that intruding malware was attempting to remove data. External email operations also were shut down, although email was restarted late Tuesday.

The lab first detected the cyber attack on April 11, although the investigation determined that the entry was made on April 7 via one of a group of phishing email messages that were sent to lab employees disguised as coming from the Human Relations Department. The entry was reportedly linked to a vulnerability in Internet Explorer, a vulnerability that Microsoft said was fixed on April 12.

ORNL Director Thom Mason said the cyber attack is known as an Advanced Persistent Threat, which starts out as a low-intensity, relatively quiet intrusion while gaining a foothold and then targets high-priority technical data for theft.

"Severing the Internet connection is a serious step, because it impacts the operations of the lab," Mason said Monday. "The reason we did it was to prevent any significant loss."

Asked if this situation was less harmful than the 2007 cyber attack that gained access to a large volume of personal information from databases on lab visitors, Mason said that depends on how the current issues are resolved.

"If we are successful in preventing exfiltration, then in terms of impact it's obviously less damaging," the ORNL director said. "But this APT is an evolved threat compared to what we faced four years ago. ... It's smarter and faster, but fortunately we're also smarter and faster. There's an element of spy versus spy in this. Our systems are getting better, but so are techniques used to defeat them."

## Security Lags Cyberattack Threats In Critical Industries, Report Finds (CSM)

**The world's water treatment plants, power grids, and other vital industries are seeing escalating cyberattacks, but are not ramping up security fast enough, says a new global report.**

By Mark Clayton, Staff Writer

Christian Science Monitor, April 21, 2011

Industries crucial to the functioning of society – such as water treatment systems, power plants, and oil and gas facilities – use computer-controlled systems that are under fast-growing cyberattack by hackers, often affiliated with government and organized crime groups, says a new report. These key industries, it adds, often are not boosting security to deal with the threat.

For decades, industrial control systems that operate the power grid and other vital infrastructure enjoyed "security by obscurity." Cybercriminal gangs saw better places to make money. That's changed in a flash.

A drumbeat of reports in recent years has warned of the corporate trend to connect previously isolated vital systems to the Internet, making them more vulnerable to criminal and government hackers seeking to infiltrate infrastructure networks.

RELATED: How much do you know about cybersecurity? Take our quiz.

Against this backdrop, "In the Dark: Crucial Industries Confront Cyberattacks," a global survey of 200 computer security professionals working in critical infrastructure industries, sends up another warning flare.

Cyberexploits and cyberattacks on vital infrastructure are now widespread, and perpetrators range from cybercriminals engaged in theft or extortion to foreign governments preparing sophisticated attacks, the report says. The Stuxnet worm was last year's key example – a cyberweapon that targeted Iran's nuclear program and damaged it, and that experts say could be modified to damage other systems.

According to the global survey, Stuxnet wormed its way into computer networks at companies of about 40 percent of respondents. Within the electric utility industry, the penetration was higher: Nearly half of the professionals surveyed said they had found Stuxnet on their systems.

Despite such evidence that cyberattackers are targeting critical infrastructure providers, many operators are not ramping up security and others are moving too slowly, the report says.

"What we found is that they are not ready," says the report commissioned by McAfee, the cybersecurity company, and conducted by the Center for Strategic and International Studies (CSIS), a Washington think tank. "The professionals charged with protecting these systems report that the threat has accelerated – but the response has not."

The report says 40 percent of cybersecurity professionals surveyed believe their industry has become more vulnerable in the past year. Some 30 percent say their company is not prepared for a cyberattack, and more than 40 percent expect a major cyberattack within the next year.

"We found that the adoption of security measures in important civilian industries badly trailed the increase in threats over the last year," said Stewart Baker, who led the study for CSIS, in a statement.

Limited progress has been made securing vital networks. Fifty-one percent of respondents at utilities say deployment of security technologies increased (compared with 50 percent the year before). Within the oil and gas industries, 48 percent boosted security technology in the past year, up from 45 percent a year earlier, the report said. Among the other findings:

- Massive numbers of attacks. Eighty percent of those surveyed have faced a large-scale denial of service attack (DDoS), in which computers bombard an Internet-connected system and overload it, making access impossible. One-quarter of respondents say their systems were hit daily or weekly by DDoS attacks or received extortion demands during the attacks.

- More extortion attempts. Among critical infrastructure providers, 1 in 4 professionals reports that the provider was an extortion target: Pay us or we'll cyberattack you. Extortion attempts grew 25 percent over the previous year, and the cases were distributed evenly among the different infrastructure sectors. Some 60 percent of professionals in India and 80 percent in Mexico reported cyberextortion attempts.

Despite this, most companies did not adopt additional security or clamp down on offsite users. Only one-quarter of the executives say they use systems that monitor network activity, and 36 percent use tools to detect changes in user authority.

- Cybersecurity laws lag. Brazil, France, and Mexico lag other nations in implementing security steps. Those nations adopted half as many measures as leaders China, Italy, Japan, which had the most confidence in laws to deter attacks.

- The US and Europe lag Asia in government involvement. While the security professionals in China and Japan report a lot of interaction with their governments on cybersecurity, those in the United States, Britain, and Spain reported little, if any, contact.

- More than half of respondents say they believe their organization has already been attacked by hackers working for governments.

"The level of sophistication of these attacks – many of them attributed to governments – was already fairly high a few years ago, and it's kind of leveled off now," says Alan Paller, research director for the SANS Institute, a cybersecurity education

organization. "What we're seeing are sophisticated attacks increasingly deployed in a targeted way at these critical infrastructure industries."

While computer firewalls block viruses and other generic threats, spear-phishing that targets individuals with convincing e-mail, infected thumb drives, and other techniques are being used to infiltrate vital systems. So-called "zero-day" attacks that use never-before-seen attack software code – which antivirus companies have not yet developed a defense against – are one example of a potent growing threat, experts say.

Today, "if you can't deal with a zero-day attack coming from a thumb drive," says James Woolsey, former director of Central Intelligence, quoted in the report, "you have nothing."

RELATED: How much do you know about cybersecurity? Take our quiz.

## **IN THE BLOGS:**

### **State Sen. Liz Krueger Polls On Indian Point (NYDN)**

By Celeste Katz

New York Daily News (blog), April 21, 2011

Manhattan State Sen. Liz Krueger's already made her views on the Indian Point nuclear power plant clear (she wants to close it), but now she wants to hear from you.

The senator's online survey, "Where Do You Stand On Indian Point?" asks participants to vote whether they feel Indian Point should remain open or be shuttered.

In the wake of Japan's nuclear crisis, the feds have said they're making Indian Point, located so close to the population center of NYC, a top priority. However, local officials' requests to expand the evacuation zone around the Buchanan plant have been ruled unnecessary by regulators.

### **Lawmaker Is Taking Online Poll On Indian Point (POLHUDSON)**

By Cara Matthews

Politics on the Hudson (blog), April 21, 2011

Sen. Liz Krueger, D-Manhattan, is conducting an online poll asking people whether the US Nuclear Regulatory Commission should renew the license of Indian Point in Buchanan, Westchester County. Krueger said she has been calling for the plant to be closed since 2003 and thinks the recent earthquake and tsunami in Japan underscore the need to do that. The plant is located above the convergence of two fault lines.

"I've been very clear on where I stand with Indian Point, as have several other elected leaders, including Governor Cuomo, but now it's time to hear from the public. I want to know where people stand on this issue," Krueger said in a statement.

Indian Point will undergo a review by the Nuclear Regulatory Commission in 2013 to determine whether its license should be renewed. Two of its three nuclear reactors are still in service. They were built in the 1970s. Twenty million people live and work within a 50-mile radius of Indian Point, which is 25 miles north of New York City.

In the wake of the natural disasters in Japan, Indian Point, which is owned by Entergy, has been defending the safety of its plant and running commercials on the issue.

This is a statement Entergy issued last month about Indian Point's capacity to withstand earthquakes:

"Indian Point is designed to withstand an earthquake greater in size than the area has ever experienced. The NRC recently stated that 'operating nuclear power plants are safe and that every plant is designed with a margin of safety beyond the strongest earthquake anticipated in the area.' The reason the risk is low for Indian Point is partly because of the geology and tectonics of the East Coast region. Indian Point is neither susceptible to the type of earthquake that occurred in Japan, nor the tsunami that followed that ultimately removed the cooling capability of the Japanese plants. Nevertheless, over the next 30 days, as part of an industry initiative, Indian Point will be performing a comprehensive review of the plant's ability to respond to catastrophic events."

## **INTERNATIONAL NUCLEAR NEWS:**

### **Japan Prohibits Access To Nuclear Evacuation Zone (NYT)**

By Keith Bradsher

New York Times, April 21, 2011

TOKYO — After weeks of trying to prevent the Japanese public from panicking about the damaged Fukushima Daiichi nuclear plant, the government now has the opposite problem: worries have faded so much that people are slipping back into the evacuation zone.

Yukio Edano, the chief secretary of Japan's cabinet, said Thursday morning that beginning at midnight, no one would be allowed to enter the 12-mile zone around the reactors without official permission. He made the announcement after residents began returning to retrieve belongings from their homes and as local and foreign journalists began exploring the area.

Noriyuki Shikata, a senior government spokesman, had earlier issued an appeal asking people to stay out of the zone until the government gave legal force to an evacuation that had been voluntary until now. "The situation at Fukushima Daiichi is still not sufficiently stable," he said. The 12-mile zone around the reactors was imposed in stages in the 30 hours after the earthquake and tsunami on March 11.

The government has also encouraged people to leave communities about 12 to 18 miles from the reactors as well as five towns farther away that happened to receive extra fallout because of wind and rain patterns. The government is not drafting a legal plan to ban people from entering those areas, officials said.

Radiation releases spiked in the first week of the nuclear accident but have declined steeply since then, according to government-run monitoring stations inside and outside the evacuation zone. The experience at Chernobyl in Ukraine after the nuclear accident there in 1986 was that wind and rain patterns tended to concentrate radiation in certain "hot spots." The Japanese authorities have not yet identified any invisible hot spots in the evacuation zone.

Government officials took pains not to suggest that they had identified any new dangers at the power plant. But they have warned with increasing urgency that the site remains extremely vulnerable to aftershocks, which could be powerful enough to set off another tsunami.

In addition, Hidehiko Nishiyama, the deputy director general of the Nuclear and Industrial Safety Agency, said that the authorities were looking for ways to shore up the bottom of the spent uranium fuel-rod storage pool at Reactor No. 4 to prevent it from collapsing.

A spokesman for the Fukushima Prefecture police, whose jurisdiction encompasses the evacuation zone, said the police had done spot checks on 3,378 addresses in the area over the past three weeks and found people at 63 sites; they were urged to leave. Media reports have suggested that as many as 200 households are still occupied in the zone, mainly by elderly people who refuse to live at evacuation centers or by farmers who refuse to abandon their livestock.

According to the Japanese cabinet, 78,200 people lived inside a 12-mile radius before the earthquake, tsunami and nuclear accident. Many of them have been staying at evacuation centers for nearly six weeks, after fleeing the tsunami without time to gather their valuables; growing activity in the evacuation area has prompted concern among evacuees that their homes may be robbed while they are away, although there have been no documented cases of looting.

Mr. Shikata said the government was sensitive to the needs of residents who had fled with nothing more than "the clothes on their backs." One person from each evacuated household would be allowed to enter the zone as part of two-hour bus trips to recover belongings, Mr. Edano said, but not even the buses would be allowed within two miles of the reactors. Mr. Nishiyama said the government's main concern in drafting legal measures to bar entry to the evacuation zone involved public health and safety. But he said a secondary concern was that interlopers could spread the hot spots of radiation. Decontamination of a large area after a nuclear accident consists of very carefully mapping the hot spots. Contaminated objects are then sent to a specially lined landfill; even the dirt may have to be dug up if contamination is high enough.

Michael Corradini, the chairman of engineering physics at the University of Wisconsin, said that with power crews already setting up electricity transmission lines across the evacuation zone to the plant, and with heavy repair equipment being brought in as well, the movement of private individuals and their vehicles would probably not have much additional effect in spreading out the hot spots.

But Matthew Kozak, a principal consultant at Intera, an environmental consulting firm in Denver that has worked on radioactive waste management issues in Japan since the late 1980s but is not involved in the Fukushima cleanup, said that workers could be trained to minimize disruption to hot spots and be confined to easily traceable routes. Finding and cleaning up the radiation spread by interlopers would be more costly, he said in an e-mail, although he doubted residents would spread enough contamination to pose a serious health risk.

"Bottom line for me is that it is a good idea to keep people out of the controlled area, at least for now," he said.

About 62,400 people lived about 12 to 18 miles from the power plant before the accident. They were initially told to stay indoors but have since been asked to leave voluntarily, along with residents of the five other communities that received some radioactive fallout because of wind and rain patterns. The cabinet has not released an estimate for the population of the other communities.

After the Chernobyl accident, the Soviet Union established a more stringently enforced exclusion zone, with an initial radius of about 18 miles.

In Japan, weather patterns appear to have pushed much of the radiation from the coastal Fukushima reactors straight east and out to sea.

Ken Ijichi, Moshe Komata and Kantaro Suzuki contributed reporting.

## **Japan Declares No-go Zone Around Nuclear Plant (AP)**

By Mari Yamaguchi And Elaine Kurtenbach, Associated Press

Associated Press, April 21, 2011

TOKYO – Japan declared a 12-mile (20-kilometer) area evacuated around its tsunami-crippled nuclear power plant a no-go zone on Thursday, urging residents to abide by the order for their own safety.

Chief Cabinet Secretary Yukio Edano said the order would take effect at midnight and was meant to prevent unrestricted entry into the mostly deserted area, which was ordered evacuated after last month's tsunami and earthquake wrecked the Fukushima Dai-ichi plant's power and cooling systems.

Under Japan's Disaster Countermeasures Basic Law, people who enter the zone would be subject to fines of up to 100,000 yen (\$1,200) and possible arrest. Up to now, defiance of the evacuation order was not punishable by law.

"We beg the understanding of residents. We really want residents not to enter the areas," Edano said. "Unfortunately, there are still some people in the areas."

Almost all the zone's nearly 80,000 residents left when the area was evacuated on March 12, but police have not been able to legally block them from going back.

Police contacted Thursday said they had no estimate of the exact number of people who have returned to the zone or who still might be living there.

Officials said the order was meant to limit exposure to radiation leaking from the plant, and to control entry to prevent theft.

Edano said authorities would arrange brief visits for residents, allowing one person per household to return by bus for a maximum of two hours to collect necessary belongings. Residents would be required to go through radiation screening, he said.

Details were still being worked out.

"We realize this is extremely inconvenient for residents, but we urge you to be patient," Edano told reporters in Tokyo.

Prime Minister Naoto Kan was visiting the region Thursday to meet with local officials and evacuees to discuss the plans for strict enforcement of the evacuation zone.

Kan, who will also visit a nuclear crisis management center during his Thursday trip, has been under fire from the opposition for the government's response to the nuclear crisis.

Edano suggested Wednesday that plant operator Tokyo Electric Power Co. should have been better prepared.

"Aside from the question of whether the accident could have been predicted, there was not sufficient preparation based on an anticipation, and there is no mistake about that," he said. "We urge all nuclear operators to immediately take any possible precaution based on the lesson from the Fukushima nuclear accident, and not wait until details of the accident are examined."

## **Japan Imposes Ban On Nuclear Zone (WSJ)**

By Mitsuru Obe And Toko Sekiguchi

Wall Street Journal, April 21, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Japan Sets No-Entry Zone Around Stricken Plant To Stop Return Of Residents (BLOOM)**

By Takashi Hirokawa And Sachiko Sakamaki

Bloomberg News, April 21, 2011

Japan imposed a 20-kilometer (12 mile) no-entry zone around the crippled Dai-ichi nuclear power plant in Fukushima in the interests of public health, Chief Cabinet Secretary Yukio Edano said.

"Entry into the zone will be banned except for authorized persons for emergencies and for temporary visits," Edano said at a press conference today in Tokyo. The order will go into effect at midnight tonight, he said.

About 80,000 people lived in the area before the March 11 earthquake and tsunami slammed into the plant, causing the worst nuclear disaster in 25 years. While the residents were evacuated, some have returned against the advice of officials. About 40 people are living in the area, said Yusuke Matsumura, a spokesman at Japan's atomic safety agency.

One person per household will be allowed to return to their homes for a two-hour period to retrieve belongings, Edano said today. Residents whose homes were within three kilometers of the plant, though, won't be permitted to make a temporary visit, he said.

"There has been a strong desire from evacuees who left without anything to go back," Edano said. Groups will be transported by bus and required to wear protective gear, he said.

The tsunami wrecked the plant's cooling systems, causing partial meltdowns and releasing radiation into the air, ground and sea, contaminating food and water supplies. Tokyo Electric Power Co., owner of the facility, laid out a plan this week to end the crisis within the next six to nine months.

Prime Minister Naoto Kan visited the area today and met with Fukushima Governor Yuhei Sato.

## **Japan PM Declares No-go Zone Around Nuclear Plant (AFP)**

AFP, April 21, 2011

Japan's Prime Minister Naoto Kan on Thursday declared the 20-kilometre (12-mile) evacuation area around the stricken Fukushima nuclear plant a legal no-entry zone.

The move, due to come into effect at midnight local time (1500 GMT), came after police found more than 60 families still living inside the zone around the plant that was hit by the March 11 quake and tsunami.

The plant, where reactor cooling systems were knocked out, has been hit by a series of explosions and leaked radiation into the air, ground and sea in the world's worst nuclear disaster since Chernobyl 25 years ago.

"The plant has not been stable," Kan's top spokesman, Yukio Edano, told reporters. "We have been asking residents not to enter the area as there is a huge risk to their safety.

"Today, as we have finished arrangements with local authorities, we have decided to designate the area an emergency area based on disaster law."

The government declared a 20 kilometre exclusion zone around the plant after the quake disaster, as well as a wider 30 kilometre radius in which people were first urged to stay indoors and later encouraged to also evacuate.

People in some towns further afield will also soon be told to leave because of the risks of long-term radiation exposure, the government has said.

Each household within the 20 kilometre area will be allowed to send one member back into their home for two hours to pick up personal belongings.

## **Doctor Says Japan's Nuclear Plant Workers Are Close To Edge Of Their Physical Endurance (AP)**

Associated Press, April 21, 2011

Workers battling the crisis at Japan's stricken nuclear plant suffer from insomnia, show signs of dehydration and high blood pressure and are at risk of developing depression or heart trouble, a doctor who met with them said Wednesday.

The crews have been fighting to get the radiation-spewing Fukushima Dai-ichi plant under control since it was crippled by the March 11 earthquake and tsunami that devastated northeastern Japan.

"The (working) conditions at the plant remain harsh," epidemiologist Takeshi Tanigawa told The Associated Press. "I am afraid that if this continues we will see a growing risk of health problems."

His findings relate to the health risks workers face due to fatigue, rather than from any exposure to radiation.

Tanigawa, the Public Health Department chairman at Ehime University's medical school, said he met and spoke with 80 of the workers over four days when he was allowed into another nearby nuclear plant where many of them take their breaks. He said he was not able to carry out full physical exams on the workers before leaving Tuesday because of time constraints.

Tokyo Electric Power Co, the plant operator, said 245 workers from the company and affiliated companies were stationed at the Fukushima Dai-ichi plant Wednesday. Soldiers, firefighters and police officers also were at the site.

The nuclear workers have been toiling around the clock to stabilize the plant. Tanigawa said they get little rest, no baths or fresh food and are under the constant threat of exposure to radiation, which remains so high in many places that robots are being used to take measurements.

In a telephone interview, Tanigawa said the work conditions don't meet the basic rights guaranteed workers by Japan's constitution. During their breaks at the Fukushima Daini plant, they often sleep on the floor of a gymnasium, "wrapped only in blankets and with no privacy," he said.

Photographs of the gymnasium show workers in white radiation protection suits sitting on gold metallic mats laid in tight rows on the floor. Boxes of supplies are stacked nearby.

"Because they sleep so close to each other, snoring is a big problem," he said. "Normally, that might sound funny, but in this case it is denying people sleep and that can lead to bad performance on the job."

The workers, most of them middle-aged men, suffer insomnia and show signs of dehydration and high blood pressure, he said. One had gout. Tanigawa said he is concerned they may develop depression or heart problems.

"Making sure they have a shower or a bath or a proper place to sleep is not just to make them comfortable, but to ensure good performance," he said.

Tanigawa said the mental stress of the job is deepened by the fear of radiation exposure, the concerns of their loved ones — many don't want the men to stay on at the plant — and the fact that many of the workers themselves lost homes or family in the tsunami.

TEPCO said the situation has become difficult as the crisis has become protracted.

"We think that we have worked to improve food, sleep hours and off days so that working conditions are improving," it said in a statement. "We would like to work on further improvements, taking Dr. Tanigawa's views into account."

Tanigawa said that although emergency conditions may have justified harsh working hours in the early days of the crisis, the situation has now "become chronic."

"They have struggled for a month. But they haven't gotten any rest," he said.

"TEPCO and the government don't think about them. The workers must do a good job, but they do not have any support," he said.

With the heat of summer approaching, the health risks could multiply.

The workers now have three meals a day, but no fresh meat or vegetables. "They get microwave food," he said.

They put in four days, then have two off, but many feel they can't leave, he said.

"They feel a deep sense of responsibility to be there," he said. "I asked many if they wanted to stop, but they responded, 'Who would do this if I didn't?'"

An anonymous worker identified as having recently worked at the plant's Unit 2 turbine building said in an interview on TV Asahi late Wednesday that the site "is just like a battlefield."

The man, whose face was shown out of focus so he could not be identified, said the turbine building was normally not radioactive, but a dosimeter beeped soon after he and his fellow workers entered the area to prepare to transfer radiation-contaminated water out of the building.

"We were shocked by the high level of radiation," he said, adding that they were so afraid of radiation it was hard to concentrate.

"I work at the plant just because I want to save my hometown," the worker said. "We are the ones who have worked at the nuclear plant all this time. Who else would take the job now if we don't?"

## **Tepco Must End 'Whack-a-Mole,' Cover Fukushima Reactors As Typhoons Loom (BLOOM)**

By Tsuyoshi Inajima And Yuji Okada

Bloomberg News, April 21, 2011

Tokyo Electric Power Co. must speed up plans to cover reactors at its crippled nuclear plant and drain tainted water to prevent more radiation leaks as Japan's typhoon season approaches, engineering professors said.

In 2004, eight cyclones passed over or skirted Japan's Tohoku region, where the Fukushima Dai-ichi power station is spewing radiation after an earthquake and tsunami on March 11. The earliest was in May that year, according to Japan's weather agency data. The eyes of two storms passed within 300 kilometers of Tohoku last year, the data show.

Last month's disaster wrecked the plant's cooling systems, triggering the worst nuclear crisis since Chernobyl in 1986. The roofs of three buildings were damaged in blasts as water inside reactor cores and spent-fuel ponds boiled away. The utility known as Tepco plans to install temporary covers within nine months, and concrete ceilings over the "medium term."

"The buildings should be covered at least before the typhoon season is in full swing by late July," said Tadashi Narabayashi, a professor of nuclear engineering at Hokkaido University. "Tepco's actions are like a game of Whack-a-Mole because the company keeps reacting after the event."

Tepco said on April 17 it will start erecting temporary covers for the damaged building within three months provided radiation falls to levels at which workers can begin construction. The work is expected to be completed in the next three to six months, according to the action plan, which lists the "possibility of the cover being damaged by a big typhoon" as a risk.

The company hasn't decided what material it will use to temporarily cover the buildings, Tepco spokesman Hajime Motojuku said today.

The covers are the only measures planned at the moment to protect against typhoons, Takeo Iwamoto, a Tepco spokesman, said yesterday. The company may install them faster than the plan announced on April 17, he said.

The Japan Meteorological Agency doesn't make forecasts for how many tropical storms or typhoons are expected to approach the country, Hajime Takayama, a weather forecaster at the bureau, said by telephone.

"It's quite possible for a typhoon to hit the Tohoku region while maintaining its strength, although most tend to make landfall in the south," Takayama said.

Tepco shares fell as much as 3.4 percent to 340 yen and were trading at 433 yen at 11:00 a.m. in Tokyo.

The Fukushima plant, 220 kilometers (137 miles) north of Tokyo, has six reactors, three of which were shut for maintenance when the earthquake and tsunami struck, leaving almost 28,000 people dead or missing.

Reactor buildings weakened by explosions may suffer further damage if a typhoon hits them, while strong winds and rain could scatter radioactive materials and water, said Hironobu Unesaki, a nuclear engineering professor at Kyoto University.

Tepco has been pouring millions of liters of water to cool the reactors and spent fuel after the accident, which has flooded basements and trenches near the buildings that house them. Some highly contaminated water leaked into the sea and the utility has dumped less toxic fluids into the ocean.

About 520,000 liters (137,000 gallons) of water with a level of radioactivity that was 20,000 times the legal limit leaked into the ocean between April 1 and 6, Junichi Matsumoto, a Tepco general manager, said today at a briefing in the Japanese capital.

Basements and trenches around the reactor buildings are also flooded with radioactive water, preventing repairs to the electrical equipment and cooling systems.

"Heavy rain may cause radioactive materials to soak further into the ground and enter the water table," Unesaki said. "This could affect drinking water."

Tepco started pumping contaminated water out of trenches near one of the reactor buildings that were damaged by the blasts, Matsumoto said on April 19. The company aims to move 10 million liters of the contaminated water to a storage unit and expects to complete the transfer in 26 days.

About 450,000 liters was pumped out by 7 a.m. today, spokesman Takashi Kurita said at the briefing in Tokyo today.

"It will be too late to start preparations once a typhoon approaches," said Narabayashi of Hokkaido University. "It's a basic risk principle that you proactively take measures against circumstances that are predictable."

Japan's government imposed a 20-kilometer (12 mile) no-entry zone around the crippled plant in the interests of public health, Chief Cabinet Secretary Yukio Edano said today.

The order will go into effect at midnight today, Edano said at a press conference in Tokyo. An earlier directive asking about 80,000 residents living within the radius to evacuate wasn't legally enforceable.

Some have returned to the area to collect belongs and check their properties against the advice of officials. One person per household will be allowed to return to their homes for two-hour periods to retrieve possessions, Edano said.

"There has been a strong desire from evacuees who left without anything to go back," Edano said. Groups will be transported by bus and required to wear protective gear, he said.

## **UN Chief: More Nuclear Accidents Are Likely (AP)**

Associated Press, April 21, 2011

The world must prepare for more nuclear accidents on the scale of Chernobyl and Japan's Fukushima Dai-ichi plant, the U.N. chief warned Wednesday, saying that grim reality will demand sharp improvements in international cooperation,

U.N. Secretary-General Ban Ki-moon and others portrayed the growth of nuclear power plants as inevitable in an energy-hungry world as they spoke at a Kiev conference commemorating the explosion of a reactor at Ukraine's Chernobyl nuclear reactor 25 years ago.

"To many, nuclear energy looks to be a relatively clean and logical choice in an era of increasing resource scarcity. Yet the record requires us to ask painful questions: have we correctly calculated its risks and costs? Are we doing all we can to keep the world's people safe?" Ban said. "The unfortunate truth is that we are likely to see more such disasters."

During a brief visit to the explosion site 60 miles (100 kilometers) north of the Ukrainian capital earlier in the day, Ban proposed a strategy for improving nuclear energy security worldwide, including strengthening the International Atomic Energy Agency and devoting more attention to "the new nexus between natural disasters and nuclear safety."

The ongoing crisis at Japan's Fukushima Dai-ichi nuclear power plant was triggered by last month's huge earthquake and the ensuing tsunami that flooded the plant.

"Climate change means more incidents of freak weather," Ban said in Kiev. "Our vulnerability will only grow."

IAEA head Yukiya Amano, who accompanied Ban on the trip to Chernobyl, echoed those sentiments.

"Many countries will continue to find nuclear power an important option in the future, and that is why we have to do our utmost to ensure safety," he said, speaking a few hundred yards (meters) from the exploded reactor, which is now covered by a hastily erected sarcophagus.

The sarcophagus has gone past its expected service life and work has begun to build an enormous shelter that will be rolled over the reactor building. The new shelter, designed to last 100 years, is expected to be in place by 2015, but a substantial amount of money for the project is still lacking.

An international donors conference Tuesday in Kiev sought to raise euro740 million (\$1.1 billion) for the shelter and a storage facility for the spent fuel at the plant's other decommissioned reactors. But in the face of global economic problems, some countries held back from making funding promises and the pledges only came to euro550 million (\$798 million).

The Chernobyl explosion on April 26, 1986, spewed a cloud of radioactive fallout over much of Europe and forced hundreds of thousands from their homes in the most heavily hit areas. A 30-kilometer (19-mile) area radiating from the plant remains uninhabited except for some plant workers who rotate in and several hundred local people who returned to their homes despite official warnings.

Zsuzsanna Jacab of the U.N.'s World Health Organization told the Kiev conference that some 6,000 cases of thyroid cancer had been diagnosed among people who were children and teens when exposed to the fallout. She said more cases are expected although "the magnitude is difficult to quantify."

Among the 600,000 people most heavily exposed to radiation — which apparently include the estimated 240,000 who worked on the first and most dangerous phase of the plant repair and clean-up — Jacab expects 4,000 more cancer deaths than average to be eventually found.

The U.N. figures have been criticized by the environmental group Greenpeace and others as severely understating Chernobyl's consequences. Even the lower figures represent "an unacceptable price paid by the affected communities," Jacab said.

Ban and others said the Chernobyl and Japan accidents highlighted the need for improved communication between countries about their nuclear programs. And Thorbjorn Jagland, secretary-general of the Council of Europe, drew a political lesson from the crises.

"The more complex technologies become, the more complex societies become, the more important it is to involve civil societies, to have democratic institutions, a free press," he said.

Soviet authorities kept the Chernobyl disaster unreported for several days, and Japanese authorities have been criticized for initially providing insufficient information.

## **Time For Plan B (NYT)**

New York Times, April 21, 2011

A 14-year effort to negotiate an international treaty banning the production of nuclear weapons fuel is getting nowhere. Under the terms of the United Nations' Conference on Disarmament, all 65 participants must agree. Pakistan, which is racing to develop the world's fifth largest arsenal, is refusing to let the talks move forward.

It is clearly time for a new approach. So we are encouraged that the Obama administration has begun discussing with Britain and France and others the possibility of negotiating a ban outside the conference, much like the 2008 convention on cluster munitions and the 1997 land-mine treaty. While the United States, Russia and China still are not signatories — they should be — many others are, and the two agreements are credited with greatly diminishing, although not eliminating, the use of both weapons.

Russia and China, which must be part of any fissile material ban, are resisting the idea of ad hoc negotiations. They should tell Pakistan to let the conference do its job, or they should accept the alternative. China has particular influence as Pakistan's longtime supplier of nuclear technology, including a fourth reactor for producing even more nuclear fuel.

Islamabad dug in its heels after the George W. Bush administration persuaded the international community to lift a ban on civilian nuclear trade with India. The ban remains in place for Pakistan.

India, unlike Pakistan, isn't a serious proliferation risk. Still, the deal was deeply flawed. It did not require India — estimated to have at least 100 nuclear warheads — to halt fissile material production. And now that New Delhi can buy foreign uranium for its power reactors it can husband its domestic uranium for weapons.

Islamabad argues that the fissile material ban would further lock in a military advantage for India. Pakistan already has 95 or more deployed nuclear weapons, up from the mid- to high-70s two years ago. It should be less fixated on India and more focused on using scarce resources to educate its children and battle home-grown extremists. Along with the test ban treaty (which the Senate still must ratify), getting countries to stop producing fissile material is essential for curbing the world's most lethal weapons. A ban would give the United States and others more leverage to pressure North Korea and Iran to abandon their nuclear efforts. Serious negotiations need to start now.

## **Call For Renewed Debate On Nuclear Energy In Australia (SYDMH)**

By Ben Cubby

Sydney Morning Herald, April 21, 2011

THE nuclear industry is calling for renewed public debate about atomic energy in Australia, and says the Fukushima reactor disaster in Japan will not affect the future of the nuclear energy or uranium mining industries.

Leading nuclear companies told a forum at the Lowy Institute that the partial meltdown of three Japanese reactors last month had eroded public support for nuclear energy. There was no clear way to reverse this in the short term, they conceded.

"The events of Fukushima were a huge wake-up call for people in my generation, born in the '80s," the regional director of the French nuclear company AREVA, Selena Ng, said.

Advertisement: Story continues below "It's also a huge wake-up call on how the nuclear industry has to improve its communication with its stakeholders," Dr Ng said. "The industry, globally, has not always been transparent about these risks."

But the Australian Uranium Association, an industry lobby group, said demand for uranium, and the amount of energy being produced by fission worldwide, would begin to expand.

"Public perceptions will return to what they were before Fukushima," the association's chief executive, Michael Angwin, said. "The nuclear fuel cycle remains as safe after the Fukushima accident as it was before."

Mr Angwin said an Australian "public education" campaign to convince people nuclear energy was safe might work with government leadership, but he did not expect to see that happen.

"One of the reasons people take a negative view of the industry is that they see it as remote from them, and they see it as a part of big government and big industry," he said.

Dr Ng said the situation at Fukushima was "not yet stabilised". But John Borshoff, the chief executive of Paladin Energy, a uranium producer operating in Australia and Africa, said he believed it was clear the main risks of dangerous radiation leaks had passed.

"Fortunately - or unfortunately for the anti-nukes - no deaths have occurred," Mr Borshoff said. "It's not a Chernobyl, even if many in the opposing camp think it is."

The picture of an expanding industry was challenged by a question from a University of Sydney adjunct professor, Richard Broinowski, who said the number of reactors around the world has declined.

Outside the Lowy Institute, anti-nuclear campaigners protested against nuclear power and the proposed use of Aboriginal land in the Northern Territory as a national radioactive waste dump. They called for fossil-fuelled energy to be replaced with renewable power.

"During the earthquake and tsunami in Japan, not one wind turbine stopped working," one protester, Natalie Wasley, said.

The Japanese wind energy industry said some turbines did shut down because of grid failure after the tsunami, but all operations had started again and been increased to partly compensate for the loss of the Fukushima reactors.

At the reactor yesterday, authorities continued to drain hundreds of tonnes of radioactive water from the partially melted No. 2 reactor.

The Tokyo Electric Power Company, who operates the reactors, said it would start paying compensation to some of the 80,000 people evacuated from the district around the nuclear plant because of radiation fears.

The Japanese government has set aside public funds to help the company meet the payments, a move that would effectively nationalise the nation's main electricity generator.

Read more: <http://www.smh.com.au/environment/energy-smart/call-for-renewed-debate-on-nuclear-energy-in-australia-20110420-1dp13.html#ixzz1K96fYgj1>

## **Romania Plans To Expand Nuclear Output By 2035, Ministry Says (BLOOM)**

By Andra Timu And Irina Savu

Bloomberg News, April 21, 2011

Romania plans to expand its nuclear power generation in the next 24 years by building two reactors at its only atomic plant and building a new facility, the country's Economy Ministry said.

The Balkan nation plans to add as much as 4,600 megawatts of nuclear capacity by 2035 to its existing output of 1,400 megawatts, according to a statement on the ministry's website. The country aims to install the two reactors at its Cernavoda plant, operated by atomic-power company Nuclearelectrica SA, by 2020 and complete the new facility by 2030.

Radiation leaks from the Fukushima nuclear plant in Japan following a devastating earthquake and tsunami on March 11 has prompted governments such as Germany to rethink their nuclear expansion plans. The Bucharest-based government is currently seeking investors for the two nuclear reactors estimated at 4 billion euros (\$5.8 billion), after CEZ AS, GDF Suez (GSZ) SA, RWE AG and Iberdrola SA pulled out in January, citing unclear regulations and doubts about future power demand.

"The most efficient solution to produce electricity, for the period between 2020 and 2035, is a new nuclear power plant," the ministry said. "We will install the third and fourth reactors at the Cernavoda plant by 2020, and after that, depending on the evolution of consumption, we will start working on the second nuclear power plant."

Romania needs to invest as much as 40 billion euros in installing new energy capacity of 14,800 megawatts in the next 24 years as it will probably close its outdated power plants, which now produce half of the country's total electricity output, according to the statement.

### **RWE Chief Lashes Merkel's Nuclear Stance (WSJ)**

By Jan Hromadko

Wall Street Journal, April 21, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

### **Violence Grows Over India's Nuclear Goals (FT)**

By Amy Kazmin

Financial Times, April 21, 2011

Full-text stories from the Financial Times are available to FT subscribers by clicking the link.

### **Gori Nuclear Reactor To Be Inspected (KORTIMES)**

By Kim Tae-gyu

Korea Times, April 21, 2011

Following the recent shutdown of the No. 1 reactor of the Gori nuclear power plant in Busan, the country plans to review the safety of the country's Gori nuclear facility in response to nationwide concerns.

The Korea Hydro & Nuclear Power (KHNP), which operates the nation's 21 nuclear reactors, said Thursday that both government and private experts will team up in order to intensively examine the 33-year-old No. 1 reactor.

"The nation's 21 nuclear reactors went through inspections of late in the aftermath of the Fukushima disaster in Japan. But this time around, the review will be about just the No. 1 Gori reactor," KHNP President Kim Jong-shin told a press conference.

"The facility will be back in operation only after receiving the approval of the inspectors, which will involve those from the state-run Korea Institute of Nuclear safety and other entities."

Last week the No. 1 Gori reactor suffered from a temporary shutdown after a circuit-breaker burned out because of an electricity overload. It was the first malfunction of the facility since 2005.

But people were worried because the reactor was supposed to stop running in 2007, 30 years after its commercial operations started in 1977. It was reactivated after state approval with a fresh timeline of 2017.

Kim did not set the date for the decision on whether to put the Gori No. 1 reactor back online. But he doesn't seem to expect the reactor to be closed after the inspections.

"The Gori No. 1 reactor is one of the best-performing nuclear facilities in the world and the circuit-breaker malfunction was not a big accident. It would not be good to shut it down," Kim said.

The circuit-breaker at issue was supplied by Hyundai Heavy Industries, the world's primary shipbuilder. Kim said that the KHNP plans to seek compensation from Hyundai for the glitch.

### **Canadian Nuclear Task Force Established To Review Nuclear Power Plants (POWGENWLD)**

Power-Gen Worldwide, April 21, 2011

The Canadian Nuclear Safety Commission (CNSC) has established an operational task force to evaluate the operational, technical and regulatory implications of the March 11, 2011 nuclear event in Japan in relation to Canadian nuclear power plants.

The task force members will review licensee's responses to the CNSC's request for information to re-examine the safety cases of their nuclear facilities, the underlying defense-in-depth against external hazards, severe accident scenarios and emergency preparedness procedures and guidelines.

The task force will recommend short- and long-term measures to address any significant gaps at Canadian nuclear power plants, and whether any design modifications are needed. It will determine priorities for the implementation of corrective actions based on the lessons learned and the need, if any, for further examination.

The task force will also recommend, as appropriate, potential changes to CNSC regulatory requirements, inspection programs and policies for existing Candu and potential new nuclear power plants.

Chaired by the Director-General of Nuclear Power Plant Regulation, Dr. Greg Rzentkowski, the task force is comprised of senior CNSC subject matter experts in reactor design, safety assessment, and emergency preparedness and response.

The CNSC task force will present this information to the Commission in a public forum at a date to be determined.

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**From:** Jaczko, Gregory <Gregory.Jaczko@nrc.gov>  
**Sent:** Monday, April 25, 2011 7:08 AM  
**To:** Coggins, Angela; Batkin, Joshua; Pace, Patti  
**Subject:** FW: NRC News Summary for Monday, April 25, 2011  
**Attachments:** NRCSummary110425.doc; NRCSummary110425.pdf; NRCClips110425.doc; NRCClips110425.pdf

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**From:** Bulletin News[SMTP:NRC-EDITORS@BULLETINNEWS.COM]  
**Sent:** Monday, April 25, 2011 7:07:29 AM  
**To:** [NRC-editors@bulletinnews.com](mailto:NRC-editors@bulletinnews.com)  
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# NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

MONDAY, APRIL 25, 2011 7:00 AM EDT

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## NRC NEWS:

**Kirk, Illinois Lawmakers Tour Zion Plant, Call For Work To Resume On Yucca.** On its "Ward Room" blog, [WMAQ-TV](http://WMAQ-TV) Chicago (4/23) discussed Sen. Mark Kirk's tour of the closed Zion plant with several other lawmakers, and said Kirk seemed concerned about the fact that the plant still holds "about 1,100 tons of radioactive waste" and that the plant is near Lake Michigan. Kirk said, "I'm so passionately in favor of building the Yucca Mountain facility to take nuclear fuel away from the largest supply of drinking water in North America." He, along with Sen. Suzi

Schmidt and US Reps. Robert Dold and Joe Walsh, added that "the recent disaster at the Fukushima plant in Japan should serve as a wake-up call for the state."

On its website, [WLS-TV](http://WLS-TV) Chicago (4/23, Gallardo) reported that it will take about 10 years before the "now-shuttered Zion nuclear power plant is completely decommissioned. By the time all is said and done, all that will remain of the 38-year-old plant is a 10-acre lot where the reactor's spent fuel rods will be stored." WLS-TV added, "Kirk, along with US Reps. Robert Dold and Joe Walsh, toured the facility to learn about the plans for doing this and also to call on the federal government to finish construction of a permanent underground storage facility in Nevada where

the waste can eventually be moved." ABC affiliate WLS-TV Chicago (4/23, Gallardo, 5:11 p.m. CDT) also broadcast the report.

The Chicago Daily Herald (4/25, Gordon, 105K) added, "Spurred by the ongoing crisis at the Fukushima Dai-Ichi power plant crisis in Japan, Kirk said the 2,226 fuel rod assemblies from the Zion plant, which was closed in 1998, must one day be shipped to the Yucca Mountain storage facility in Nevada that has been a source of controversy at the national level for more than 20 years." Kirk and the Dold, and the other officials "said after a tour of the Zion plant Saturday that on-site storage of the spent rods cannot last." Dold said, "It is time for the administration and Senate leadership to move forward on Yucca Mountain."

The AP (4/24) reported the lawmakers toured the site and "say the recent disaster in Japan should serve as a wakeup call for the state." The lawmakers said "the situation is putting the region's drinking water at risk" and want "want the United States to step up efforts to build central nuclear waste storage in Nevada."

***Yucca Supporters Protest Outside Of Obama Town Hall Meeting.*** The AP (4/23) reported that supporters of a proposal to expand the Yucca Mountain nuclear waste site "criticized the Obama administration Thursday for paying lip service to the nuclear industry while ignoring the need for radioactive waste storage. The 75 protesters outside President Barack Obama's town hall meeting in Reno included more than a dozen members of a non-partisan group promoting the Yucca Mountain facility." The supporters explained that "the site, if turned into the energy park, could generate \$4 billion in potential revenue that could be shared with residents in dividends, similar to the way Alaska shares its oil pipeline money."

**Southern Co. Says Tripped Breaker Led To Shutdown.** Several local and national media outlets continued with their coverage of the unexpected shutdown of the Unit 1 reactor at Plant Vogtle, Georgia, noting that it was caused by a failed breaker. The Atlanta Journal-Constitution (4/23, McWilliams, 213K) reported the "unexpected shutdown of a nuclear reactor at Plant Vogtle in east Georgia," which was "triggered by a failed breaker," did not "damage" any other equipment and "the shutdown proceeded safely." Carrie Phillips, a representative for Southern Nuclear, said the reactor will begin operating "once the breaker and some other equipment is replaced and testing is finished." Joey Ledford, a spokesman for the NRC said "a reactor 'trip' is not necessarily a problem."

WJBF-TV Augusta, GA (4/23, Sesadri, Terry) reported the "Unit 1 nuclear reactor at Plant Vogtle remains out of service as repairs are made and the exact cause of Wednesday's shutdown is investigated." Notably, the "last

known shutdown was in 2009" at the plant, the TV station noted.

WRDW-TV Augusta, GA (4/23) reported plant employees "have replaced parts connected to a tripped breaker at Plant Vogtle, but still don't know the exact cause of Wednesday's automatic shutdown." WRDW said "technicians are now working to bring the Reactor 1 unit online, but Georgia Power officials could not comment on when it would be functioning at 100 percent."

Similarly, Reuters (4/23, Kelleher, Beasley), citing the Southern Co. spokeswoman, said the utility had replaced the breaker and that workers were making efforts to restart the plant.

The Augusta Chronicle (4/22, Pavey, 64K) noted that Phillips said the company has not "been able to identify or isolate an apparent equipment failure." Still, "as a conservative measure, we are replacing all the components that could have caused the breaker to open," she added. Notably, the reactor, "one of two units at the Burke County plant, is shut down about every 18 months for refueling, but unscheduled shutdowns are rare," Phillips added.

***NRC Says Vogtle Nuclear Reactor Could Begin Operating Friday.*** The AP (4/23) reported that the Vogtle nuclear reactor "that unexpectedly shut down in eastern Georgia could resume operations as early as Friday after the utility replaced electronics equipment," according to NRC officials. The company "would not confirm the timeline for restarting the reactor, citing competitive pressure," AP added.

The Covington News (4/23), citing officials, however said the Vogtle "reactor should be up and running Saturday." The article reported Covington Utility Director Bill Meecham said "the outage should have very little affect on local power capacity or cost." Also, Georgia Power "receives power from Plant Vogtle," the paper added.

The CNN (4/23) said Phillips pointed out the shutdown was "a maintenance issue, not a safety issue." The company said "there were no threats to public health or safety," and the "plant's second reactor continued to operate at full power."

Under a headline "Plant Vogtle Won't Notify You During Mechanical Problems," WRDW-TV Augusta, GA (4/22, Baker) reported some people were concerned that the news of the shutdown, which comes in the aftermath of the Japan Fukushima nuclear crisis, did not garner much publicity "because the public and media weren't told." The "routine event has generated anything but a routine response." Southern Co. spokeswoman Alyson Fuqua said the "event has no safety impact," and "there was no need for us to issue any type of press release or notify state and local agencies or media in that fashion."

Earlier Friday, the Atlanta Business Chronicle (4/22) reported the "Unit 1 reactor at Plant Vogtle shut down Wednesday night without incident," citing an AP story. The paper said "it wasn't clear why the equipment shut down, but

it was likely triggered by equipment related to an electrical turbine," according to Southern Co. spokesperson Alyson Fuqua.

The Online Journal (4/23, Stacy) said the unexpected shutdown follows a March 23 announcement by the NRC "to launch a comprehensive review of America's plant safety. According to the commission's original timeline, that review's first report is due within days." The final report is expected by September.

CNN (4/22), AHN (4/23, Sinclair), and the Dow Jones Newswires (4/21, Malik) also covered the news of the shutdown.

**Georgia Power To Explain Its Financial Risk-Sharing Proposal.** The AP (4/23) reported, "Georgia Power will soon explain how it could be stung by a proposal meant to help control costs during the construction of two more nuclear reactors proposed for Plant Vogtle." The AP says the Georgia Power "must explain its case Wednesday in filings to the state's Public Service Commission, which regulates utilities." Regulators are weighing "a plan that would trim Georgia Power's earnings if the cost of building the new reactors at the power plant near Waynesboro runs over budget." However, the utility "could also earn more money from those reactors if construction costs are kept under budget."

**Blog: Palo Verde Plant Relicensed Despite Safety Violations.** On his blog for Forbes (4/23, 924K), Osha Gray Davidson wrote on the NRC's announcement that it has approved relicensing Palo Verde Station's three pressurized water reactors. Davidson notes that Palo Verde had "racked up a large number of safety violations over the years. In a 2007 investigation, the NRC found that 'cost controls had been viewed as more important than safety,' based on interviews with workers at Palo Verde." Davidson recounts the safety culture problems at the plant and the "Degraded Cornerstone" condition of the plants on the NRC's Action Matrix, and the "heightened levels of scrutiny" over subsequent years for the units, especially unit 3. Davidson says that while the NRC is continuing to relicense plants in the wake of the Fukushima disaster, other countries, "such as Germany, have imposed a moratorium on license extensions until a 'lessons learned' study of the Japanese accident can be completed."

**Opponents Of Relicensing Say Better Options Exist.** On its website, KNXV-TV Phoenix (4/24) reported on the relicensing of Palo Verde, and whether, in light of the Fukushima plant crisis, the issue of new nuclear power plant licenses and extending existing licenses is a good idea. "Arizona Public Interest Research Group Executive Director Diane Brown" opposes the idea and says nuclear power is

"neither safe nor clean" and she cites "studies by the Nuclear Regulatory Commission documenting potentially dangerous situation at 17 US nuclear stations." She says that since 1979, the NRC has determined that 17 instances at domestic plants showed "a 'significant precursor' of core damage, meaning a dramatic increase in the risk of a serious accident." She adds that nuclear power is too expensive and better options exist for generating power.

**Entergy Asks Court To Allow Vermont Yankee To Continue Operating During Challenge.** The AP (4/23) reported that Entergy, which had sued Vermont last week "over whether the state can legally close the plant, are now seeking a court order that would prevent that from happening until courts have ruled on the jurisdiction challenge." At the US District Court in Burlington, as requested a "preliminary injunction" to "bar the state from shutting down" Vermont Yankee nuclear plant. The AP adds that Vermont officials insist they "have every right to exercise control over the continued operation of Vermont Yankee," given that the state Senate voted 26-4 last year against its continued operation and, under "a 2006 state law, Entergy's owners need the OK of the Legislature to continue operating the plant past March 2012."

The Burlington (VT) Free Press (4/22, Hallenbeck, 34K) reported, the Entergy filing "asks the court to prevent the state from taking any action that would force the Vernon power plant to shut down. 'The harm to the public interest from even a temporary shutdown of the Vermont Yankee Station would be significant, immediate and irreparable,' Entergy argued in court papers." Entergy says shutting down Yankee in 2012 has already "caused the plant to lose highly trained employees."

Fox affiliate WFFF-TV Burlington, VT (4/22, 10:07 p.m. EDT) reports that the owners of the Vermont Yankee nuclear plant "are now seeking a court order that would prevent the state from closing the plant until a ruling is made. Entergy filed the request today in US district court," asking that the judge keep the plant open until deciding who has jurisdiction. ABC affiliate WVNY-TV Burlington, VT (4/22, 11:08 p.m. EDT) carries a similar report.

**Entergy Criticized For "Reneging" On Agreement.** In an editorial, the Boston Globe (4/24, 244K) chides Yankee and Entergy for appearing to go back on its word. Entergy, "provoked justified outrage in Vermont last week when it announced it was reneging on a longstanding commitment to abide by the state's stringent nuclear regulations." Entergy, the Globe says is doing "precisely what it had long promised it would not: challenge the constitutionality of Vermont's rules in federal court, as part of a last-ditch effort to keep its Vermont Yankee nuclear power plant running." The piece calls the legal issues of the case "murky" and says while the

"Supreme Court has ruled that states do have some regulatory authority over nuclear power," legal scholars say the Vermont case "will offer a precedent-setting test of how far those powers extend."

**Commentary Criticizes Yankee Opponents.** In a "My Turn" op-ed in the Burlington (VT) Free Press (4/24, 34K), Milo Schaefer wrote that in the Fukushima nuclear plant crisis, it is "apparent that those who wish to shutter Vermont Yankee will use the damage caused by the tsunami to their advantage. They want you to forget that nuclear power has a remarkable safety record," with "fewer fatalities per kilowatt hour produced than coal, oil, natural gas, biofuel, wind or solar." Schaefer also suggests the recent tritium leaks pose little health risk, and says Yankee's opponents won't say that one can "get more radiation from drinking a glass of milk than drinking a glass of tritium groundwater from Vermont Yankee."

**Exelon To Break Ground On New Dry Cask Storage Facility At Clinton Station.** The Springfield (IL) State Journal Register (4/24, Landis, 47K) reported on the situation facing Clinton Power Station, which is "running out of room to store spent nuclear fuel. Parent company Exelon Corp. plans to break ground by early 2012 for an above-ground storage facility that would provide sufficient space for spent-fuel storage to carry the plant...through its licensed operating life of 2026." Clinton Station radiation protection manager Jeff Stovall said that the spent fuel pool "water is about 20 feet deep, and the spent fuel is below ground level." The new storage "site, which would have the capacity for 55 tons of spent fuel every two years, is within the current security perimeter of the plant."

Referencing the State Journal-Register article, the AP (4/25) notes "Bill Harris, a spokesman at the 24-year-old Clinton station, tells the (Springfield) that storage capacity at the current rate would be reached by the end of 2016. Exelon hopes to have the new storage available by 2015." According to the NEI, "roughly 71,600 tons of spent uranium fuel from a half century of operation is stored at the nation's nuclear plants."

**NRC Rebutts Critic's Concerns About TMI Unit 2 Decommissioning Fund.** The Lancaster (PA) New Era (4/25, Crable, 40K) reports the NRC "finds no basis to a local nuclear watchdog's allegation that not enough money is being saved to dismantle the contaminated Unit 2 reactor at Three Mile Island 23 years from now." The NRC said it had reviewed TMI "Unit 2 owner FirstEnergy's savings plan and that the plan provided 'adequate decommissioning funding assurance' that the money will be there when the time comes." At the end of 2009, FirstEnergy had "\$577 million dedicated to decontaminating and dismantling Unit 2."

Current estimates peg the cost to carry out the project at \$836 million. The NRC said Eric Epstein of Three Mile Island Alert "used outdated figures" to estimate how much was in the FirstEnergy decommissioning fund.

**Cracks In TMI Storage Units To Be Repaired.** The York (PA) Daily Record (4/24, Adkins, 56K) reports, "Repairs are under way to address cracks that have damaged the concrete storage units that protect the spent fuel and debris from Three Mile Island's damaged core, which is stored in Idaho." The NRC said in an April 7 report that in 1999, "Transnuclear installed the concrete enclosures to cover and protect dozens of canisters filled with spent fuel from TMI Unit 2," which sustained the "partial meltdown in March 1979, and for more than a decade, the spent fuel and debris have been stored in canisters at a federal laboratory in Idaho." In 2000, DOE officials noticed some "cosmetic' cracks in the concrete storage units," and seasonal weather changes have since made the problem worse. Officials are repairing the storage units.

**PG&E Said To Be Quietly Pursuing Diablo Canyon Relicensing.** According to the San Francisco Bay Citizen (4/23, Upton) PG&E is "quietly seeking a 20-year extension of its license to operate the Diablo Canyon nuclear power plant, despite publicly requesting the process be delayed until studies of the facility's ability to withstand an earthquake are completed." The "discrepancy between the company's public and private stance has led some lawmakers and environment advocates to accuse PG&E of misleading the public" about its plans for the facility. While PG&E advised the NRC of its request to postpone relicensing its Diablo Canyon plant until a seismic study is complete, but "April 12, PG&E sent a clarifying letter to the NRC, which it did not publicize with a press release, asking agency staff to move forward with safety and environmental reviews associated with relicensing efforts before the company's seismic studies are completed."

**California NOW Calls On NRC To Halt Relicensing.** KTVU-TV San Francisco (4/23, Mibach, 9:08 p.m. PDT) reports on the city's Earth Day event, noting that "a very hot topic began to surface revolving around California earthquakes and nuclear power plants." The president of the California chapter of the National Organization for Women said her group had "called on the Nuclear Regulatory Commission to us is suspend all nuclear until an independent analysis of the reactor disaster in Japan is completed." The United Farm Workers' Dolores Huerta was also on hand to speak against nuclear energy and in favor of alternative energy and "trying to increase solar energy." The segment closed with a statement from PG&E saying that it "takes care in all of its operations, especially at the Diablo Canyon, to analyze and address seismic risk."

## **Experts Look For Lessons From Fukushima Plant Crisis.**

The San Francisco Chronicle (4/24, Perlman, 232K) reports on the efforts underway to learn the lessons of the Fukushima Daiichi nuclear plant crisis, and how "the three expert members of the state's Independent Diablo Canyon Safety Committee and their staffs are studying the two massive reactors at" Diablo Canyon to assess their vulnerability to quakes and tsunamis. Committee member and nuclear engineer Peter Lam, "was at the Diablo Canyon site last week" and cautioned "It is wrong for anyone to say we are not Fukushima and therefore we're not vulnerable." Meantime, Per F. Peterson, a UC Berkeley professor of nuclear engineering said that among the lessons emerging early from the crisis in Japan is that the "Fukushima plant suffered what is known as a complete 'station blackout,'" and steps should be identified "to assure that similar problems" do not occur at US plants Peterson said.

## **NRC To Discuss Worker Culture Problems At San Onofre Station.**

The San Diego Union-Tribune (4/25, Soto, 240K) reports, "A month after telling operators of the San Onofre nuclear plant that they were still having trouble with worker culture, the Nuclear Regulatory Commission wants to answer questions from the public." The NRC will host a public meeting Thursday in San Clemente to discuss progress at the nuclear plant, where inspectors "say the two-reactor plant is operating safely and have improved efforts to identify problems and fix them. But it 'has not been fully successful in addressing several longstanding human performance issues,' the agency said." NRC says San Onofre workers continue to be afraid to call their immediate superiors attention to problems.

## **Southern California Edison Explains Cost Increases For Seismic Study.**

The North County (CA) Times (4/24, Sisson) reports, "Japan's nuclear crisis is causing Southern California Edison to nearly double its request -- \$59 million instead of \$31 million -- to do a seismic study of the land around San Onofre Nuclear Generating Station." Plant spokesman Alexander said the project will "cost ratepayers more because Edison is planning to do work beyond the already pricey three-dimensional earthquake fault mapping that represented the bulk of its original request in November." Alexander said SCE is also planning to "study possible tsunamis in much greater depth than it had planned" with new "modeling work" that will examine how "earthquakes occurring in the ocean might affect the plant."

## **Market Qualms Make Safer Reactor Designs Slow In Coming, Experts Say.**

In an "Ingenuity Of The Commons" blog entry for Forbes (4/22, 924K), Jeff McMahon wrote, "Safer nuclear reactors have been available for years, but the energy market prefers less expensive

conventional designs, a nuclear energy expert from Argonne National Laboratory said Thursday." Argonne Nuclear Energy Division director Hussein Khalil said that there is a "tremendous incentive" to develop "new reactors that have more inherent, intrinsic safety features, and we've been doing this for some time at ANR" and while they have "been developed to a fairly high degree of technical maturity, but none of them have been successfully commercialized yet because it appears they can't yet compete on an economic basis with the existing technology." Khalil said, "liquid-metal and sodium cooled reactors are examples of safer reactor designs," but noted they haven't been selected because it's easier and cheaper to repeat older designs than risk the "regulatory uncertainty" faced by power companies that risk new designs."

## **Salem Unit 1 Reactor Returns To Service Following "Grassing" Problem.**

New Jersey's Today's Sunbeam (4/24, Gallo) reports, Salem Unit 1 reactor "returned to service early today after being shut down for more than 37 hours because of vegetation in the Delaware River blocking its cooling water intakes." According to PSEG spokesman Joe Delmar, the unit began transmitting power to the grid at 5:19 am Saturday. Operators had "shut down the reactor around 4 pm Thursday after encountering a problem with heavy 'grassing' in the river." NRC spokesman Neil Sheehan "said that the shutdown had been handled properly by plant operators."

The Delaware News Journal (4/23, Montgomery) reported, "One circulating water pump was already out of service for maintenance and another for cleaning when problems developed in a third pump, leading to a sudden clogging of a fourth -- a series of events that forced workers to manually 'trip' control rods into place, cutting down reactor heat and stopping electricity production."

The AP (4/25) notes the plant was "out of service for about 37 hours."

Shortly after the shutdown, Today's Sunbeam (4/22, Gallo) reported Sheehan said, "Our resident inspectors assigned to Salem observed the shutdown from the plant's control room and identified no concerns with operator or equipment response," adding the "inspectors have also concluded that PSEG's response to an increase in grassing this week was appropriate and in accordance with plant procedures used during the grassing season."

On its website, WDEL-AM Wilmington, Delaware (4/22) reported, Sheehan said the shutdown "wasn't due to something that happened inside the plant, but outside the plant, in the Delaware River. He says it's a condition they've dealt with before at the facility called 'grassing.'" Sheehan says "if Salem has another two unplanned shutdowns in its

next 7 thousand hours of operation, it would warrant additional monitoring from the NRC."

Similarly, WHYY-AM Wilmington, Delaware (4/22, McDonald) reported, "Weeds and other grasses along the Delaware shoreline have dislodged, floating downstream toward the reactors, as Today's Sunbeam reports, and Salem 1 and 2 take in and return a combined three billion gallons of river water each day for cooling."

**USEC Reviewing Safety Procedures At Paducah Gaseous Diffusion Plant.** The AP (4/25) reports that the USEC Paducah Gaseous Diffusion Plant "uranium enrichment plant in western Kentucky is reviewing safety regulations and emergency response protocols after an earthquake and tsunami in Japan damaged a nuclear power plant there." USEC started the voluntary review in March, even though, according to USEC Vice President Steve Penrod, the "plant doesn't have a nuclear reactor or the spent-fuel pools that nuclear power plants feature."

An abbreviated version of the AP (4/25) story also appeared.

**Both Sides See Outside Chance For Callaway Nuclear Bill This Session.** The St. Louis Post-Dispatch (4/24, Hancock, 232K) reports on a pronouncement last week from State Sen. Robin Wright-Jones that the chances of passing legislation aimed at funding a preliminary permit for a new Callaway were "likely dead for this session," especially, "with only three weeks left, I just don't think we can breathe life into it." But "even with hope for passage dwindling as the session winds down and issues such as redistricting and budgets take up the lion's share of lawmakers' attention, those actively fighting for and against the measure agree on one thing: There is time this year to get something done." Chris Roepe of the Fair Energy Rate Action Fund, which opposes the measure, and Irl Scissors, of Missourians for a Balanced Energy Future, which supports the measure both say "the bill is far from dead, even this late in the session."

**Kelly Calls For Special Session To Consider Bill.** The Columbia (MO) Daily Tribune (4/23, A12, Denney, 17K) reported, "With the fate of the Callaway nuclear plant bill in question, members of the Missouri House are calling on the governor to consider a special session to hammer out a deal." Democratic State Rep. Chris Kelly, says the measure would help bring jobs to Missouri "as well help to increase the state's energy output." Kelly called the measure the "most economically important issue facing the state by a long shot." But the bill is opposed "from heavy energy users such as Anheuser-Busch and Noranda Aluminum for the additional costs Ameren could levy upon their operations as the result of a rate increase."

**Colorado County To Decide Whether To Rezone Site For Proposed Nuclear Plant.** The Pueblo (CO) Chieftain (4/24, Roper) reports the Pueblo County Board of Commissioners will decide Monday "whether to rezone land in the eastern county for a possible nuclear power plant." The Chieftain added, "Regulations allow the commissioners to take 40 days to render a decision on the proposal" and they took virtually all that time "because of the thousands of pages of testimony and material submitted at the hearings." Local lawyer Don Banner wants officials to "rezone 24,000 acres in the eastern county for something called the Colorado Energy Park."

On its website, KRDO-TV Colorado Springs (4/24) reported, "If commissioners vote to rezone, a nuclear power plant could be built between Avondale and Fowler along Highway 50. It would be several years before it would be up and running."

Similarly, KKTU-TV Colorado Springs (4/24, Brinias) reported, "Don Banner, needs to get a zoning change in order to pursue the plans for the 24,000 acre parcel. However, that would be only the first step in a long journey to obtain the necessary authorizations and funding to go forward with building a nuclear plant."

**Green Party Calls On Cuomo To Shut Down New York Nuclear Plants.** The Albany Times Union (4/23, Nearing, 76K) reports, "On Earth Day, the Green Party of New York called upon Gov. Andrew Cuomo to ban hydrofracking for natural gas, shut down nuclear power plants and undo a delay on a sales ban on outdoor wood boilers." Green Party officials "renewed calls for the state to shut down nuclear power plants at Indian Point and near Lake Ontario -- Fitzpatrick and Nine Mile Point Unit 1 -- that share the same design as the tsunami-damaged reactors in Japan."

On its "Wonkster" blog, Gotham Gazette (4/22) noted that the "Green Party of New York observed Earth Day today by calling upon Governor Cuomo to support a ban on hydrofracking for natural gas and an immediate shut down of not only Indian Point but the nuclear reactors at Fitzpatrick and Nine Mile Point Unit 1 that are the same design as the Fukushima Daiichi plant in Japan." The "Indian Point Nuclear plant is located at the intersection of two earthquake faults and has been cited for many safety violations over the years." The "NRC said that the plant has the highest risk of core damage from an earthquake among all U.S nuclear plants."

The blog website, Politics on the Hudson (4/23) added that Green Party co-chairman Peter LaVenita, said New York's "draft energy master plan wants to construct 20 new nuclear power plants. The tragedy in Japan is just the latest evidence that nuclear power is a bad energy solution,' he said."

**Duke Energy Says McGuire Station Safe From Disaster Threat.** The Charlotte (NC) Observer (4/24, Vieser, 168K) reports, "The likelihood of a nuclear disaster at Duke Energy's McGuire Station similar to the one being experienced in Japan is virtually non-existent, according to site Vice President Regis Repko." Repko discussed the design features of the "800-acre Huntersville facility," which offer multiple layers of protection in the event of any emergency," with "about 50 local business leaders April 20 in Cornelius." Repko said that in Japan the tsunami, not the earthquake did the most damage. "At McGuire, we have a robust design and numerous procedures built into our operations which, we believe, would prevent such a nuclear emergency from ever occurring." Several systems at McGuire are able to handle the "unlikely failure of all upstream water control facilities," and this "renders water intrusion into the facility virtually impossible."

**Safety Review May Change Evacuation Zone Requirements For US Plants.** The Rock Hill (SC, 21K) Herald (4/24, Henderson, Fryman, 23K) reported, "A federal safety review of US nuclear plants after the crisis in Japan will include whether to expand the 10-mile evacuation zones around plants like Duke Energy's Catawba plant on Lake Wylie." The Herald says the zones have not been changed since the "they were first required shortly after the worst US nuclear accident, Three Mile Island in 1979," which was a few years before Duke finished work at Catawba and McGuire plants. "Much has changed around their rural sites, notably the number of people who now live within 10 miles of the two plants." Population estimates range between 370,000, to nearly 394,000.

**Plymouth Officials To Discuss Pilgrim Safety.** The Boston Globe (4/25, Knox, 244K) reports, "Deciding it's time for public reassurances, Plymouth officials have scheduled a public meeting next month to discuss the safety of the Pilgrim nuclear power plant with its owners." Selectmen will move "their May 10 meeting with representatives from Entergy, Pilgrim's owner, from Town Hall to the Plymouth North High School auditorium to accommodate those from Plymouth and the region concerned about nuclear safety in light of Japan's nuclear crisis." Town Manager Mark Stankiewicz cited "a recent State House hearing, public nervousness over nuclear reactors in New England and New York, and a planned rally outside the Plymouth plant on May 7, he said the forum could draw a large crowd."

**Bellefonte Plant Design Raises Concerns.** The Tennessean (4/24, Paine, 129K) reports, "The Bellefonte nuclear reactor that the Tennessee Valley Authority is

positioning itself to complete in northern Alabama, 110 miles from Nashville, was designed in the 1960s and 1970s." Although TVA staff members have indicated that various components will be updated, "critics argue that safety and reliability issues are raised by the old design, the deterioration of work already done, the cannibalizing of plant parts and a failure to keep tight controls over the site." The report also mentions that some are questioning the need for TVA to develop another nuclear plant. According to the Tennessean, "Terry Johnson, a TVA spokesman, said the project is being closely scrutinized and changes will be made as needed."

**Browns Ferry Road Too Narrow Say County Leaders.** The AP (4/23) reported that "Athens and Limestone County leaders are trying to get a grant to fund a \$2.5 million upgrade for" Nuclear Plant Road, "which is the only eastward evacuation route from Browns Ferry Nuclear Plant." According to the wire report, "the concern is if there is a disaster at the nuclear plant, or a hazardous spill from a tanker truck or train, the road could not handle an evacuation." Commissioner Bill Latimer, who represents that district, "estimates about 300 people live along Nuclear Plant Road." The report mentions that TVA claims that the nuclear plant can withstand a 6.0 magnitude earthquake.

**Alabama EMA Urges Earthquake Preparedness.** The Athens (AL) News Courier (4/25, Smith, 6K) reports that two towns in the Tennessee Valley, Elkmont and New Market, experienced minor tremors within five days of each other. Despite the relatively "small earthquake threat, the Alabama Emergency Management Agency is encouraging residents, schools and businesses to take part in The Great Central US Shake Out preparedness drill, to be held Thursday." Art Faulkner, director of the Alabama Emergency Management Agency, said that "given the close proximity of Browns Ferry Nuclear Plant and the recent recorded earthquakes, 'some areas of the state should be more aware' of the drill than others."

**Japan Disaster Driving New Challenges To Watts Bar Drills.** The Roane County (TN) News (4/25, Lawrence) reports, "Disaster drills at TVA's Watts Bar Nuclear Plant in nearby Rhea County could be more challenging in the future because of the disaster that occurred in Japan." Ray Golden, TVA senior manager of nuclear communications, said, "Used to, we might have an event that was an earthquake at one unit that would result in damage to the plant and possible releases of radiation." However, Golden explained that "going forward, what you're likely to see is that we might combine events so we might have a simulated emergency where we have an earthquake and a dam breaking simultaneously."

**Nuclear Critics March Near Wisconsin Reactors.** On its website WLUK-TV Green Bay (4/24) reported, "Protesters hit the streets in Kewaunee County opposed to the area's two nuclear power plants." The event "follows ongoing troubles with damaged nuclear plants in Japan" and "also marks the approach of the 25th anniversary of the Chernobyl nuclear disaster in the Ukraine." Over "two dozen people from all over the state protested peacefully around the Kewanee Power station and Point Beach Nuclear Power Plant." WTAQ-FM Green Bay (4/25) also covered this story. The Green Bay Press-Gazette (4/22) previewed the event.

**Dominion Agrees To New Malloy Tax Proposal.** The New London Day (4/22, Reindl, Daddona) reported, "The corporate owner of the Millstone Power Station in Waterford said Thursday that it would drop its threat to close the plant and absorb the cost of a new annual \$40 million tax if Gov. Dannel P. Malloy's revised plan for an across-the-board electricity generator tax replaces a more onerous proposal in the legislature." Dominion's Ken Holt "said the company agreed to Malloy's proposal for a temporary, two-year tax that would apply to all forms of electricity generation but renewables." Holt said, "We understand the need for this tax, and we appreciate the challenge Governor Malloy has in developing a balanced budget for the state under such difficult circumstances. ... This tax proposal limits the potential negative effect on consumers and businesses, is designed to address the state's short-term financial needs, and is applied to electricity generators in a much more balanced and fair manner."

The Norwich Bulletin (4/22) reports, "A Connecticut tax on electric generators targeting the Millstone nuclear plants has been replaced by a lower tax in a budget agreement between Gov. Dannel P. Malloy and legislative leaders. Generators would instead be taxed .0025 cents per kilowatt hour, or 25 cents per \$100." The proposal first "endorsed by a legislative committee would have raised \$340 million, with \$332 million from Millstone."

**Judge Dismisses Case Over Possible Import Of Waste To Hanford.** The Tacoma News Tribune (4/25, 84K) reports, "Federal Judge Edward Shea has dismissed a lawsuit filed by Heart of America Northwest against the Department of Energy over proposals to send radioactive waste to Hanford for disposal or storage." The judge ruled that "Heart of America members now are not being harmed, so do not have standing to bring a lawsuit." He added that "There is no allegation that DOE is importing low level radioactive waste or mixed low level radioactive waste in violation of the agreement." The DOE argued in court filings

that harm, if any, would come only if a future decision was made to send waste to Hanford.

**DOE Encourages Hanford Residents To Remain Involved.** Matt McCormick, manager of the DOE's Richland Operations Office, and Stacy Charboneau, acting manager for the Office of River Protection, write in an op-ed for the Tri-City Herald (WA) (4/25, 34K), "During our State of the Hanford Site Cleanup meetings in March, we heard many views, concerns and suggestions, with emphasis on requesting more funding for cleanup, accelerating the pace of our work and protecting the Columbia River." They add, "The work is some of the most challenging and heavily regulated in the United States, and it hasn't always gone as planned. But workers, regulators, community members and others share a common goal to ensure safety is our No. 1 priority and that cleanup is completed safely and efficiently." They conclude by encouraging local residents to remain involved and informed of the ongoing cleanup efforts at Hanford.

**Energy Expert Says Clean Coal Is A "Mirage."** Energy and climate policy expert William S. Becker wrote in the Huffington Post (4/23), "Even renewable energy hawks -- most of us anyway -- will concede that the United States cannot go cold turkey from oil tomorrow, or shut down all coal-fired power plants this week, or flip the off-switch tonight on nuclear power." Becker emphasizes, however, that what renewable energy advocates should not compromise on is pushing towards making renewable energy a top "national energy priority." He touted President Obama's "Blueprint for a Secure Energy Future" as "close as he's come so far to issuing a comprehensive national plan for the transition to clean energy." However, Becker -- referring to the blueprint -- argued that "by describing a future in which we burn oil and coal indefinitely, the president calls into question the depth of his concern about climate disruption," adding that clean coal is a "mirage."

**DOE To Hold Public Hearing On Expanded Use Of WIPP.** The Carlsbad (NM) Current-Argus (4/25, 6K) reports, "Carlsbad-area residents will have the opportunity Tuesday to voice their thoughts concerning the possibility of opening the Waste Isolation Pilot Plant to receive an additional type of low-level radioactive waste." The DOE is considering WIPP "as a possible site for disposing of Greater-Than-Class C low-level radioactive waste, known as GTCC LLRW, and Greater-Than-Class C-like waste." According to the DOE, "the waste under consideration consists of a small volume of low-level radioactive waste generated by activities licensed by the Nuclear Regulatory Commission, including electricity production by nuclear power plants, production and use of radioisotopes for disease diagnosis and treatment, oil and gas exploration and other industrial uses."

## **NNSA Releases New Environmental Impact Study For LANL Facility.**

The Santa Fe New Mexican (4/23, Snodgrass, 22K) reported that the National Nuclear Security Administration released the draft environmental analysis of its plans for the new Chemistry and Metallurgy Research Replacement facility at the Los Alamos National Laboratory late Friday. "The preferred option under the new plan backs the project as it is being designed by LANL with the blessing of Congress and the Obama administration. But it also includes additional measures considered necessary for safety," due, in part, to a seismic study completed in 2007. However, "not everyone is likely to be convinced by the new construction options," including Nuclear Watch New Mexico, which criticized the NNSA for releasing their proposal on Good Friday and Earth Day.

John Fleck also discussed the release of the NNSA's new report in his blog for the Albuquerque Journal (4/23, 95K).

**Y-12 To Ship Reactor Fuel To N2S2.** The Knoxville (TN) News Sentinel (4/25, Munger) reports, "After nearly 30 years in storage at the Y-12 nuclear weapons plant, an unspecified amount of never-used reactor fuel will be repackaged and sent to Nevada for disposal." Y-12 spokesman Steven Wyatt said that "no one currently at the Oak Ridge plant could remember which reactor" the mixture of highly enriched uranium and thorium came from, but it was shipped in the early 1980s to Y-12 by General Atomics. While Wyatt declined to discuss the quantity of nuclear material, he "said the plan is to ship the surplus material to the Nevada National Security Site (formerly known as the Nevada Test Site) for disposal."

## **INTERNATIONAL NUCLEAR NEWS:**

### **No Plans To Further Expand Evacuation Zone, Japan Says.**

The Wall Street Journal (4/25, Fujikawa, Subscription Publication, 2.02M) reports Japan's Nuclear and Industrial Safety Agency said Sunday it had no plans to further expand the evacuation zone around the Fukushima Daiichi plant, even if there is another hydrogen explosion at the stricken facility. NISA spokesman Hidehiko Nishiyama said, "I don't expect any evacuation order to expand to the Tokyo area." On Friday, the Japanese government had formally advised residents of five towns and villages outside the 20-kilometer evacuation zone to leave due to the threat of radiation exposure, but Chief Cabinet Secretary Yukio Edano said the government does not plan to make the advisory legally binding at the moment.

### **NISA To Investigate Stability Of No. 1 Reactor.**

Meanwhile, the Wall Street Journal (4/25, Ito, Subscription Publication, 2.02M) reports that NISA also announced it has commissioned an investigation into the ability of the No. 1 reactor at the Fukushima Daiichi plant to withstand additional earthquakes, as there are concerns that the dumping of water to cool the fuel rods may have weakened the structure. Said Nishiyama, "We are checking this, but haven't reached the conclusion that there are problems." He added that the inspection was ordered "just in case."

### **Efforts At Containing Radioactive Leaks Appear Successful.**

In yet another announcement, the Wall Street Journal (4/25, Obe, Subscription Publication, 2.02M) reports, NISA said Monday that there is no evidence that highly radioactive water is leaking from the Fukushima Daiichi nuclear complex, signaling that efforts to contain the radiation have been successful. However, it may also point to the possibility that the water is collecting inside the plant.

Bloomberg News (4/25, Okada, Nakayama) adds that "Tokyo Electric Power Co. transferred about 14 percent of the highly radioactive water lying in trenches around the No. 2 reactor at its crippled nuclear power plant after six days of pumping." TEPCO spokesman Takashi Kurita said that the company "moved 1.41 million liters (372,000 gallons) of the water to a storage unit," while ten million liters are expected to be transferred in total.

**Thousands Protest Nuclear Power In Tokyo.** AFP (4/25) reports, "Thousands of people marched in Tokyo on Sunday to demand an end to nuclear power in Japan and a switch to alternative energy after the crisis at an atomic plant hit by the March 11 earthquake and tsunami." Organizers of the protest estimate that 5,000 people took part. "Greenpeace Japan director Junichi Sato, one of the organizers of the protest, said until now few had protested about nuclear power following the quake-tsunami disaster which left more than 26,000 dead or missing. ... Around 2,000 people took part in a separate anti-nuclear demonstration under the slogan 'Anti-TEPCO,' referring to the operator of the atomic plant, held simultaneously a few kilometres away at Shiba Park."

### **Sunday: Nuclear Crisis Takes Emotional Toll On Japanese Survivors.**

The Washington Post (4/24, Harlan, 572K) reported on the emotional health of Japanese who already feel the "ruinous legacy" of the nuclear crisis there, where "tens of thousands" are "stressed and traumatized, either looking for new homes or trying to make sense of their atrophied home towns." The AP describes the routines of affected communities and portrays residents as alternately angry, sorrowful, or fearful. One woman "sets up bags with emergency supplies: water, surgical masks, jackets and shoes" every night, and "stays indoors for days at a time."

**Saturday: Japan's Government Will Take Over Nuclear Plant Briefings.** The Wall Street Journal (4/23,

Obe, Sekiguchi, Subscription Publication, 2.02M) reported that the Japanese government is taking over from utility Tepco in managing daily briefings on its nuclear plant status, in part because Tepco's briefings have been inconsistent and occasionally hostile, with reporters shouting at Tepco officials. The Journal says Tepco got more bad news Friday when the governor of Fukushima prefecture said he would resist the reopening of the Fukushima Daiichi plant and another nearby Tepco plant until he was convinced they are safe.

**Japan Earmarks \$50 Billion For First Spending To Rebuild.** The New York Times (4/23, A5, Tabuchi, Subscription Publication, 950K) reported that Japan "earmarked almost \$50 billion in emergency spending on Friday for the first step in the country's largest reconstruction effort since World War II." The cost of rebuilding its damaged coastline likely will exceed that, because the government says total damages from the March 11 earthquake and tsunami will be \$300 billion. The Times adds that the government also on Friday banned residents from a 12-mile evacuation zone around the Fukushima Daiichi nuclear power plant. Previously, the government had "urged" evacuation in that area.

**Nuclear Reactor Operator Delayed Venting To Get Approvals.** The Wall Street Journal (4/23, Dvorak, Subscription Publication, 2.02M) examined incidents at Japan's Fukushima Daiichi nuclear plant that it says led the operator to wait too long to vent the facility, likely contributing to the explosion blamed for spreading radiation and causing evacuations. The Journal reports that a delay of 12 hours – caused by rules that require layers of approval for venting – pushed the already-overloaded plant to explode.

**Chernobyl Cleanup Remains Expensive, Uncertain.** The AP (4/25) reports that four days of conferences organized by the Ukrainian government "has highlighted a key message: the Chernobyl cleanup will remain expensive and anxiety-provoking for decades to come. ... An international donors' conference raised pledges of euro550 million (\$802 million) to build a shelter to cover the exploded reactor building for the next century," but that fell short of the euro740 million (\$1.1 billion) needed for the shelter and a facility to store spent reactor fuel. Mikhail Balanov of the UN Scientific Committee of the Effects of Atomic Radiation "told Friday's conference that other medical effects were difficult to project because the margins of error in various studies are too high to allow reliable assessment."

**Study Suggests Less Radiation Damage From Chernobyl Disaster Than Feared.** According to a news release (4/21) from the University of Portsmouth, a "new study of the lakes in and around Chernobyl's fallout zone reveals that radiation from the nuclear accident appears to have had no long term effect on the abundance or diversity of aquatic animal life." Coinciding with the 25<sup>th</sup> anniversary of

the Chernobyl disaster, the study "examined invertebrate animals, such as insects, snails and crustaceans, living along the shores of eight lakes. Levels of radiocaesium in the lakes ranged from near-background levels at 0.1 microGrays per hour, considered normal, to around 300 times higher. No evidence was found that the abundance or diversity of the animal communities was influenced by direct contamination from the Chernobyl accident. Indeed, the most contaminated lake, Glubokoye, 6.5 km north of the nuclear power plant, supported the most animal diversity of those lakes studied."

### **Resistance To Indian Nuclear Plant Growing.**

AFP (4/25, Hazlewood) reports, "Opposition to the Jaitapur Nuclear Power Project runs deep in this part of the Konkan region of western India, whose people have earned a living from fishing and farming for generations. ... At least 5,000 people work on about 600 boats, bringing in 50 tonnes of fresh fish, prawns and squid every day," and local fisherman warn that once the plant is built those jobs may be lost, because warm water expelled from the plant may affect the fish populations. And while resistance has steadily grown against the plant in the last four years, it "has hardened since the Japanese earthquake and tsunami that crippled the Fukushima plant, forcing a rethink on nuclear safety around the world and calls in India for a halt to atomic expansion."

Meanwhile, India's The Hindu (4/25) reports that Environment Minister Jairam Ramesh "suggested a 'pause' for the project till a transparent atomic policy is formulated," in the wake of the ongoing nuclear crisis in Japan. Ramesh told reporters, "We cannot abandon the project. But I am neither pleading reversal or fast progression as a pause is the best option till a transparent nuclear policy is formulated."

### **CERN Atom Smasher Sets New Record For Beam Intensity.**

AFP (4/22) reported that the Large Hadron Collider (LHC), the world's biggest atom smasher, "set a new world record for beam intensity, a key measure of performance and power, the European Organisation for Nuclear Research (CERN) said. Friday." CERN Director General Rolf Heuer said "Beam intensity is key to the success of the LHC, so this is a very important step." Heuer added that "high intensity means more data, and more data means greater discovery potential."

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# NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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## **NRC NEWS:**

### **Kirk Tours Zion Nuclear Power Plant (NBCCHI)**

NBC Chicago, April 23, 2011

Sen. Mark Kirk on Saturday was one of several lawmakers who toured the shuttered nuclear power plant in Zion.

The plant, about 40 miles north of Chicago, was closed in 1998, but still holds about 1,100 tons of radioactive waste.

That's too close to Lake Michigan, as far as Kirk is concerned.

"I'm so passionately in favor of building the Yucca Mountain facility to take nuclear fuel away from the largest supply of drinking water in North America," he said.

He and state Sen. Suzi Schmidt, as well as US Reps. Robert Dold and Joe Walsh, said the recent disaster at the Fukushima plant in Japan should serve as a wake-up call for the state.

Officials from the nuclear industry assert that its spent fuel storage pools are all safe and protected from both natural disasters and terrorist attacks, but many of its leaders agree that longer-term solutions need to be found.

### **Illinois Congressmen Worried Over Zion Nuclear Power Plant Waste (WLS)**

WLS-TV Chicago (IL), April 23, 2011

US Sen. Mark Kirk and some Republican congressmen toured the Zion nuclear power plant Saturday -- it is shut down and slowly being dismantled. The big concern there revolves around what's being done with more than 1,000 tons of radioactive waste.

It will take 10 years before the now-shuttered Zion nuclear power plant is completely decommissioned. By the time all is said and done, all that will remain of the 38-year-old plant is a 10-acre lot where the reactor's spent fuel rods will be stored.

"I would just love this area to go back to the way it was, and to have the availability here for the public to once again enjoy that shoreline," said State Sen. Susan Schmidt.

Before that can happen, however, there is the process of moving the fuel rods from their current pool storage to the dry canisters. Kirk, along with US Reps. Robert Dold and Joe Walsh, toured the facility to learn about the plans for doing this and also to call on the federal government to finish construction of a permanent underground storage facility in Nevada where the waste can eventually be moved.

"In the long run, I hope that the fuel leaves the shoreline of Lake Michigan because storing nuclear fuel long-term next to the GreatLakes, a source of 95 percent of the freshwater of the United States, is irresponsible," Kirk said.

In the meantime, the company managing the decommission process, Zion Solutions says the dry storage facility will be perfectly safe, licensed initially for 20 years.

"It's absolutely perfectly safe from seismic earthquakes, tornadoes, floods. They're passive. They require no electricity or water to maintain the fuel integrity and keep them cool," said Patrick Daly with Zion Solutions.

The visit also comes in the wake of the tsunami in Japan, which severely damaged the Fukushima Daiichi nuclear power plant, leaking radiation into the area. This is why Kirk is calling on the Nuclear Regulatory Commission to expand the current emergency preparedness zone from the existing 10 miles to 13 miles.

"The Illinois Emergency Management Agency, IEMA, and FEMA can make sure that we have proper radiation sources, evacuation plans, et cetera, that encompass a wider area, given what happened at Fukushima," Kirk said.

## **Delegation Says Zion Storage Plans OK (CHIDH)**

By Tony Gordon

Chicago Daily Herald, April 25, 2011

A group of the state's leading Republicans said Saturday they are satisfied with how spent fuel rods are currently being stored at the former Zion nuclear power plant and how the material will be stored in the immediate future.

But the group led by US Sen. Mark Kirk, a Highland Park Republican, insisted that the ton of radioactive waste should someday find a permanent resting place far from the shores of Lake Michigan.

Spurred by the ongoing crisis at the Fukushima Dai-ichi power plant crisis in Japan, Kirk said the 2,226 fuel rod assemblies from the Zion plant, which was closed in 1998, must one day be shipped to the Yucca Mountain storage facility in Nevada that has been a source of controversy at the national level for more than 20 years.

Placed on hold in the most recent budget agreement reached early this month, Yucca Mountain is envisioned as a place where nuclear waste can be stored 1,000 feet underground in secure conditions scientists believe will last for a million years.

Currently, the spent fuel rods at Zion are stored in water-cooled containment pools on the 250-acre site and will be moved next year to what are described as even more secure containment casks.

But Kirk and US Reps. Robert Dold, a Winnetka Republican, and Joe Walsh, a McHenry Republican, said after a tour of the Zion plant Saturday that on-site storage of the spent rods cannot last.

"We cannot allow the spent fuel rods to be stored on the shores of Lake Michigan, the source of drinking water for millions," Dold said. "It is time for the administration and Senate leadership to move forward on Yucca Mountain."

The group at the plant tour, who were joined by state Sen. Suzi Schmidt, a Lake Villa Republican, and Zion Mayor Lane Harrison, laid the blame for the delay on Yucca Mountain's opening on President Obama and US Senate Majority Leader Harry Reid, a Nevada Democrat.

"Harry Reid is adamantly against Yucca Mountain ever receiving any nuclear waste, but hopefully he is going to retire someday," Kirk said. "Sen. Dick Durbin (an Illinois Democrat many believe could succeed Reid as majority leader) is in favor of using the facility, so there is bipartisan support."

Pat Daly, site manager for Zion Solutions, LLC., which is doing the disassembly of the plant expected to be completed in 2020, said the plans his corporation has in place for storage of the rods are safe against any natural or man-made disaster.

Kirk also said he intends to ask the Nuclear Regulatory Commission to expand the evacuation zone around the Zion plant from its current 10 miles to 13 miles.

"There are lessons to be learned from the Fukushima disaster and one of them is to have an adequate evacuation zone mapped out," Kirk said. "The evacuation zone around Fukushima is 20 kilometers (about 13 miles), which should be a 'lesson learned' for us."

Schmidt and Harrison said they both hoped that when the plant is completely torn down the acreage in now sits on will be given back to state and local government for recreation area.

"I want to see this area go back to what it was — open to the public for recreation," Schmidt said. "There is a beautiful shoreline here everyone should be able to enjoy."

## **Lawmakers Tour Decommissioned Ill. Nuclear Plant, Call For Waste To Be Moved (AP)**

Associated Press, April 25, 2011

Illinois lawmakers have toured the decommissioned nuclear power plant in Zion and say the recent disaster in Japan should serve as a wakeup call for the state.

US Sen. Mark Kirk, US Reps. Robert Dold and Joe Walsh and Illinois Sen. Suzi Schmidt visited the plant Saturday.

They say an estimated 1,100 tons of radioactive waste are being stored at the plant next to the Lake Michigan shoreline. They say the situation is putting the region's drinking water at risk.

The plant about 40 miles north of Chicago was closed in 1998.

The Republican lawmakers want the United States to step up efforts to build central nuclear waste storage in Nevada.

The visit comes after a March 11 earthquake and tsunami in Japan have led to a nuclear crisis.

## **Backers Of Yucca Mt. Say Obama Pays Lip Service To Nuclear While Ignoring Waste Needs (AP)**

Associated Press, April 23, 2011

RENO, Nev. — Backers of a broad proposal to expand a nuclear-waste dump site in Nevada criticized the Obama administration Thursday for paying lip service to the nuclear industry while ignoring the need for radioactive waste storage.

The 75 protesters outside President Barack Obama's town hall meeting in Reno included more than a dozen members of a non-partisan group promoting the Yucca Mountain facility. They waved signs that read, "Open Yucca Nevada Energy Park."

"We wanted to let him know there are Nevadans who are in favor of utilizing the Yucca Mountain facility for good purposes," said Randy York, a member of Nevadans 4 Carbon Free Energy. "Many people say out of one side of their mouth they are in favor of nuclear energy, but you never are going to see it ramp up until we solve the storage problem."

The Obama administration has stopped plans to bury the nation's nuclear waste in the Nevada site, which is about 90 miles northwest of Las Vegas. Several states, including South Carolina and Washington, are suing to try to restart plans to ship their radioactive spent-nuclear fuel to Yucca Mountain.

Nevada's congressional delegation has fought against the project for years, and polls have shown most Nevadans share their opposition to the long-term repository.

The pro-Yucca protesters say the site, if turned into the energy park, could generate \$4 billion in potential revenue that could be shared with residents in dividends, similar to the way Alaska shares its oil pipeline money. Nevadans 4 Carbon Free Energy wants the proposed energy park to include a recycling and research center, reprocessing of the fuels and generation of new power, as well as the spent-fuels storage site.

York said he is supportive of Obama's push to develop "green" renewable energy, but that the president's vision was "only one part of the puzzle. It might be a long-term solution, but it is not going to make a difference the next 10 years."

He said that while the administration has indicated its support for the nuclear industry, it has prevented new production with regulatory red tape similar to the way it addresses new oil drilling.

The pro-Yucca protesters were among those outside Obama's town hall who criticized his economic and foreign policies, energy plans and the federal health care overhaul. Some held signs that read, "Drill here, drill now, pay less," and "Green energy a big fraud just like stimulus bill."

Others included the jobless in a state with one of the highest unemployment rates in the nation.

Corey Lequieu, 41, of Fallon, said he'd been unemployed for two years. He was an Army veteran who worked in restaurant management and nursing, but said now he can only find part-time jobs.

Katie Fortuna, president of the University of Nevada College Republicans, said Obama promised to create jobs when he visited her Reno campus during his campaign four years ago.

"We're offended that President Obama would come back to the state with the highest unemployment in the country to campaign. He doesn't care about our jobs; he cares about his job," she said.

Georgia Navarro, of Reno, said she doesn't like Obama's policies or his decision to close the town hall to the public. About 400 invited guests were allowed inside. "Why are we paying for all the fuel for Air Force One to go fly around to Reno and San Francisco and Los Angeles, and he's not paying for it out of his campaign?" Navarro said.

Earl Ammerman IV, a college student and member of the Nevada Green Party who turned out to protest the wars in Iraq and Afghanistan, shared her criticism of the private meeting.

"It's not right to call it a town hall meeting if the general public is not allowed to show up," he said. "We need to get the troops out of Afghanistan and Iraq. We need to build solar panels instead of weapons of mass destruction."

[View the discussion thread.](#)

## **Vogtle Nuclear Reactor Shutdown Traced To Tripped Breaker (AJC)**

By Jeremiah McWilliams

Atlanta Journal-Constitution, April 25, 2011

The unexpected shutdown of a nuclear reactor at Plant Vogtle in east Georgia was triggered by a failed breaker, according to Atlanta-based Southern Co. No other equipment was damaged and the shutdown proceeded safely, the company said.

The reactor, which went out of service Wednesday evening, will resume operation once the breaker and some other equipment is replaced and testing is finished, said Carrie Phillips, a spokeswoman for Southern Nuclear. When the breaker tripped, a signal was automatically sent to the reactor, shutting it down.

"Everything went as designed," Phillips said.

The company did not indicate when the unit might start producing power again, citing competitive reasons. But once a reactor restarts, it typically takes 12-14 hours to reach full power.

Southern Co. reported Thursday that the Unit 1 reactor at Plant Vogtle automatically shut down without incident on Wednesday evening.

Nuclear reactors are designed to shut down if automatic monitoring systems detect conditions that could be unsafe. Breakers are a common part of electrical systems and are designed to shut off power if current fluctuates.

Joey Ledford, a spokesman for the US Nuclear Regulatory Commission, said a reactor "trip" is not necessarily a problem. A unit of a nuclear plant would have to have three such occurrences in 7,000 hours of operation -- nearly 10 months -- before the shutdowns would trigger more frequent inspections.

It was unclear when Plant Vogtle last had a similar incident. The facility has not had any recent issues with unexpected shutdowns, Ledford said. But "that's not to say we're not very interested in what happened," he said.

The Associated Press contributed to this article.

## **The Latest On Reactor Shutdown At Plant Vogtle (WJBF)**

WJBF-TV Augusta, GA, April 25, 2011

Waynesboro, GA --

The Unit 1 nuclear reactor at Plant Vogtle remains out of service as repairs are made and the exact cause of Wednesday's shutdown is investigated.

Southern Company staff had a status call Friday to find out the root cause of why that reactor shut down on Wednesday. Officials say, as a preventive measure, they're going to replace the breaker that caused the reactor to shut down. They're also going to replace all components that could have caused the breaker to fail.

The officials say it's a maintenance issue...not a safety issue. The shutdown happened Wednesday around 5:00 p.m.

Unit 2 at Plant Vogtle continues to operate normally. A spokesperson for the Nuclear Regulatory Commission (NRC) says if unit 2 shuts down, no electricity would get produced during the shutdowns, since both reactors would not operate.

Carrie Phillips, Southern Nuclear Public Affairs Manager says, "Southern Nuclear has replaced the breaker that failed, and as a conservative measure we have replaced all the components that could have caused the breaker to fail. This is a maintenance issue, not a safety issue. The reactor worked as designed. Once we complete the replacement we will begin start up process to return the unit to 100 percent power."

Southern Company staff would not comment about when Unit 1 would be up and running because of competitors in the energy market.

We've also learned from both Southern Company and the NRC that the plant is safe and there's no danger to public health or the environment.

The last known shutdown was in 2009.

## **Plant Vogtle Replaces Parts After Shutdown (WRDW)**

WRDW-TV Augusta, GA, April 25, 2011

BURKE CTY, Ga. -- Workers have replaced parts connected to a tripped breaker at Plant Vogtle, but still don't know the exact cause of Wednesday's automatic shutdown.

Technicians are now working to bring the Reactor 1 unit online, but Georgia Power officials could not comment on when it would be functioning at 100 percent.

Officials have called the shutdown a routine mechanical failure but don't yet know what exactly tripped it. Work to replace parts connected to the breaker haven't yielded any clues, they said.

## **Georgia Nuclear Reactor Idled Unexpectedly Still Shut Down (REU)**

Reuters, April 22, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Plant Vogtle Reactor's Components Will Be Replaced (AUGC)**

By Rob Pavey

Augusta Chronicle, April 25, 2011

Plant Vogtle's Unit 1 reactor is being prepared for restart after its unexpected, automatic shutdown Wednesday.

"We haven't been able to identify or isolate an apparent equipment failure," said Carrie Phillips, a spokeswoman for Southern Nuclear, which operates the commercial nuclear power plant.

The sudden shutdown, or "scram," as it is known in the nuclear industry, occurred when a breaker opened in a safety system designed to shut the unit down if monitoring equipment detects anything out of the ordinary.

"As a conservative measure, we are replacing all the components that could have caused the breaker to open," Phillips said. "Once the components have been replaced, we will begin startup activities to return the unit to service."

The reactor, one of two units at the Burke County plant, is shut down about every 18 months for refueling, but unscheduled shutdowns are rare, she said.

Phillips could not provide details on how many such incidents have occurred at Vogtle, whose units went online in 1987 and 1989, but she said shutdowns are infrequent and do not rise to the level of an emergency.

"This is not an 'event,' where anything is wrong with that unit," she said. "It is a maintenance issue, basically."

Although it was not a declared emergency, activists questioned why Southern Nuclear did not notify the public of the outage for almost 24 hours.

"Having a nuclear reactor mystery is not good," said Glenn Carroll, the coordinator of Nuclear Watch South. "It may well be nothing, but not knowing about something at all is not good."

The public's heightened interest in nuclear safety after the Fukushima crisis in Japan is reason enough for plant operators to work harder to keep the public informed, she said.

Phillips said the incident was reported immediately to the US Nuclear Regulatory Commission but was not an "event" that rises to the level of public notification. The NRC, she added, monitors all such shutdowns and posts the status of commercial nuclear reactors on its Web site.

Joey Ledford, a spokesman for the NRC's regional office in Atlanta, said automatic shutdowns are not unusual, but added that NRC does not keep specific lists of such incidents, sorted by individual plants or reactors.

"It is something that happens across the industry, but it's a small number," he said. "The uncomplicated ones are not much of a cause of concern, but if they occur frequently, it could be a sign of deeper, underlying problems."

## **NRC: Ga. Nuclear Reactor Could Soon Restart (AP)**

Associated Press, April 25, 2011

ATLANTA

A nuclear reactor that unexpectedly shut down in eastern Georgia could resume operations as early as Friday after the utility replaced electronics equipment, federal regulators said.

The Atlanta-based Southern Co. has told the government it is on a path to restarting the Unit 1 reactor at Plant Vogtle, near Waynesboro, said Joey Ledford, a spokesman for the Nuclear Regulatory Commission. The utility would not confirm the timeline for restarting the reactor, citing competitive pressure.

The NRC and utility officials said the reactor shut down unexpectedly Wednesday and there have been no leaks, damage or other safety concerns reported. Unexpected shutdowns of commercial reactors happen occasionally each year.

Southern Co. spokeswoman Carrie Phillips said the reactor shut down after a breaker opened, but it was not immediately clear why that happened. No other malfunctions have been reported at the plant. The shutdown will not affect electricity supply to customers.

The company has replaced the breaker and related electronics and installed monitoring equipment to help determine the root cause of the shutdown, Ledford said.

## **Nuclear Reactor To Be Back Up Saturday (CN)**

Covington News, April 25, 2011

One of two nuclear reactors at Plant Vogtle near Waynesboro, Ga. unexpectedly shut down Wednesday, but officials said the reactor should be up and running Saturday.

No problems were reported with the automatic shutdown, which occurred because of the operation of a breaker that allows the control rods in a reactor to drop, said Steve Jackson, vice president of power supply at the Municipal Electric Cities of Georgia (MEAG). Control rods are used to vary the output power of a nuclear reactor, according to the US Nuclear Regulatory Commission.

Covington is a member of MEAG and receives nuclear power from Plant Vogtle. Georgia Power also receives power from Plant Vogtle. Covington Utility Director Bill Meecham said the outage should have very little affect on local power capacity or cost. Power usage is lower during the spring and excess power is readily available, he said.

Nuclear reactors are designed to shut down if automatic monitoring systems detect conditions that could be unsafe, and these unexpected shutdowns occasionally happen each year.

Nuclear Regulatory Commission and utility officials say there have been no leaks, damage or other safety concerns reported, but officials are still trying to determine what prompted the shut down.

"This occurrence shows how systems are supposed to work to shut a unit down when a problem is detected," said Paul Warfel, senior regional manager with MEAG.

## **Shutdown Of Georgia Nuclear Reactor Traced To Failed Breaker (CNN)**

CNN, April 25, 2011

Atlanta (CNN) -- A failed breaker caused this week's automatic shutdown of a nuclear reactor at Vogtle Electric Generating Plant in Georgia, the plant's owner said Friday.

"This is a maintenance issue, not a safety issue," said Carrie Phillips, public affairs manager of Southern Nuclear, a division of the Southern Co.

"Southern Nuclear has replaced the breaker that failed, and as a conservative measure we have replaced all the components that could have caused the breaker to fail," she said.

Once the replacement is complete, the reactor will be restarted, Phillips said. She declined to say when that would be.

The reactor shut down automatically Wednesday. The ensuing investigation led to the breaker, according to the company.

There were no threats to public health or safety, the company said. The plant's second reactor continued to operate at full power, it said.

The Vogtle Electric Generating Plant is near Waynesboro in eastern Georgia.

The shutdown comes as the nuclear industry is under increasing scrutiny amid the ongoing crisis at Japan's Fukushima Daiichi nuclear plant, which was crippled by an earthquake and tsunami March 11.

Inside Japan's nuclear 'hot zone'

The US Nuclear Regulatory Commission voted on March 23 to begin a comprehensive review of plant safety across the United States. The first report from that review is due within days, according to the commission's initial timeline.

A final report on any proposed changes is supposed to be presented by September, the commission said.

## **Plant Vogtle Won't Notify You During Mechanical Problems (WRDW)**

WRDW-TV Augusta, GA, April 25, 2011

BURKE COUNTY, Ga. -- It's been six weeks since the disaster in Japan. But closer to home, Unit 1 at Plant Vogtle was still offline Friday evening after Wednesday's mechanical breakdown. Two days after the shutdown, a routine event has generated anything but a routine response.

"The public has a heightened concern, so anytime something like this happens right now it tracks a lot of interest with the public and the media," said Burke County Emergency Management Chief Rusty Sanders.

That's because the public and media weren't told. But Plant Vogtle operator, The Southern Company, simply didn't have to.

"This event has no safety impact," says spokeswoman Alyson Fuqua. "So there was no need for us to issue any type of press release or notify state and local agencies or media in that fashion."

The Nuclear Regulatory Commission only requires power plants tell them within four hours of a non-emergency event. Fuqua says an NRC inspector was at Plant Vogtle during the shutdown.

"That information that is filed with the NRC is on a website," she said. "It is a public forum available for anyone in the public to see."

Meanwhile, Burke County Emergency Management Chief Rusty Sanders didn't know about the shutdown until yesterday.

"Timeliness of notification is very important," he said. "We've never had a problem with that when it's been warranted."

But after Japan, The Southern Company may start alerting people when a mechanical problem does happen in the future.

"We'll thoroughly take a look at this," adds Fuqua. "When we get past this, if there are things moving forward based on the sensitivity and the awareness of the public at this time, we want to be a little more proactive and potentially push (information) out."

More than two dozen reactors around the country are also offline, but NRC officials say that's because of routine refueling. It happens every 18 months.

Burke Co officials will also consider a zoning ordinance later this year, specifically geared towards keeping people away from an emergency planning zone near Plant Vogtle. Although zoning laws were being discussed, they are a response to the Japanese disaster.

Have information or an opinion about this story? [Click here](#) to contact the newsroom.

## **Nuclear Reactor At Ga.'s Vogtle Shuts Down (ATLBIZ)**

Atlanta Business Chronicle, April 25, 2011

A nuclear reactor at Southern Company's Plant Vogtle in eastern Georgia, about 30 minutes from Augusta, has been taken out of service until officials can determine why it suddenly shut down, reports the Associated Press.

Atlanta-based Southern Co. (NYSE: SO) reported Thursday that the Unit 1 reactor at Plant Vogtle shut down Wednesday night without incident. Reactors are made to shut off if monitoring systems find conditions could be unsafe. It wasn't clear why the equipment shut down, but it was likely triggered by equipment related to an electrical turbine, said Southern Co. spokesperson Alyson Fuqua. She stressed the shutdown was on the non-nuclear portion of the plant.

Southern Co. was not sure when the reactor would start producing power again, AP reported.

As the Atlanta Business Chronicle previously reported, Georgia Power, a unit of Southern Co. is building a \$14 billion expansion at Vogtle in partnership with Oglethorpe Power Corp., the Municipal Electric Authority of Georgia and Dalton Utilities.

Environmental groups have fought the licensing of two new AP1000 reactors planned for the plant.

## **Georgia Nuclear Reactor Remains Shut Down (ONJO)**

Online Journal, April 25, 2011

A Georgian nuclear reactor remains shut down today after engineers were surprised by a breaker failure on Wednesday.

Carrie Phillips, a public affairs manager for Southern Nuclear, which operates the plant in Waynesboro, Ga., told reporters that "this is a maintenance issue, not a safety issue."

Phillips said that the company is taking steps to fix the problem.

"Southern Nuclear has replaced the breaker that failed, and as a conservative measure we have replaced all the components that could have caused the breaker to fail," she said.

According to Phillips, employees at the plant are currently "going through the process to look at our restart activities to return that unit to 100 percent."

She declined to say when the reactor would be back in operation.

According to Southern Nuclear, the plant's second reactor has continued to operate at full power.

The reactor shutdown arrives during a tricky time for America's nuclear industry, which is facing close scrutiny following the disaster at Japan's Fukushima Daiichi nuclear plant.

On March 23rd the US Nuclear Regulatory Commission voted to launch a comprehensive review of America's plant safety. According to the commission's original timeline, that review's first report is due within days. The final report on any suggested changes is due by September.

## **Georgia Nuclear Reactor Shuts Down; Investigation Underway (FLSUNSEN)**

CNN, April 25, 2011

A nuclear reactor at Georgia's Vogtle Electric Generating Plant has been taken off line indefinitely until investigators determine the cause of an automatic shutdown earlier this week, according to a statement released Friday by Southern Company, which supplies power to much of the state.

A plan to re-start the reactor, which has been in operation since 1987, will be implemented once the investigation has been completed.

The reactor shut down early Wednesday morning, the statement noted.

"There were at no time impacts to public health or safety," said Alyson Fuqua, a company spokeswoman.

Southern Company made "all appropriate notifications" to the Nuclear Regulatory Commission, according to the statement.

Plant Vogtle's second reactor continues to operate at full power, the statement said.

The Vogtle Electric Generating Plant is located near Waynesboro in eastern Georgia.

## **Nuclear Reactor In Georgia Abruptly Shuts Down (AHN)**

All Headline News, April 25, 2011

A nuclear reactor at Georgia's Vogtle Electric Generating Plant has been taken off line indefinitely until officials determine the cause of an automatic shutdown earlier this week. The announcement of the shutdown was made Thursday by operator Southern Company, which provides power to much of Georgia.

A plan to re-start the reactor, which has been operating since 1987, will be put in place once the investigation is done, reports stated.

The reactor shut down early Wednesday morning, Southern Company stated. There were no impacts on public safety or health, the company said.

Plant Vogtle's second reactor is still operating at full power.

The Vogtle Electric Generating Plant is in eastern Georgia, near Waynesboro.

Read

more:

<http://www.allheadlinenews.com/articles/90045953?Nuclear%20reactor%20in%20Georgia%20abruptly%20shuts%20down#ixzz1KWnBF4YV>

## **Southern Co. To Restart Georgia Reactor After Replacing Parts (DJNews)**

By Naureen S. Malik

Dow Jones Newswires, April 25, 2011

Southern Co. To Restart Georgia Reactor After Replacing Parts

Brought to you eLearners.com

DOW JONES NEWSWIRES

NEW YORK -(Dow Jones)- Southern Co. (SO) said Friday that equipment failure didn't cause the emergency shutdown of a Georgia nuclear-power reactor and that the plant will be restarted after parts are replaced as a precaution.

One of the two nuclear reactors at the Vogtle Electric Generating Plant, located 26 miles east of Augusta, "automatically tripped from 100% power" and followed normal system procedures for doing so, according to a report filed to the US Nuclear Regulatory Commission.

An investigation by Southern Co., which operates the plant and owns a controlling stake in the nuclear facility, "has not identified or isolated any apparent equipment failure," spokeswoman Alyson Fuqua said in an email. This "is not a safety related issue," she added.

Shutdown procedures were initiated by a breaker that opened and which has been replaced, Fuqua said. The company is also in the process of replacing all of the components that could have caused the breaker to open, including the computerized reactor-control card, and additional monitoring instruments are being installed to identify potential equipment issues.

It is unclear when the plant will restart but Southern Co. and the NRC said the reactor will be returned to service once the new parts are installed and it is safe to do so.

"For competitive reasons, I cannot tell you the exact date when the unit will be returned to 100% power," Fuqua said.

The timing, though, will depend on what caused the reactor to trip offline, said NRC spokesman Joey Ledford. "Early indications are that it was a faulty trip breaker," which operates much like a household circuit breaker, he said.

Southern's Georgia Power utility owns a 45.7% stake in the complex, and three other partners own the rest. There are currently two reactors on site and the NRC is reviewing plans to construct two more reactors at the site.

Unit 1 began operation in May 1987 and the second unit came online two years later. Combined, they can produce 2,430 megawatts of electricity. Unit 2 continues to run at 100% power, the company said.

## **Ga. Utility To Discuss Financial Risk-sharing Plan (AP)**

Associated Press, April 25, 2011

ATLANTA – Georgia Power will soon explain how it could be stung by a proposal meant to help control costs during the construction of two more nuclear reactors proposed for Plant Vogtle.

The subsidiary of the Atlanta-based Southern Co. must explain its case Wednesday in filings to the state's Public Service Commission, which regulates utilities.

Utility regulators are considering a plan that would trim Georgia Power's earnings if the cost of building the new reactors at the power plant near Waynesboro runs over budget. The company could also earn more money from those reactors if construction costs are kept under budget.

The commissioners have asked Georgia Power to explain how that proposal would affect the publicly traded company's financial disclosures. The PSC has set an Aug. 2 vote on the issue.

## **NRC Renews License For Nation's Largest Nuclear Plant, Despite A Long History Of Problems (FORBES)**

By Osha Gray Davidson

Forbes, April 25, 2011

The Nuclear Regulatory Commission has renewed operating licenses for an additional 20-years for the Palo Verde Nuclear Generating Station outside of Phoenix, Arizona. Palo Verde is the nation's largest generating station, with three pressurized water reactors, each capable of producing 1335 megawatts for a combined capacity of just over 4,000 MW.

Palo Verde, which began operating in the mid-80s, has racked up a large number of safety violations over the years.

In a 2007 investigation, the NRC found that "cost controls had been viewed as more important than safety," based on interviews with workers at Palo Verde.

A compromised culture of safety

In the 1st quarter of 2005, the NRC downgraded all three units at Palo Verde for safety concerns. Palo Verde reactors went from the top of the NRC's safety designations down two notches on a five notch scale. This was done after the NRC learned that for a dozen years, starting in 1992, plant workers had been draining water from emergency cooling pipes, in violation of NRC policy.

The NRC ruled that the plant operators had "increased the probability of a malfunction of equipment important to safety" imposed a \$50,000 civil penalty, and moved the plant into the "Degraded Cornerstone" column of the Commission's Action Matrix, which indicates heightened levels of scrutiny for problem nuclear plants.

In a January 6, 2006 document, the NRC listed several other problematic "events" at Palo Verde during this same time period.

Steam generator tube leak in Unit 2 in February 2004.

Response to loss of offsite power in all three units in June 2004.

Followup on identification of significant voiding in the Emergency Core Cooling System at all three units in August 2004.

Followup on identification of potential design issue in Emergency Core Cooling System at all three units in October 2005.

Followup on operating at reduced power due to high pipe vibrations in Unit 1 in December 2005.

Bottom of the Nuclear Barrel

Later in 2006, Palo Verde's reactor number 3 was downgraded again, joining just three of the 104 nuclear power units in the nation in the "Multiple/Repetitive Degraded Cornerstone Column." That is the lowest ranking a plant can have without being shut down. The NRC stated that reactor 3 had been downgraded in part because the plant operators hadn't adequately addressed problems that had already been pointed out, even after multiple warnings.

The two other units at Palo Verde remained in the "Degraded Cornerstone Column," — with reactors from just one other plant.

By March, 2007, Palo Verde had become the least safe plant in the United States, according to NRC rankings.

Reactor number 3 remained in the worst — but still operable — category, the only unit in the nation with that designation. Units 1 and 2 were still in the "Degraded Cornerstone Column." They, too, were alone in that category.

David Lochbaum, a nuclear engineer at the Union of Concerned Scientists, questioned the NRC's lack of action in getting Palo Verde's owner's to comply with safety rules.

"It is abundantly clear and extensively documented," wrote Lochbaum, "that Palo Verde's owner is either scoffing at this federal regulation or is doing its best, but falling way short. As a direct result, the public has been exposed to undue risk (and the company's stockholders have been poorly served)."

In a slide show presented by the NRC at a public hearing in 2007, the NRC made the following observations.

Performance (at Palo Verde) has declined since 2003.

Multiple human performance and corrective action program problems exist at Palo Verde.

[Problems were caused by] years of lowering safety culture.

Problems were not consistently identified, evaluated, and corrected.

Control Room operators did not always demonstrate high standards associated with nuclear plant operations.

All three units at Palo Verde are currently in compliance with NRC regulations.

This is the second time the NRC has relicensed a nuclear power plant since an earthquake and tsunami crippled the Japanese Fukushima nuclear power plant on March 11. The NRC relicensed the controversial Vermont Yankee nuclear power plant on March 21.

While the NRC is scheduled to meet on May 12 to discuss a safety review of US nuclear plants in light of the Fukushima disaster, the Commission continues to relicense plants. Some countries, such as Germany, have imposed a moratorium on license extensions until a "lessons learned" study of the Japanese accident can be completed.

## Is Nuclear Energy A Safe Source Of Power For Arizona's Future? (KNXV)

KNXV-TV Phoenix, AZ, April 25, 2011

PHOENIX - The push for cleaner, alternative forms of energy is well underway.

But in light of last month's earthquake and tsunami in Japan, and the subsequent nuclear crisis there, the debate over the role of nuclear power in our country and our state intensifies.

Each Sunday, ABC15.com debuts an Arizona issue - along with two opposing sides on the topic.

Don't worry, you always have the opportunity to make comments at the bottom of the page. Yeah, your opinion matters, too.

This week we're tackling the debate on whether or not nuclear power should be a part of Arizona's energy future.

Arizona Public Interest Research Group Executive Director Diane Brown is critical of the idea. She says nuclear power is neither safe nor clean. She sites studies by the Nuclear Regulatory Commission documenting potentially dangerous situation at 17 US nuclear stations.

President And CEO of the Nuclear Energy Institute Marvin Fertel disagrees. He says nuclear power is safe. He goes on to say that nuclear energy can bring prosperity to developed and merging economies worldwide.

So, is nuclear energy a safe source of power for our energy future? Click "next page" to read the first of two positions, "Nuclear energy is a lousy investment and inherently dangerous".

"Nuclear energy is a lousy investment and inherently dangerous": By Diane Brown, executive director of the Arizona Public Interest Research Group

Is nuclear power safe and should it be a major part of our energy policy going forward?

No and no. Here are three reasons why:

1. Risk. The Arizona PIRG Education Fund recently released a report documenting a history of safety problems at nuclear reactors in the US Since 1979, the Nuclear Regulatory Commission has rated 17 instances at domestic nuclear power plants as a "significant precursor" of core damage, meaning a dramatic increase in the risk of a serious accident. American nuclear power plants are not immune to the types of natural disasters, mechanical failures, human errors, and losses of critical electric power supplies that have characterized Fukushima and other major nuclear accidents. Unforeseen events could occur at any plant outside the scope of their emergency planning.

In addition, there is no permanent solution for storing nuclear waste, which is radioactive for tens of thousands of years at any plant, old or new. There is no safe level of exposure to radiation and even small exposures to radioactive agents released during a nuclear accident are capable of causing thyroid cancer and leukemia. Even without an accident, spent nuclear fuel must be stored safely for an indefinite period of time. Any lapses could result in radioactive contamination of our drinking water or other critical resources.

2. Cost. Nuclear power is among the most costly approaches to meeting our energy needs. Over the last fifty years, American taxpayers have subsidized nuclear power to the tune of \$145 billion. According to the Union of Concerned Scientists, the value of government support has exceeded the value of electricity the technology produced.

On top of that, the nuclear industry reaps all of the rewards and none of the burden. US policy has essentially given the nuclear power companies a preemptive bailout - if a nuclear power plant has an accident, taxpayers are on the hook for up to 98% of the liability - which could run into the hundreds of billions.

Even Wall Street investors will not touch nuclear energy because the technology is too risky and too expensive.

3. Better Options Exist. Nuclear power currently generates about 20 percent of the US electricity supply. While it would be difficult to immediately shut down existing nuclear reactors, they do not need to continue to operate beyond the 40 years for which they were originally designed nor do new reactors need to be built.

There are safer and less expensive energy resources that can keep the lights on without the potential to explode, spill, or contaminate food supplies. For example, energy efficiency is the quickest, cheapest and cleanest way to meet our energy needs. Energy efficiency also provides five times as much power per dollar of investment as nuclear energy. Building 100 new nuclear reactors would cost approximately \$300 billion. If that money went to energy efficiency instead, energy savings in 2030 would be equivalent to the output of more than 80 nuclear reactors and consumers could save more than \$600 billion.

In short, nuclear power is a lousy investment, inherently dangerous, and there are better options to meet our energy needs.

Do you agree with this opinion? Add a comment below to sound off.

Click "next page" to read the second position, "US Nuclear power plants verifying defense-in-depth protective measures"

"US Nuclear power plants verifying defense-in-depth protective measures": By Marvin Fertel, president and CEO of the Nuclear Energy Institute

By a narrow margin, Arizona voters passed an initiative last November legalizing the medicinal use of marijuana, putting into motion a measure that will have profound effects on Arizona's workplaces, communities and neighborhoods.

The new law leads the state down a "hazy" path for our local communities and family neighborhoods.

Arizonans will now face workplaces where workers could be under the influence of a drug that the federal government classifies as a banned Schedule 1 controlled substance. As a result, employers who have undertaken strict measures to ensure a "drug free" workplace must now permit employees to use the drug. Meanwhile, workers will be working alongside co-workers who could be under the influence of the drug.

The potential effects on workplace safety and productivity are immense. That is why I sponsored House Bill 2541, which establishes a clear definition for the concept of "impairment," something the ballot initiative failed to do. While the ballot initiative allows employers to take disciplinary action against employees who are impaired, employers deserve clear guidelines on how they can deal with employees under the influence of marijuana or other prescribed drugs in the workplace.

My bill also permits employers to reassign to a different position those employees who might be under the influence of a prescribed drug, including marijuana, which could negatively affect their ability to perform in a "safety sensitive" position. This is common sense. If an employee is under the influence of a drug, then employers should have the ability to protect themselves and their business from liability.

The new law could also have broader economic impacts. Consider the case of a large manufacturer located in my north Phoenix legislative district. The company is considering investing millions to renovate its facility. But the company is taking great pause to make this investment because the neighborhood in which it is located is the site of a new marijuana dispensary.

Companies consider where they invest based on a host of factors, including the quality of the neighborhood in which they are located. If companies are concerned that marijuana dispensaries will attract a customer base they find undesirable, then local communities could lose out on the opportunity to attract and retain good jobs. From the Fortune 500 corporation to the local mom and pop shop, companies might think twice before doing business nearby a marijuana dispensary—and in this economy, we can't afford further job loss.

City councils and their planning and zoning commissions should encourage public input when determining where to locate dispensaries. Local residents have an important voice in keeping the integrity of our neighborhoods, where our families live and our children go to school.

Medical marijuana is now the law of the land, but we should do all we can to implement the law in a way that respects the concerns of employers, encourages workplace safety, and reflects the character of our local communities and neighborhoods.

## **Vt Nuke Plant Owners Seek Injunction (BOS)**

Boston Globe, April 22, 2011

Vermont Yankee nuclear plant's owners, who filed suit this week over whether the state can legally close the plant, are now seeking a court order that would prevent that from happening until courts have ruled on the jurisdiction challenge.

Entergy filed a request for a preliminary injunction Friday in US District Court in Burlington, asking a judge to preserve the status quo and bar the state from shutting down the nuclear power plant in Vernon.

The US Nuclear Regulatory Commission recently granted Vermont Yankee a new 20-year operating license.

But the state of Vermont, which contends it has the power to close the plant in March 2012, appears unlikely to agree to a renewal of its state permit.

No hearing has been set on the request for preliminary injunction.

On Monday, two Entergy Corp. subsidiaries -- Entergy Nuclear Vermont Yankee and Entergy Nuclear Operations -- filed the civil suit, naming as defendants state Attorney General William Sorrell, Gov. Peter Shumlin and the members of the state Public Service Board.

State officials say they have every right to exercise control over the continued operation of Vermont Yankee, whose original permit expires in March 2012. The state Senate voted 26-4 last year against renewing it. Under a 2006 state law, Entergy's owners need the OK of the Legislature to continue operating the plant past March 2012.

Gov. Peter Shumlin, who wants the plant closed, didn't respond to a request for comment on the filing Friday. Nor did Sorrell.

In an affidavit submitted to the court Friday in support of Entergy's motion, the company's chief nuclear officer says uncertainty about Vermont Yankee's future is making it hard to retain the plant's specialized, skilled workers. John T. Herron says that increasingly, employees leaving their jobs at the plant are citing uncertainty as the reason.

## **Entergy Seeks Injunction To Keep Vermont Yankee Open (BURFP)**

By Terri Hallenbeck

Burlington (VT) Free Press, April 25, 2011

The owners of the Vermont Yankee nuclear power plant took the next step Friday in seeking a court order to keep the state from shutting down the plant while a lawsuit filed earlier this week is pending.

Entergy Corp. filed a request Friday for a preliminary injunction in US District Court in Burlington. The filing asks the court to prevent the state from taking any action that would force the Vernon power plant to shut down.

"The harm to the public interest from even a temporary shutdown of the Vermont Yankee Station would be significant, immediate and irreparable," Entergy argued in court papers.

Neither Gov. Peter Shumlin nor Attorney General William Sorrell responded immediately to a request for comment Friday evening about Entergy's injunction request. They said earlier this week they were anticipating the filing, and Sorrell said his office has been preparing for months to fight Entergy in court.

Monday, Entergy filed a lawsuit challenging the state's ability to decide the plant's future.

The US Nuclear Regulatory Commission last month granted the 39-year-old Vermont Yankee plant a 20-year extension on its operating license, which expires in March.

The state, however, has not granted the plant a certificate of public good to continue operating beyond that date. The state Senate voted last year against allowing the Public Service Board to act on Entergy's request for an extension.

Entergy's lawsuit contests the state's authority, contending the federal government preempts Vermont's oversight and that a 2006 law granting the Legislature a say in the matter negates Entergy's 2002 agreement not to challenge the state's control.

But Vermont, which contends it has the power to close the plant next year, appears unlikely to agree to a renewal of Vermont Yankee's state permit.

Entergy's court papers Friday request a hearing on the injunction request. No hearing date was immediately set.

In its filing Friday, Entergy claims the state's plans to shut down Vermont Yankee in 2012 already have caused the plant to lose highly trained employees. Closing the plant would cost jobs, make the power grid less reliable, force electric prices to rise, increase greenhouse gas emissions and hurt state tax revenues, the filing claims. Keeping the plant running will impose no costs on the public, it says.

(Page 2 of 2)

The court filing notes that Entergy needs to decide by July 7 whether to buy more fuel for the plant if it is to keep running after next March.

Also Friday, legislators and administrative officials were warned not to destroy any documents related to Entergy. Assistant Attorney General Kyle Landis-Marinello wrote in a memo to state officials that the pending lawsuit means they must be careful to retain any documents that might be subpoenaed or they could face harsh penalties from the court.

Beth Robinson, legal counsel for Shumlin, said such "litigation hold" notices mean that all records, even those that officials are not required to keep under public-records laws, must be retained.

"We are mindful of our obligation and are taking steps to ensure that we comply," Robinson said, speaking Friday before Entergy's request for a preliminary injunction was disclosed publicly.

Entergy's nearly-70-page request, accompanied by dozens of pages of attachments such as sworn statements from plant employees, was signed by Burlington lawyer Robert Hemley. Hemley has worked on media cases in Vermont, and his clients have included the Burlington Free Press.

## **Vermont Yankee Plant's Owner Must Honor Its Own Promises (BOS)**

Boston Globe, April 24, 2011

A DEAL is a deal — except, apparently, when Entergy is involved. The company, a major energy supplier in New England, provoked justified outrage in Vermont last week when it announced it was renegeing on a longstanding commitment to abide by the state's stringent nuclear regulations.

Instead, the company has done precisely what it had long promised it would not: challenge the constitutionality of Vermont's rules in federal court, as part of a last-ditch effort to keep its Vermont Yankee nuclear power plant running. It's a stunning move.

The conflict in Vermont has been brewing since 2002, when the Louisiana-based corporation bought Vermont's only nuclear power plant, an aging reactor on the Connecticut River in Vernon, near the Massachusetts border. As a condition of receiving state approval for the sale, the company agreed to seek permission from state regulators to operate past 2012. In 2006, the state went a step further, requiring that any extension of the plant's license be subject to the Vermont legislature's approval. Then, too, the company went along.

Either Entergy never really intended to live by those commitments, or it simply didn't foresee what would happen next. A string of accidents, including the partial collapse of a cooling tower in 2007 and the discovery of an underground pipe system leaking radioactive tritium, raised serious questions about both Vermont Yankee's safety and Entergy's management — especially after the company made misleading statements about the pipe. Enraged by Entergy's behavior, the Vermont Senate voted 26 to 4 last year against allowing an extension. And that was before the disaster in Japan rekindled popular concern over nuclear plants, especially older reactors like the one at Vermont Yankee, which is similar in design to those at the stricken Fukushima Daiichi plant.

Now the company is suddenly claiming that the 2002 agreement is invalid because of the 2006 legislation, and that only the federal government has regulatory power over nuclear issues. The legal issues in the case are murky; the Supreme Court has ruled that states do have some regulatory authority over nuclear power, but legal scholars say the Vermont case will offer a precedent-setting test of how far those powers extend. Certainly, there are valid concerns about the patchwork regulations that could result if every state sets its own rules. But had Entergy kept its word, that debate would be beside the point.

The company seems to have concluded that its reputation in Vermont is already so battered that it has nothing left to lose by going to war with the state. But there should be consequences. Permission to run a nuclear plant is a public trust. Entergy runs 11 other reactors in the United States, including Pilgrim Nuclear station in Plymouth. Vowing to run Pilgrim safely, the company has applied for federal permission to keep it open for another 20 years. But as the Nuclear Regulatory Commission reviews the company's application, it should keep in mind what promises from Entergy are worth.

## **My Turn: Keep Vermont Yankee Safe From Political Tsunami (BURFP)**

By Milo Schaefer

Burlington (VT) Free Press, April 25, 2011

By all accounts, the Japanese nuclear power plant held up fairly well after sustaining an unprecedented magnitude 9.0 earthquake notable since it was more intense than design capacity of the plant. What precipitated the ongoing problems was a direct hit from the monumental tsunami which completely overcame the backup diesel generators. Up until that point all automatic backup shutdown procedures were working according to plan.

It is now apparent that those who wish to shutter Vermont Yankee will use the damage caused by the tsunami to their advantage. They want you to forget that nuclear power has a remarkable safety record. Nuclear has fewer fatalities per kilowatt hour produced than coal, oil, natural gas, biofuel, wind or solar. They also want you to think the recent tritium leaks pose a significant health risk. They won't tell you you get more radiation from drinking a glass of milk than drinking a glass of tritium groundwater from Vermont Yankee.

Clearly, there will be lessons learned from the accident in Japan. The US Nuclear Regulatory Commission (NRC) will identify recommended modifications to existing nuclear plants in the US and require plant operators to institute those modifications. The NRC has sent many people to Japan and the review is beginning.

We are fortunate to have a low cost, reliable, safe, CO2-free source of power in Vermont Yankee. It is an ideal baseload component to complement our ever growing renewable portfolio of solar, wind and others. Renewables do not have a stable, consistent power output pattern, and they need the support of baseload power. Just a few days ago the NRC renewed Vermont Yankee's operating license. This shows that nuclear experts support ongoing operations at Vermont Yankee. We should follow their lead and not permit a political tsunami to be directed at the plant.

## **Nuclear Plant In Clinton Running Out Of Space For Spent Fuel (SSJR)**

By Tim Landis

Springfield (IL) State Journal Register, April 25, 2011

Nearly 25 years into operation, the Clinton Power Station is running out of room to store spent nuclear fuel.

Parent company Exelon Corp. plans to break ground by early 2012 for an above-ground storage facility that would provide sufficient space for spent-fuel storage to carry the plant, which is 60 miles northeast of Springfield, through its licensed operating life of 2026.

"We would reach capacity by the end of 2016, if we weren't doing what we're doing with above-ground, dry storage," said Bill Harris, director of communications at the Clinton station.

He added it is a step that has been taken at nuclear reactors across the country — including at other Exelon plants in Illinois — after decades of unresolved debate over the need for a central, national storage facility.

"The solution was going to be centralized storage," Harris said. "We cannot run out of room in spent-fuel pools, so we had to have an alternative."

Chicago-based Exelon is one of the world's largest operators of nuclear plants, with 10 power plants and 17 reactors in Illinois, New Jersey and Pennsylvania. The company has approximately 20 percent of the nation's generating capacity.

Illinois has six of the power plants and 11 reactors.

Limited capacity

Deep within the Clinton Power Station, metal storage racks — the appearance from above is something akin to large, steel cages stacked one on the other — reside at the bottom of a bluish but clear pool of water.

It is here every two years that half of about 630 fuel bundles are rotated out of the reactor into the storage pool. The water is about 20 feet deep, and the spent fuel is below ground level, said Jeff Stovall, radiation protection manager for the plant.

"The uranium fuel only has a certain amount of energy in it, so every 24 months, we change out fuel," he said.

Stovall said about 1,800 company workers and private contractors are called in during a three-week refueling shutdown every two years. In addition to moving half of the reactor fuel to storage and loading new fuel, plant maintenance is performed.

In addition to spent fuel, the federal Nuclear Regulatory Commission requires power plants to have sufficient storage space to offload the reactor fuel in case of emergencies. Harris said that, at this point, the Clinton station would run out of that capacity in 2016.

Exelon's goal is to begin dry-cask storage in 2015.

"It's literally a gigantic, 350-ton, concrete re-enforced cast with a steel liner," said Harris.

Spent fuel still would have to be stored by the pool method for at least five years.

The new storage site, which would have the capacity for 55 tons of spent fuel every two years, is within the current security perimeter of the plant. The module units also could be moved to a central storage facility, should Congress eventually establish a national site.

Yucca Mountain

According to the Nuclear Energy Institute, approximately 71,600 tons of spent uranium fuel from 50 years of operation is stored at the nation's nuclear plants — spent fuel that has a half life of thousands of years.

Illinois, with more reactors than any other state, has the most spent fuel in storage at nearly 8,400 tons.

As a result of the growing stockpile, 55 nuclear plants in 31 states have switched to the above-ground, dry-cask storage, said the institute's Tom Kauffman.

NEI estimates an initial investment of \$10 million to \$20 million for a dry-storage facility, followed by operations cost of \$5 million to \$7 million a year.

He said the industry group continues to support a central storage facility, as has been proposed at Yucca Mountain in Nevada. A presidential commission is expected to release a report this summer on long-term storage options for spent fuel and nuclear waste, including ways to recycle used fuel.

Congress approved the Yucca Mountain site during the second Bush administration, but the plan was put on hold by the Obama administration while the commission completes its work. In the interim, Kauffman said, dry-cask storage is the best short-term alternative.

"Of course, we're going to need long-term, geologic storage, no matter what. We're also talking about high-level radioactive waste materials from weapons and research facilities," Kauffmann said. "They are going to need the space, too."

50-year debate

The federal government has the responsibility to "provide for the permanent disposal of high-level radioactive waste and such spent nuclear fuel to protect public health and the environment," according to the Atomic Energy Act of 1954.

A 1982 update also required plant operators to pay in to a fund for establishment of a central repository, while requiring Congress to approve a site by 1998. The NEI estimates \$35.1 billion has been paid into the fund and \$10.8 billion has been spent on the Yucca Mountain project.

Nuclear energy opponents say there is good reason for the decades of government delays for a power source that is unsafe to begin with.

After the earthquake disaster at the Japanese nuclear plant in March, the Nuclear Energy Information Service in Chicago warned that the spent-fuel "pools" at the Fukushima plant are similar to those at Exelon plants at Dresden and the Quad Cities.

“At Dresden and Quad Cities, they are not only outside the containments,” said a statement from executive director David Kraft, “they are positioned on the second floor of the buildings, meaning that a pipe break on the lines feeding cooling water to the pools would result in the pools draining, the fuel overheating, and ultimately melting and causing an uncontrollable fire.”

Kraft said the plants could be affected by a major quake along the New Madrid fault in southern Illinois and southeast Missouri, or an accident such as an airliner crash.

“This is not as inconceivable as it sounds,” Kraft said.

Second reactor?

It has been about six years since the US Nuclear Regulatory Commission granted Exelon an early-site permit for a second reactor tower at Clinton. Original plans for a second reactor were dropped as a result of cost overruns and delays during construction in the 1970s.

The early-site permit remains in effect, but Harris said the company has no immediate plans to apply for construction or operating approval.

“It’s a matter of economics and demand,” Harris said.

He also pointed out Illinois has had a moratorium on nuclear plant construction since 1987. The Illinois Senate sponsor said last month she has indefinitely postponed action on a bill lifting the ban as a result of the disaster in Japan.

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About the Clinton Power Station

\*Exelon Corp. of Chicago is the plant owner.

\*Construction began in 1976; plant began generation in 1987. Plans for a second reactor were canceled as a result of delays and cost overruns.

\*Plant is on Clinton Lake, about 60 miles northeast of Springfield in DeWitt County.

\*Generation: 8.6 million megawatts in 2010; serves 1 million customers.

\*Work force: 650

\*Type of plant: Boiling water reactor generates steam for turbines; currently licensed to operate until 2026.

Sources: Archives of The State Journal-Register and Exelon Corp.

Wet vs. dry storage

About half the nation’s reactors, including Clinton, use an underground “rack” system that stores spent fuel in pools of water. The others rely on above-ground, “dry” storage using casts made of steel or steel re-enforced concrete.

At current storage rates, the Clinton station capacity would be exceeded in 2016. Exelon plans to begin construction of “dry” storage by early 2012 and to begin moving spent fuel into the containers in 2015.

Security tight at Clinton plant

CLINTON — At first glance, the Clinton Power Station appears as much prison as power plant with its concrete walls, high fences, razor wire, automatic weapons on security staff and firing towers.

“This was all a result of Sept. 11 (2001),” plant spokesman Bill Harris said of the security measures.

A tour of the power plant involves a maze of multiple floor levels, intersecting hallways, overhead pipes, metal detectors, body scans and badge-operated locks sequenced to operate depending on the level of security.

“It’s like a honeycomb,” said Harris, who retired from the Navy before joining Exelon Corp., the plant owner.

Earplugs and radiation-detection devices must be worn in the plant interior. A tunnel leading to the reactor room is cut through thick concrete walls. Entry is through heavy airlock doors similar to those on a bank vault.

Not that the plant is walled off from the world. It is easily visible across Clinton Lake from Illinois 54, about 6 miles east of the community of Clinton. An annual community open house is scheduled from 5 to 7 p.m. Wednesday, May 4, at the plant training center.

Last year’s open house drew about 60 people, Harris said.

The plant is an object of curiosity for visitors, said Marian Brisard, executive director of the Clinton Area Chamber of Commerce & Tourism Bureau.

“They ask about the nuclear plant and what it’s like,” Brisard said.

As for the community of 7,200, she said the Clinton Power Station is just part of the local way of life.

“They are one of our largest employers,” Brisard said. “They have been very committed to the community.”

## **Daily Journal - Exelon Plans New Storage Site For Spent Nuclear Fuel At Clinton Plant In Central Illinois (AP)**

Associated Press, April 25, 2011

The operator of a nuclear power plant in central Illinois says the site is running out of space to put its spent fuel and will break ground by early next year for an above-ground storage facility.

Chicago-based Exelon Corp., owner of the Clinton Power Station in DeWitt County about 60 miles northeast of Springfield, says the new storage site would provide adequate space for spent fuel through its licensed operating life of 2026.

Bill Harris, a spokesman at the 24-year-old Clinton station, tells the (Springfield) State Journal-Register that storage capacity at the current rate would be reached by the end of 2016. Exelon hopes to have the new storage available by 2015.

Exelon is among the world's biggest operators of nuclear plants, with 10 power plants and 17 reactors in Illinois, New Jersey and Pennsylvania. Illinois has six of the power plants and 11 reactors.

The new storage site would have the capacity for 55 tons of spent fuel every two years and will be within the plant's secured perimeter.

The Nuclear Energy Institute says roughly 71,600 tons of spent uranium fuel from a half century of operation is stored at the nation's nuclear plants.

The institute says 55 nuclear plants in 31 states have switched to the above-ground, dry-cask storage.

## **Feds: No Funding Problem At TMI (LANERA)**

By Ad Crable

Lancaster (PA) New Era, April 25, 2011

A federal agency finds no basis to a local nuclear watchdog's allegation that not enough money is being saved to dismantle the contaminated Unit 2 reactor at Three Mile Island 23 years from now.

The US Nuclear Regulatory Commission said in a draft decision that it had reviewed Unit 2 owner FirstEnergy's savings plan and that the plan provided "adequate decommissioning funding assurance" that the money will be there when the time comes.

Specifically, as of the end of 2009, Akron, Ohio-based FirstEnergy had \$577 million dedicated to decontaminating and dismantling Unit 2. The current estimate for carrying out the project is \$836 million.

Unit 2 is proposed to be decommissioned when the active Unit 1 closes, currently set for 2034.

The NRC said there should be sufficient interest from the trust fund set aside by FirstEnergy to meet the closing expenses.

And if market fluctuations affect that, the NRC requires that FirstEnergy make appropriate funding changes. Decommissioning funding plans for owners of commercial nuclear plants must be updated annually and reviewed by the NRC.

The NRC said that Harrisburg-based Eric Epstein used outdated figures for determining how much was in FirstEnergy's funding plan.

Epstein had expressed concern that adequate funds would be set aside because Pennsylvania ratepayers of Metropolitan Edison and Pennsylvania Electric Co. had stopped contributing to the decommissioning fund as of Dec. 31, 2010.

Epstein's petition seeking the NRC to require FirstEnergy to come up with financial guarantees was accepted in December and assigned to a Petition Review Board.

He pointed out that the amount in the utility's Unit 2 fund had fallen from 2005 through 2008 because of a faltering economy.

FirstEnergy purchased General Public Utilities, the former owner of the Unit 2 reactor damaged in a 1979 accident, in 2001.

FirstEnergy said at the time Epstein's petition was accepted that full funding for Unit 2 would be in place when it was needed.

A final decision on Epstein's petition will be made after giving him and FirstEnergy a chance to comment.

## **Repairs Needed For Cracking TMI Waste Units In Idaho (YDRPA)**

By Sean Adkins

York (PA) Daily Record, April 25, 2011

Repairs are under way to address cracks that have damaged the concrete storage units that protect the spent fuel and debris from Three Mile Island's damaged core, which is stored in Idaho.

The company, Transnuclear Inc., that supplied those storage units also provides containers that house spent fuel for Peach Bottom Atomic Power Station.

"Peach Bottom has been storing spent fuel safely onsite in dry casks since 2000 and has not experienced any issues of this kind," said David Tillman, a spokesman for the power station.

In 1999, Transnuclear installed the concrete enclosures to cover and protect dozens of canisters filled with spent fuel from TMI Unit 2, according to an April 7 US Nuclear Regulatory Commission inspection report.

That unit sustained a partial meltdown in March 1979, and for more than a decade, the spent fuel and debris have been stored in canisters at a federal laboratory in Idaho.

In 2009, an independent engineering study found that, despite the cracking, the storage units remained effective in protecting the canisters, according to the inspection report.

"The key thing to note is that the modules do meet the necessary technical requirements," said Bob Grubb, president and chief executive officer of Transnuclear. "The system is safe."

Columbia, Md.-based Transnuclear designs and licenses dry spent fuel storage systems.

In 2000, officials with department of energy started noticing "cosmetic" cracks in the concrete storage units, according to the inspection report.

Since that time, the seasonal freezing and thawing of water trapped near the roofs and in the cracks of the enclosures has made the problem worse. Federal officials at Idaho laboratory are repairing the storage units.

"These modules were originally designed for a 50-year service life when constructed in 1999, however, in the (10) years they have been in use, the concrete is showing significant cracking and degradation," according to the commission's report. "This is a concern to the NRC."

Despite the cracks, the steel canisters inside the enclosures have not been damaged and radiation levels around the units have not increased, said Victor Dricks, a spokesman for the US Nuclear Regulatory Commission. Drick's office regulates the Idaho laboratory.

"There is no danger to public health and safety," he said. A different cask problem in Peach Bottom

Last fall, workers at Peach Bottom detected leaking helium from two of Transnuclear-supplied storage containers, or spent-fuel casks. The helium leaked from a system on the container that is supposed to prevent it from escaping.

Helium helps reduce the heat given off by the fuel assemblies and prevent corrosion.

"The helium pressure issue that Peach Bottom reported last year in two casks was not related to cask integrity, did not pose a risk to public health or safety and repairs were made in full accordance with NRC specifications," Tillman said. "To date, one of the casks has been safely returned to the station's highly secure dry cask storage facility and repairs are underway (on) the outer lid of the second cask."

No radiation was released as a result of the helium leaks or the cracked concrete storage units, said Neil Sheehan, a commission spokesman.

"There are about 800 dry cask storage units across the United States," Sheehan said. "Two casks out of 800 is a very small percentage. We're always looking for generic issues with a company, but we haven't seen it thus far with Transnuclear."

Grubb said Transnuclear has "a very strong quality control program." Fixing the problem in Idaho

As a fix for the Idaho storage containers, officials with the department of energy plan to install protective caps, apply a seal coating and repair damaged sections of the storage units, according to the April 7 federal inspection report.

Ken Whitham, who is the department of energy's manager of the Three Mile Island Unit 2 Independent Spent Fuel Storage Installation in Idaho, said the storage units are being maintained.

"(The cracks) are not something that we're content to do nothing about," he said "We are taking protective actions."

In the mid 1980s, as part of its investigation into the partial meltdown of TMI Unit 2, the department of energy transported the core's debris to the Idaho National Laboratory, said Tim Jackson, a department spokesman.

"We learned a great deal of how the reactor behaved from the studying that (spent) fuel," he said.

In 1999, the department of energy built a storage site for that debris and fuel. Transnuclear supplied both the canisters and the concrete enclosures.

The enclosures are 2 feet thick and come in two pieces, a body and a roof connected by anchor bolts.

In 2008, the department of energy recognized that the continued cracking of the concrete was growing worse. A year later, the department of energy hired an independent firm to study the enclosures.

That engineering firm, Illinois-based Wiss, Janney, Elstner Associates, found that the units, some with severe cracking, still offered structural support for canisters, "assuming the deterioration to the (enclosures) were limited to the observed cracking and spalling," according to the report.

The problem was that water had frozen in the cracks and the anchor holes, damaging the concrete.

In response, the department of energy filled the anchor bolt holes with polyurethane foam and have installed strain gauges at various spots on the storage units to monitor the cracks, Dricks said.

"The maintenance program that we have in place will make sure that (the concrete storage units) do last 50 years," Whitham said. "We do weekly inspections in which a person goes out and looks at the modules. We have highlighted certain cracks that we keep a close watch on."

## **PG&E Quietly Seeking Permission To Extend Diablo Canyon's License (BAYCIT)**

By Zusha Elinson

Bay Citizen (CA), April 25, 2011

Pacific Gas and Electric Company is quietly seeking a 20-year extension of its license to operate the Diablo Canyon nuclear power plant, despite publicly requesting the process be delayed until studies of the facility's ability to withstand an earthquake are completed.

The discrepancy between the company's public and private stance has led some lawmakers and environment advocates to accuse PG&E of misleading the public about its plans for the San Luis Obispo plant following last month's devastating earthquake, tsunami, and nuclear disaster in Japan.

On April 10, PG&E asked the National Regulatory Commission to postpone relicensing its Diablo Canyon nuclear power plant until the company completes studies of a seismic fault that runs within 330 yards of the facility.

"In the aftermath of the Japanese earthquake and the resulting tsunami, we are working even more closely with various governmental permitting agencies to accelerate the plant's advanced seismic research," PG&E's Chief Nuclear Officer John Conway said in a press release one day after the April 10 letter was sent to the NRC.

"As PG&E works toward this objective, we are asking the Nuclear Regulatory Commission to withhold issuance of PG&E's renewed operating licenses, if approved, until after this research is completed and the findings are submitted to the commission," Conway stated.

The utility's critics and lawmakers praised the delay.

But on April 12, PG&E sent a clarifying letter to the NRC, which it did not publicize with a press release, asking agency staff to move forward with safety and environmental reviews associated with relicensing efforts before the company's seismic studies are completed.

"PG&E has not requested any suspension or delay in the NRC Staff's ongoing safety and environmental reviews," PG&E attorney David Repka wrote in the April 12 letter. "PG&E also is not requesting any delay in the schedule for this licensing hearing process."

Liz Apfelberg, a member of Mothers For Peace, which has long led protests against construction at Diablo Canyon, accused PG&E of taking a "sneaky" approach to public relations by sending the second, unpublicized letter.

NRC spokesman Victor Dricks this week confirmed that the agency is moving forward with safety and other reviews of the Diablo Canyon facility in preparation for a ruling on PG&E's request for permit extensions.

"We're continuing our review," Dricks said.

PG&E spokesman Paul Flake said the NRC's safety review of Diablo Canyon and the company's planned seismic studies "don't have any connection with one another."

Sen. Sam Blakeslee (R-San Luis Obispo), a geophysicist with a doctorate in earthquake studies whose district includes the nuclear power plant, said it's impossible for the NRC to "credibly perform" safety studies required for the extension of Diablo Canyon's operating permits without first reviewing the results of PG&E's planned seismic studies.

"It seems utterly contradictory," Blakeslee said.

The Diablo Canyon plant lies next to the Shoreline Fault, which was discovered in 2008. Seismologists know little about the fault, including whether it is connected to other faults in the region. Some fear that its rupture could severely damage Diablo Canyon, causing a catastrophic nuclear meltdown.

PG&E says the seismic studies of the 1980s-era power plant will be completed by the end of 2015. The plant's operating permit expires in 2025, and PG&E has asked the NRC to extend it by 20 years.

At a hearing on April 14 before the Senate Energy Committee, officials for the NRC testified that Diablo Canyon is considered safe, because no data exists indicating otherwise.

But federal lawmakers are aware of the potential safety threats.

"We are particularly interested in the safety of the San Onofre Nuclear Generating Station, located in San Clemente, and the Diablo Canyon Nuclear Power Plant near San Luis Obispo, both of which are near earthquake faults," senators Barbara Boxer and Dianne Feinstein wrote in a March 16 letter to the NRC. "We ask that the National Regulatory Commission (NRC) perform a thorough inspection at these two plants to evaluate their safety and emergency preparedness plans."

More recently, Feinstein asked the NRC to assess seismic and tsunami hazards, operational issues, plant security, emergency preparedness and spent fuel storage before it relicenses nuclear power plants.

"I believe that our understanding of many threats – especially seismic threats, tsunami threats, spent fuel risks, and terrorist threats – has improved dramatically since most nuclear power plants were originally designed and licensed thirty or more years ago," Feinstein wrote in the April 20 letter to NRC Chairman Gregory Jaczko. "Relicensing these facilities offers a unique

opportunity to review the original assessment of potential threats, in order to ensure that a facility is designed to endure all threats safely."

## **Japan's Nuclear Disaster Offers State Lessons (SFC)**

By David Perlman

San Francisco Chronicle, April 25, 2011

After Fukushima, what?

Japan's disastrous earthquake and tsunami that crippled its coastal nuclear reactors have reopened old questions for California: How big could the next inevitable earthquake be, and how safe are the state's nuclear power plants that now produce more than 15 percent of our electricity?

Federal and state experts are reviewing every aspect of what went wrong at Fukushima's reactors, where fuel rods overheated, cooling efforts proved inadequate, radiation escaped and evacuation signals were, at best, mixed.

The Nuclear Regulatory Commission, which holds power over the nation's 104 nuclear power reactors, has already completed its first 30-day assessment of their seismic safety status in the wake of Fukushima. That will be followed by two more as more lessons are learned from the Japanese disaster.

Operators of every nuclear plant in the country are doing the same, including PG&E's Diablo Canyon plant near San Luis Obispo, with its two nuclear reactors that generate the electricity consumed by 15 million people in Northern and Central California.

The Legislature's energy committees are hearing testimony from experts, while specialists at Diablo Canyon and at the San Onofre plant near San Diego are reviewing the built-in safety of their reactors and their tons of spent nuclear fuel now stored in pools of cooling water or in huge steel and concrete casks.

Meanwhile, the three expert members of the state's Independent Diablo Canyon Safety Committee and their staffs are studying the two massive reactors at the site to assess their vulnerability to quakes and tsunamis. That committee was created in 1988 after public disputes arose over the power plant's safety design in light of the unexpected discovery of a significant seismic fault beneath the ocean 3 miles offshore from the plant.

Peter Lam, a nuclear engineer and member of the committee, was at the Diablo Canyon site last week, and during a telephone interview with *The Chronicle* he cautioned: "It is wrong for anyone to say we are not Fukushima and therefore we're not vulnerable. We must make sure that we've learned."

Another independent committee member, Per F. Peterson, a professor of nuclear engineering at UC Berkeley and an expert on reactor safety systems who frequently advises federal energy agencies, testified in detail last week before the state Senate Energy Committee on at least four lessons learned from Fukushima.

One of them, he said, lies in the fact that the Fukushima plant suffered what is known as a complete "station blackout," in which all electrical systems operating the plant, including emergency backups, failed completely, and hydrogen leaking from the reactors exploded.

"We need to identify the specific pathways by which hydrogen leaked from the Fukushima reactor ... under conditions of station blackout, which resulted in large explosions, to assure that similar problems with the management of hydrogen could not occur in the US," Peterson said.

It's crucially important to take lessons from the accident in Japan, Peterson said, "and these lessons will certainly change our approach to nuclear reactor safety in the United States."

One reassuring forecast came from scientists at the US Geological Survey who constantly study every global seismic event.

Even if the entire 800-mile length of the San Andreas Fault were to rupture, it would produce an earthquake no bigger than a magnitude of about 8.3, said earthquake geologist David P. Schwartz. "The fault is long and skinny, and there isn't enough fault area to produce anything much larger, so a magnitude 9 quake (similar to the one that hit Japan) is out of the question here, at least to me and many others," he said.

The Fukushima reactors also were hit by the same devastating tsunami that destroyed so many towns and villages in the Sendai region with waves up to 46 feet high. And at Diablo Canyon, 85 feet above sea level, the maximum possible tsunami wave height there has been estimated at 30 to 35 feet, according to James Becker, PG&E's vice president of plant operations and the on-site station director at Diablo Canyon.

The plant's diesel-powered intake pumps that suck in sea water to cool the reactors are protected inside a concrete structure and could continue operating beneath waves as high as 45 feet, Becker said in an interview. To cool those pumps, two large "snorkels" are ready to rise above the waves and bring in air that keeps the intake pumps from overheating, he said.

So well-protected is the plant and so redundant are the stand-by emergency machines that both the reactors and their spent fuel storage facilities in both pools and dry casks could survive a complete "station blackout" for at least seven days until new power is brought in, Becker said.

In Southern California, the San Onofre nuclear plant's two reactors stand right at the edge of the Pacific, where waves lap the beach below. Officials there say the plant is built to withstand a magnitude 7.0 earthquake - greater than the 6.5-magnitude temblor that had been seen as possible there on a fault that lies about 5 miles offshore. The plant is also protected against possible surging waves by a 30-foot-high "tsunami wall," officials have said.

Whatever protection California's two nuclear power plants provide against nature's seismic and tsunami threats - and more lessons are still to come from ongoing investigations at Fukushima - the old debate over the inherent safety of nuclear power and its problems of long-term storage for its radioactive wastes will continue long after the Japanese nuclear plants are restored and the earthquake and tsunami are history.

California's 5 permanently closed nuclear power plants

1964 Santa Susana Sodium Reactor Experimental in Ventura County

1967 Vallecitos, near Livermore

1976 Humboldt Bay, Eureka (PG&E)

1989 Rancho Seco, near Sacramento (Sacramento Municipal Utility District)

1992 San Onofre 1, San Clemente (Southern California Edison)

World's most nuclear countries

France: 74% of electrical power is nuclear generated

Slovakia: 52%

Belgium: 51%

Hungary: 42%

Note: 19.6% of US electricity is nuclear generated

Source: Nuclear Energy Institute, California Energy Commission, US Energy Information Administration

California's in-state energy sources

Natural gas: 56.7%

Nuclear: 15.3%

Hydro: 12.2%

Coal: 1.8%

Renewable\*: 13.9%

\*Wind, geothermal, solar

Japan's energy sources

Nuclear: 11%

Coal: 21%

Natural gas: 17%

Oil: 46%

Hydro: 3%

Renewable: 1%

By the numbers

15.3 Percentage of California's electricity produced by the Diablo Canyon and San Onofre nuclear plants

9.0 Magnitude of the quake in Japan

8.3 Maximum magnitude possible on the 800-mile San Andreas Fault, according to USGS scientists

46 Height in feet of highest waves in tsunami that hit Japan

35 Height of maximum possible tsunami at the Diablo Canyon plant (which is 85 feet above sea level), according to PG&E

7 Millions of pounds of uranium ore bought from domestic suppliers for US reactors in 2009

43 Millions of pounds of uranium ore bought from foreign suppliers for US reactors in 2009

Top suppliers of uranium oxide to US in 2009

Australia: 11.16 million pounds

Canada: 8.97

Russia: 7.94

Namibia: 5.73

Kazakhstan: 4.99

And, by the way . . .

Item: The last nuclear reactor to enter service in the United States was the Tennessee Valley Authority's Watts Bar 1 in

1996.

Item: The Palo Verde nuclear plant in Arizona has the second-highest capacity (3,872 megawatts) of any electric power plant in the United States; Grand Coulee Dam in Washington is No. 1 at 7,079 megawatts.

## **Nuclear Regulators Want To Talk About San Onofre (SDUT)**

By Onell R. Soto

San Diego Union-Tribune, April 25, 2011

NRC meeting on San Onofre

What: Staff from the Nuclear Regulatory Commission will meet with Southern California Edison representatives to discuss its 2010 assessment of safety performance. The public will have the opportunity to ask questions.

When: 6 p.m., Thursday

Where: Capistrano Unified School District Board Room, 33122 Valle Road, San Juan Capistrano

More

These links take you to documents at [www.nrc.gov](http://www.nrc.gov):

March 4 letter from the NRC about 2010 plant performance (PDF)

Fourth Quarter performance summary for San Onofre Unit 2 (chart)

Fourth Quarter performance summary for San Onofre Unit 3 (chart)

A month after telling operators of the San Onofre nuclear plant that they were still having trouble with worker culture, the Nuclear Regulatory Commission wants to answer questions from the public.

The agency has scheduled a public meeting in San Clemente on Thursday to talk about how things are going on the nuclear plant.

Inspectors say the two-reactor plant is operating safely and have improved efforts to identify problems and fix them.

But it "has not been fully successful in addressing several longstanding human performance issues," the agency said.

The biggest problem, the NRC has found, is that front-line workers are afraid to bring up problems with their immediate bosses, despite exhortations from company brass that nobody should be afraid to raise safety issues.

It said it will continue inspections aimed at making sure there are improvements in how people work and that they do so safely.

So far, none of the problems have increased risks to the public, the NRC says

## **Edison Says Added Work Will Bump Up Earthquake-study Costs (NCT)**

By Paul Sisson

North County Times (CA), April 25, 2011

Japan's nuclear crisis is causing Southern California Edison to nearly double its request --- \$59 million instead of \$31 million --- to do a seismic study of the land around San Onofre Nuclear Generating Station.

Company spokesman Gil Alexander said last week that the project will cost ratepayers more because Edison is planning to do work beyond the already pricey three-dimensional earthquake fault mapping that represented the bulk of its original request in November.

Edison has estimated the rate increase would be less than 1 percent of a customer's overall electric bill. However, the company must get permission from the state's Public Utilities Commission before making such a rate hike.

Alexander said what happened in Japan on March 11 when that country's Fukushima Dai-ichi nuclear plant was severely damaged by a magnitude 9.0 earthquake and tsunami has caused Edison to broaden its studies for San Onofre.

For example, he said, new plans include drilling "boreholes up to 1,000 feet below the surface" in three locations at the San Onofre site.

"The soil samples from these boreholes will be analyzed to better understand the nature and formation of the soil structure beneath the plant," Alexander said in an email. "This deeper understanding ... will support more refined analyses of how the site responds to earthquakes."

Alexander said Edison also intends to study possible tsunamis in much greater depth than it had planned. New modeling work would take a look at how earthquakes occurring in the ocean might affect the plant.

The local studies "could include drilling in lagoons north of San Diego County to identify potential prehistoric tsunami evidence," Alexander said.

Tsunami estimates would also need to be redone in light of the new data that researchers will collect in three-dimensional seismic studies on the Newport-Inglewood/Rose Canyon fault, which runs parallel to the coast about 5 miles offshore. A state law passed in 2006 requires those studies.

Tom Brocher, director of the Earthquake Science Center at the US Geological Survey, said three-dimensional ground modeling is most often used by oil companies looking for new deposits deep beneath the ocean floor.

Specialized boats tow long arrays of sound-emitting hydrophones over sections of the sea floor. The low-frequency sound waves can penetrate as much as 30 miles into the earth, Brocher said. Frequencies change depending on what kind of soil or rock they hit when traveling through the earth, rebounding to the surface where they can be detected and assembled into a detailed map showing underground structures and faults.

"We wind up getting three-dimensional images of the subsurface like we get three-dimensional images of babies in utero," Brocher said, likening the process to ultrasound imaging. "It's a very powerful method for looking for things such as earthquake faults and the connections between earthquake faults."

He said that the maps can then be used to guide deep-ground borings that can in turn show just how fast a fault is slipping and just how probable another earthquake is in the future.

The mapping could also uncover evidence of the Oceanside blind-thrust fault, which Harvard University scientists predicted in a research paper published in 2000. Blind-thrust faults exist entirely underground and are not evident on the surface, unlike the San Andreas fault. Geophysicists found that the magnitude 6.7 Northridge earthquake in 1994 was caused by a blind-thrust fault.

Brocher said another area that could produce risk for the plant is the possibility of underwater landslides that new science has shown can create large tsunamis.

Alexander, the Edison spokesman, said that the planned surveys will map the location of landslide deposits. Depending on what maps and borings show, previous predictions of earthquake and tsunami risk at the plant could change.

The known faults in the area are predicted to produce an earthquake no larger than magnitude 7.0 off San Onofre's coastal location.

Brocher said he would not guess at what the studies might mean for earthquake risks in the region.

"It really could go either way. The hazard could be raised because you discovered something you didn't know about, or it could be reduced because the fault isn't as bad or as fast-moving as you thought it was," he said.

## **Safer Nuclear Reactors Impeded By Marketplace, Expert Says (FORBES)**

By Jeff McMahon

Forbes, April 25, 2011

Safer nuclear reactors have been available for years, but the energy market prefers less expensive conventional designs, a nuclear energy expert from Argonne National Laboratory said Thursday.

"There is a tremendous incentive to develop new reactors that have more inherent, intrinsic safety features, and we've been doing this for some time at ANR and at other research organizations," said Hussein Khalil, director of Argonne's Nuclear Energy Division.

"They've been developed to a fairly high degree of technical maturity, but none of them have been successfully commercialized yet because it appears they can't yet compete on an economic basis with the existing technology."

Khalil was one of four speakers Thursday at "Lessons from Fukushima," a University of Chicago panel that convened around the corner from the site of the first man-made sustained nuclear chain reaction in 1942—an event that gave rise to nuclear power, to nuclear weapons, and to the man-made radioisotopes that have been visited upon the world since the disaster at Japan's Fukushima Dai-Ichi nuclear plant.

Liquid-metal and sodium cooled reactors are examples of safer reactor designs, Khalil said, that have not been embraced by power companies proposing new plants in the US and overseas.

"It's clearly true that Nth-of-a-kind plants will cost less than first-of-a-kind plants, and there's a benefit from learning and repeating the construction of these [older] plants, but it's also true that the cost estimates for building new plants have gone up," Khalil said, pointing to the "regulatory uncertainty" faced by power companies that risk new designs.

"There's a market answer to this question," added Robert Topel, a University of Chicago economist on the panel:

Absent that impediment of learning by doing—where nobody wants to take the first step because it benefits everybody else—absent that, the fact that private investors are not putting up the money tells you that right now, based on their expectations of the near future, it's not all that happening."

Khalil's comments came in response to a call for safer plants from Kennette Benedict, publisher of the Bulletin of the Atomic Scientists—a publication founded in 1945 by the same scientists who founded nuclear energy, nuclear weapons, and the Argonne National Laboratory. Famous for its Doomsday Clock, the Bulletin's mission is to warn humanity about the dangers of nuclear technology.

"This is the most dangerous technology on earth," Benedict said. "The bombs that were created during the Cold War—the number was extraordinary. We still could demolish the world with bombs. And peaceful nuclear reactions are in a sense trying to control the bomb."

The discussion sizzled from the start with chain reactions between Benedict, who challenged the nuclear industry, and Khalil, who defended it:

"Fortunately," Khalil said, "based on the current data and analysis, it appears that there will be no widespread health consequences" from the Fukushima accident:

It's too early to know for sure, but there's a good possibility this will be the case. The local population was evacuated in time and does not seem to have received radiation in doses liable to induce health effects. In fact the consequences of the reactor accident, at least so far, pale in comparison to the enormous death and injury toll, the human suffering, and the devastating physical and economic damage from the earthquake and the tsunami.

"Because of differences in natural phenomenon hazards, reactor design features, and accident response capabilities, it's very unlikely that a Fukushima-like event could occur at a nuclear power plant in the U.S.... Nuclear fission is a major energy source today and it has proven its value in the US, in Japan and elsewhere."

But Benedict blamed the nuclear-power industry for putting profit before safety and failing to take measures that could make reactors safer:

We need to ask why safety measures which have already been suggested are not in place right now."

Khalil countered that some nuclear accidents—such as the Three Mile Island partial meltdown in 1979—have been more disastrous for reactor owners than anyone else:

Taking Three Mile Island as an example, that accident was first and foremost a financial disaster for the utility which owned the reactor. The release of radioactivity was very minor, the health effects were very minor. And today the same is true: all owners of these incredibly expensive facilities have a tremendous incentive to keep them operating safely."

Safety concerns were deemphasized at the beginning of the industry, Benedict replied, noting that issues of The Bulletin from the 1950s contain safer reactor designs. The US opted for more dangerous reactors, she charged, that could produce plutonium for weapons. She asked why we don't shut down reactors like the ones at Fukushima that are 40 or 50 years old, when we know there are better designs.

Benedict: "I believe that this would be a very good time to take a very deep breath and a very big pause. We haven't built a new plant in what, 20, 25 years—

Khalil: "Thirty-two years. So there's not a strong need to put the brakes on anything related to nuclear energy."

Benedict: "Terrific. So let's really sit down and think about this."

Despite her challenges to the industry, Benedict does not oppose nuclear energy: "Nuclear power is a technology that does not emit carbon so I think it is probably a part of the mix that we will need."

But when Argonne Deputy Director Mark Peters asked each panelist to describe—in two or three sentences—the future of nuclear power in the US, the prognosis ranged from uncertain to grave. The economist spoke first:

Topel: "I can answer in two or three words: I don't know."

Benedict: "Well, I'm going to do better than Bob in terms of brevity: It depends."

Khalil: "In the US we have a lot of energy options. Not the same is true in other countries. We also have less government determination of energy policy, and so I think the prospects for new plants are very limited. But I think we'll try to keep our existing plants going and try to get the most out of them. As long as we can safely do that."

Disclosure: Like the panelists, I work at the University of Chicago, but I work with split infinitives, not split atoms, in the Humanities Division.

## **Salem 1 Nuclear Reactor Returns To Service After Problem With Delaware River 'Grassing' Eases (TSNJ)**

By Bill Gallo Jr.

Today's Sunbeam (NJ), April 25, 2011

The Salem 1 nuclear reactor returned to service early today after being shut down for more than 37 hours because of vegetation in the Delaware River blocking its cooling water intakes.

The reactor began sending out electricity over the regional power grid at 5:19 a.m. today, according to Joe Delmar, spokesman for the plant's operator, PSEG Nuclear.

Control room technicians shut down the reactor around 4 p.m. Thursday after encountering a problem with heavy "grassing" in the river.

Grassing is caused by vegetation such as phragmites and other weeds growing along the Delaware River's shoreline and its tributaries becoming dislodged and floating downstream in the river and being pulled up against the protective screens around the cooling water intakes, blocking the flow of water.

Delmar said Saturday that problems with grassing had eased, allowing the restarting of the plant.

Salem 1 and its twin reactor, Salem 2, draw in from the Delaware River three billion gallons of water per day when operating at full power. The water is circulated throughout the plants for cooling and returned to the river.

The neighboring Hope Creek reactor at the Artificial Island nuclear generating complex has a cooling tower which recirculates water in the plant so it needs to draw only about 58 million gallons of water per day from the river when operating at full power.

The grassing problem did not impact Salem 2 since that reactor has been shut down for refueling since April 9.

Nuclear Regulatory Commission Spokesman Neil Sheehan on Friday said that the shutdown had been handled properly by plant operators.

Sheehan did note, however, that the shutdown will count as a hit against the plant's performance indicator for unplanned shutdowns. If a nuclear plant experiences more than three unplanned shutdowns during a period of 7,000 hours of operation, it would prompt additional oversight by the NRC.

Salem 1 was ascending back to full power early this evening.

The Hope Creek reactor remains operating at full power.

Each of the three reactors at Artificial Island, at full power, produce enough electricity for three million homes.

The reactors here comprise the second largest commercial nuclear power complex in the United States.

## **Delaware Energy: Grasses Force Salem Plant Shutdown (WILNJ)**

**Regulators count it as a 'hit' on record**

By Jeff Montgomery

Wilmington News Journal, April 22, 2011

Clogs from floating wetland grasses forced a shutdown of the Salem Unit 1 nuclear reactor along the Delaware River late Thursday, a seasonal and storm-related problem that federal regulators counted as a negative mark on PSEG's overall performance tally.

Salem 1 is one of two reactors at the three-unit complex that relies on river water for operational cooling and safety systems. One circulating water pump was already out of service for maintenance and another for cleaning when problems developed in a third pump, leading to a sudden clogging of a fourth -- a series of events that forced workers to manually "trip" control rods into place, cutting down reactor heat and stopping electricity production.

On-site Nuclear Regulatory Commission inspectors observed the shutdown, at about 4 p.m., while inside the reactor's control room, Neil Sheehan, NRC spokesman, said. Salem 1 was operating at about 89 percent of its 1,174-megawatt capacity at the time of the incident.

Inspectors reported that PSEG's handling was "appropriate," Sheehan said, but the unplanned shutdown "will count as a hit" against the plant's record.

The NRC can order increased oversight for plants that report four unplanned shutdowns in a 12-month period of operation.

The NRC has looked closely in the past at PSEG's handling of cooling and service water problems caused by grassing, most recently in 2009 and 2007, when reactors were shut down twice because of clogging.

PSEG's complex on Artificial Island, which can produce nearly 3,600 megawatts, is the second-largest in the nation. Company officials are seeking approval this summer for 20-year license extensions at all three reactors and have asked the NRC to approve a site for one or two more reactors along the river.

Environmental groups have urged the NRC to order a conversion to cooling systems for Salem Units 1 and 2 that would use cooling towers and recycle river water. The Hope Creek reactor is the only one on the site to use a cooling tower now.

## **Southern NJ Nuclear Plant Goes Back Online (AP)**

Associated Press, April 25, 2011

A southern New Jersey nuclear power plant has returned to full service after being offline for nearly two days, so crews could clear vegetation that was blocking cooling water intakes.

Today's Sunbeam of Salem reports that the Salem I reactor was restarted early Saturday and was back at full power by Saturday night.

The plant was manually taken offline around 4 p.m. Thursday and was out of service for about 37 hours. The shutdown was due to "grassing," a problem caused by vegetation, weeds and grasses that grow along the Delaware River and its tributaries. The vegetation becomes dislodged and floats downstream, and can become especially troublesome in the spring.

The reactor is one of three at the Salem/Hope Creek site in Lower Alloways Creek Township in Salem County.

## **Salem 1 Nuclear Reactor Shut Down Because Of Problems With River 'Grassing' (TSNJ)**

By Bill Gallo Jr

Today's Sunbeam (NJ), April 25, 2011

The Salem 1 nuclear reactor is shut down today because of problems with "grassing," the blocking of cooling water intakes by vegetation, officials said.

Salem 1 was manually taken off line Thursday about 4 p.m. and remains down today as operators attempt to clear debris causing the problem.

Grassing is caused by vegetation such as phragmites and other weeds and grasses growing along the Delaware River's shoreline and its tributaries becoming dislodged and floating downstream in the river.

Grassing can be especially troublesome in the spring when dead vegetation moves downstream. High tides and heavy rains — like the conditions seen last weekend — can dislodge even more of the dead materials and carry them downstream.

Salem 1 and its neighboring Salem 2 reactor together draw in and return 3 billion gallons of water from the river each day for cooling purposes. Hope Creek, the third reactor at the Artificial Island nuclear generating complex here, draws in only about 58 million gallons a day from the river because the plant has a cooling tower which recirculates cooling water.

Salem 1 had been operating at reduced power — 89 percent — at the time it was shutdown after the grassing issue became more severe, according to Joe Delmar, spokesman for the plants' operator, PSEG Nuclear.

The Nuclear Regulatory Commission said today that the shutdown was handled properly.

"Our resident inspectors assigned to Salem observed the shutdown from the plant's control room and identified no concerns with operator or equipment response," said NRC Spokesman Neil Sheehan.

"The inspectors have also concluded that PSEG's response to an increase in grassing this week was appropriate and in accordance with plant procedures used during the grassing season."

Delmar said he could not estimate when Salem 1 would return to service.

"River grassing continues to be an operating challenge for the Salem plants," Delmar said. "Our operators are trained to take appropriate measures when need as they did yesterday to ensure the safe shutdown of the plant.

"We will continue to explore opportunities to make plant modifications to lessen the impact of grassing on our plant operations," Delmar said.

The Salem 2 reactor was taken off line on April 9 for a scheduled refueling outage.

Each of the reactors generates enough power for 1 million homes.

## **Salem Unit 1 Shutdown (WDEL)**

By Peter Macarthur

WDEL-AM, April 25, 2011

The Salem Unit 1 nuclear power plant had to be shutdown Thursday afternoon.

Neil Sheehan with the Nuclear Regulatory Commission says it wasn't due to something that happened inside the plant, but outside the plant, in the Delaware River.

He says it's a condition they've dealt with before at the facility called 'grassing.'

Sheehan says Salem has worked to prevent grassing but it still happens seasonally.

He says if Salem has another two unplanned shutdowns in its next 7 thousand hours of operation, it would warrant additional monitoring from the NRC. Copyright © Apr 24, 2011, WDEL/Delmarva Broadcasting Company. All Rights Reserved.

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## **Salem 1 Nuclear Reactor Shut Down For Vegetation Blockage (NEWSWORK)**

By Shannon McDonald

NewsWorks.com, April 25, 2011

The Salem 1 nuclear reactor was shut down late yesterday and remains that way due to grassing, the blocking of cooling water intakes by vegetation.

It's not clear when the reactor's service will be restored.

Weeds and other grasses along the Delaware shoreline have dislodged, floating downstream toward the reactors, as Today's Sunbeam reports, and Salem 1 and 2 take in and return a combined three billion gallons of river water each day for cooling.

The Nuclear Regulatory Commission says the shutdown, which began as a reduction of power when the grassing started, was handled properly.

## **USEC Plant Reviewing Safety After Earthquake (AP)**

By David Freddoso

Associated Press, April 25, 2011

A uranium enrichment plant in western Kentucky is reviewing safety regulations and emergency response protocols after an earthquake and tsunami in Japan damaged a nuclear power plant there.

USEC Inc., which runs the Paducah Gaseous Diffusion Plant, started the review in March, shortly after a 9.0 earthquake destroyed parts of Japan and set off a tsunami that flooded a nuclear power plant.

USEC Vice President Steve Penrod told The Paducah Sun that the review is voluntary, even though two national industry organizations urged all members to review protocols.

USEC only enriches uranium that is later used in nuclear power plants in Paducah. Penrod said the plant doesn't have a nuclear reactor or the spent-fuel pools that nuclear power plants feature.

"It's been said we're more of a chemical plant that processes radioactive materials," said Georgann Lookofsky, USEC spokeswoman.

The distinction is an important one as worries and renewed scrutiny have arisen after radioactive contamination in Japan from one of the world's worst nuclear incidents.

Penrod said in enriching uranium, the plant pressurizes gas and sends it through a process. Losing power and shutting down the process would only cool off the facility and pose no health risks as far as contamination, Penrod said.

The US Nuclear Regulatory Commission hasn't handed down changes to guidelines at the plant site. Pressure is on nuclear facilities as nuclear-safety and environmental groups have called for an independent investigation on pools that store spent fuel and a moratorium on relicensing and approvals of new designs.

The Paducah Area Chamber of Commerce board asked for a presentation from Penrod in early March on the situation in Japan, said chamber president Elaine Spalding.

"We wanted to know, 'What are the facts?'" Spalding said. "We're still sort of waiting to see what exactly the facts are with the crisis in Japan."

## **USEC Plant In Western Ky. Reviewing Safety, Emergency Protocols After Japan Earthquake :: The Republic (AP)**

Associated Press, April 25, 2011

A uranium enrichment plant in western Kentucky is reviewing safety regulations and emergency response protocols after an earthquake and tsunami in Japan damaged a nuclear power plant there.

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## **Callaway Nuclear Bill Still Has A Chance, Both Sides Say (SLPD)**

By Jason Hancock

St. Louis Post-Dispatch, April 25, 2011

State Sen. Robin Wright-Jones didn't mince words last week in describing the chances of passing legislation aimed at funding a preliminary permit for a new nuclear facility in Callaway County.

"I think the bill is likely dead for this session," the St. Louis Democrat said, later adding: "This session, with only three weeks left, I just don't think we can breathe life into it."

Throughout debate over whether to allow Ameren Missouri to charge customers for its share of the cost of obtaining this early site permit from the US Nuclear Regulatory Commission, finding common ground has never been easy.

But even with hope for passage dwindling as the session winds down and issues such as redistricting and budgets take up the lion's share of lawmakers' attention, those actively fighting for and against the measure agree on one thing: There is time this year to get something done.

"There is still, in the legislative process, an eternity left," said Chris Roepe, director of the Fair Energy Rate Action Fund. "There is still a lot of time for things to happen. I wouldn't rule anything out yet."

Roepe's organization, which is a coalition of some of Ameren's largest customers, opposed the legislation that stalled on the Senate floor last week, saying it didn't adequately protect consumers.

Irl Scissors, the executive director of Missourians for a Balanced Energy Future, supported the measure. He, too, says the bill is far from dead, even this late in the session.

"Until May 13 (the day the session adjourns) rolls around, anything is possible," he said. "We'll keep pushing, and I am still hopeful that this can get done."

A late-session resurrection would be just the latest twist for a bill that has become one of the most contentious measures of the year.

The year started with Gov. Jay Nixon, who opposed similar legislation two years ago, publicly declaring his support for the bill. Among other things, the measure would allow a coalition of utilities to recoup about \$45 million for a site permit. The new legislation would be necessary because of a law approved by voters in the 1970s that shortly after the first Callaway facility was built that restricts utility companies from raising rates to finance the construction of a new plant before it is complete and online. Ameren has said it cannot finance the plant, which will cost billions of dollars, without recouping some of its costs before the plant is built.

Even before the legislative session began, a coalition of companies and consumers opposed to the bill started running television ads criticizing it. Ameren Missouri pushed back with ads saying the bill would cost the average Missouri consumer only \$2 a year.

The first real hurdle came when Senate President Pro Tem Rob Mayer, a Republican from Dexter who opposes the measure, decided that all legislation concerning a new site permit for a nuclear facility would be assigned to a committee chaired by state Sen. Jason Crowell, R-Cape Girardeau, another vocal critic of the bill. Crowell then drafted his own legislation, which would allow Ameren to charge consumers for the permit but would set up \$3 million in additional funding for the Office of Public Counsel, the state agency that represents consumers in electricity rate cases.

That bill cleared Crowell's committee but has not been brought to the full Senate.

The bill backed by Nixon and a majority of Senators was originally filed by state Sen. Mike Kehoe, R-Jefferson City. In order to get his legislation out of Crowell's committee, Kehoe attached the language to a separate bill sponsored by Wright-Jones. That bill, SB 48, came to the Senate floor last week.

Kehoe said the bill contained concessions that consumer groups had been asking for, including language to fund the Office of Public Counsel, a cap on how much the companies can charge consumers and protections if the facility is never built or if the permit is obtained and then sold. After more than an hour of discussion, however, Crowell asked Mayer to rule the bill out of order, saying the new measures went beyond the scope of the original legislation.

The procedural move, known as a "point of order," ended debate on the bill without a vote.

Despite the setback, Kehoe remains optimistic. He said conversations would continue on the bill and whether some version can make its way to the full Senate.

"I know that now everything is subject to the 'point-of-order' rulings, but the bottom line is that the conversation needs to be had to see how we're going to go forward," Kehoe said. "Because nobody else has come along and said, 'Here's what we're going to do for energy.'"

Disagreement continues

State Rep. Chris Kelly, D-Columbia, said neither side of the debate appeared truly willing to compromise. Even though big majorities in both legislative chambers support the idea, there is little chance it will pass before the session adjourns, he said.

The only path forward at this point, he said, would be for Nixon to call a special legislative session. Last year Nixon called lawmakers back into session in order to pass tax incentives for a Ford Motor Co. plant in Kansas City. Kelly said that although he believed that special session was important, "the Ford issue was tiny compared to this."

"Construction of this plant is hugely important to Missouri," he said. "I hope Gov. Nixon calls a special session."

Nixon's office declined to speak about the bill and was noncommittal about a special session.

"The Legislature has plenty of time to take care of the people's business in the next three weeks," said Sam Murphey, Nixon's spokesman.

Scissors, of Missourians for a Balanced Energy Future, said he didn't understand why opponents of the original bill continued to oppose the latest legislation.

"I'm not sure how sincere they are," he said. "They've had three demands all along, and SB 48 included those demands. In our eyes, what they were upset with was addressed in the bill."

The consumer protections opponents demanded — a hard cap on spending, clawback provisions and funding for the Office of Public Counsel — were addressed in the legislation but not in an adequate way, said Roepe of the Fair Energy Rate Action Fund. The hard cap of \$45 million isn't a cap at all, he said, and the clawback provisions provide for too much discretion that could allow the company to avoid paying consumers back if a facility isn't built. And while the bill does provide additional funding for the Public Counsel, it does so by taking money from the Public Service Commission.

Roepe said his organization was willing to support Crowell's version of the legislation, which includes all three of the provisions opponents have demanded. A House committee passed another version of Kehoe's original bill earlier this year, but it has not made its way to the full House.

Wright-Jones remains pessimistic about a deal: "In this session, we have done about as much as we can do."

## **Kelly Suggests Special Session For Ameren Bill (COLDATR)**

By Andrew Denney

Columbia (MO) Daily Tribune, April 25, 2011

With the fate of the Callaway nuclear plant bill in question, members of the Missouri House are calling on the governor to consider a special session to hammer out a deal.

The legislation in question is a bill that would help Ameren Missouri get financing to construct a second nuclear power plant in Callaway County. The bill has been held up in a state Senate committee that has not held a hearing in more than a month.

The project could help attract jobs to the state, said State Rep. Chris Kelly, D-Columbia, as well help to increase the state's energy output.

Last year, Gov. Jay Nixon called a special session after an economic incentives bill aiming to keep a Ford manufacturing plant in Claycomo failed to pass in the final days of the regular session. The plan to build a nuclear power plant is "five times bigger" in terms of economic development, Kelly said.

"It is the most economically important issue facing the state by a long shot," Kelly said.

The bill, sponsored by Sen. Mike Kehoe, R-Jefferson City, would allow Ameren to increase bills for ratepayers so it can purchase a site permit from the Nuclear Regulatory Commission. The bill includes a "clawback" provision that would require Ameren to refund any money it receives from a rate increase, if the company decides to sell off the site permit. The bill also would increase funding for the Office of Public Counsel, which represents ratepayers in utility cases, and include a \$45 million cap on how much the company can collect from rate increases to fund the project.

But the bill has come under fire from heavy energy users such as Anheuser-Busch and Noranda Aluminum for the additional costs Ameren could levy upon their operations as the result of a rate increase. Kehoe's bill is held up in a committee chaired by Sen. Jason Crowell, R-Cape Girardeau, whose constituency includes Noranda employees.

The language in Kehoe's bill was tacked onto a utilities bill sponsored by Sen. Robin Wright-Jones, D-St. Louis, but this week Senate President Pro Tem Rob Mayer, R-Dexter, shot down that bill, calling it out of order.

Kelly said the senators in that dispute are fighting for the companies that are part of their constituencies, but he said it is Ameren that has been unwavering in its position in negotiations over the legislation, which has complicated the process.

Kelly said considering the fact that its project could cost as much as \$10 billion, Ameren should be more willing to give a little to appease the opposing parties.

Irl Scissors, executive director of Missourians for a Balanced Energy Future, a lobbying group that is supporting the bill, said he is optimistic a bill can be passed by the legislature before the end of the session.

Scissors also disagreed with Kelly's view that Ameren has been unwilling to compromise in negotiations over the bill. The Fair Electric Rate Action Fund, a lobbying group of which Anheuser-Busch and Noranda are members, had pushed for the consumer protection elements contained in Kehoe's bill.

Kelly said he knows the plan would be able to attract a majority vote from both chambers if brought out for a full vote. He also said the General Assembly should pass a bill that puts the decision to voters.

"We ought to have the good sense to ask them instead of just shoving it down their throats," Kelly said.

House Speaker Steve Tilley, R-Perryville, said Kelly's reasons for a special session — the size of the investment, the jobs it would create and the need to move ahead — are valid. But he noted that the legislation under consideration is only for a site permit, not for actual construction.

"I am a supporter of Ameren's plan for a nuclear plant in Callaway County," Tilley said. "I would encourage the Senate to take up the bill and get it done."

Tribune reporter Rudi Keller contributed to this article.

## **Decision Due On Nuclear Plant Zoning (PUEBLO)**

By Peter Roper

Pueblo Chieftain, April 25, 2011

Pueblo County residents have been waiting for 39 days for a decision that comes Monday.

The Board of Commissioners will sit down at 5 p.m. and decide whether to rezone land in the eastern county for a possible nuclear power plant. The special land-use meeting will be in the Sangre de Cristo Arts and Conference Center ballroom — the same venue where the commissioners last month listened to two long nights of impassioned public testimony on the pros and cons of nuclear power.

Regulations allow the commissioners to take 40 days to render a decision on the proposal. They decided to take almost every hour of that time because of the thousands of pages of testimony and material submitted at the hearings.

The nuclear power question comes from local lawyer Don Banner, who is asking the county to rezone 24,000 acres in the eastern county for something called the Colorado Energy Park. Banner wants the land classified as a planned unit development, which opponents have hotly argued is the wrong process for something as important as zoning property for a nuclear power plant.

Banner's plan has been forming since last year, but the public debate couldn't have come at a more dramatic time. The commissioners are deliberating over the question of nuclear reactor safety just as Japan continues to struggle with several failed and leaking power-plant reactors damaged by the March's massive earthquake and tsunami.

Banner's plan has created its own storm of controversy as anti-nuclear activists from the around the region and the Front Range descended on Pueblo to oppose his proposal.

Roughly 500 people filled the arts center conference room on the night the commissioners took testimony from opponents.

Banner is something of a maverick. By his own admission, he doesn't have a utility interested in building a nuclear power plant, but he does have short-term options on the 24,000 acres south of Avondale that he wants designated as the energy park. A self-described enthusiast for nuclear power, Banner is making his request on the theory that if Pueblo County zones acreage for a power plant, that could entice a developer to start the long process of licensing and building one.

Given that the federal Nuclear Regulatory Commission hasn't licensed a new reactor since 1978, Banner acknowledges that he is waging a steep, uphill fight to get the land zoned and a plant built here. "I give myself about a 10 percent chance of getting this done," he said in an interview before the public hearings last month.

Banner is an electrical engineer as well as a lawyer. He initially consulted on the project with Don Gillespie, an Idaho businessman whose company, Alternate Energy Holdings company, is trying to raise money for a reactor in that state. Gillespie's company came under scrutiny last year by federal investigators, however, who challenge where the investment money is being spent. Prosecutors wanted Gillespie's accounts frozen but a federal district judge unfroze them in January. A lawsuit by the Securities and Exchange Commission remains.

Banner has distanced himself from Gillespie, saying they have no partnership or shared financial interests in the Pueblo County project.

About 150 supporters came to Banner at the commissioners' hearing last month, but he has drawn up the proposal largely on his own.

His campaign, however, ignited a wildfire of opposition. Rallying into a loose coalition calling itself Puebloans for Smart Energy, opponents have organized rallies and town hall meetings to keep their ranks energized.

The critics include local farmers, residents and activists as well as representatives from national groups, such as the Sierra Club and Physicians for Social Responsibility.

They have given the commissioners a long list of issues that challenge the fundamental safety and efficiency of nuclear power.

As for the commissioners, they can approve the planned unit development request, reject it or approve it with conditions. Although Banner is making a land-use request, the commissioners also could settle the matter by deciding a much larger question, that they do not believe current nuclear technology is safe.

Gary Raso, the county's land-use attorney, said a fundamental issue in all land-use decisions is whether there is an impact on the health and welfare of county residents.

## **Nuclear Power Plant Decision Coming Soon (KRDO)**

By Lila Hollin

KRDO-TV, April 25, 2011

Pueblo County Commissioners will decide if Pueblo County will be home to a nuclear power plant.

Commissioners will vote on rezoning the eastern part of the county, which would allow for a future energy park. Puebloans For Energizing Our Community are behind the project.

Residents in Pueblo have been speaking up since the news first broke a few months ago.

"My thoughts are that it would open up more job opportunity," said Tiffany Brown.

But, others said they weren't as optimistic.

"It just doesn't seem like a good idea. It doesn't seem very safe," said Naomi Lavato.

If commissioners vote to rezone, a nuclear power plant could be built between Avondale and Fowler along Highway 50. It would be several years before it would be up and running. KRDO NewsChannel 13 also learned there is no developer on board.

The decision will be made Monday at 5pm at the Sangre De Cristo Arts and Conference Center.

## **Decision Due On Controversial Nuclear Development Plan (KKTU)**

By Shannon Brinias

KKTU-TV, April 25, 2011

A decision is due Monday from the Pueblo County Board of Commissioners on whether to grant a zoning change for a possible development of a nuclear power plant.

In early March, county commissioners heard testimony from supporters and opponents of the plan involving a plot of land east of Pueblo off Highway 50.

The proponent, Don Banner, needs to get a zoning change in order to pursue the plans for the 24,000 acre parcel.

However, that would be only the first step in a long journey to obtain the necessary authorizations and funding to go forward with building a nuclear plant.

No utility has yet expressed an interest in building a nuclear power facility at the site.

## **Greens Question Cuomo Policies (ATU)**

By Brian Nearing

Albany Times Union, April 25, 2011

On Earth Day, the Green Party of New York called upon Gov. Andrew Cuomo to ban hydrofracking for natural gas, shut down nuclear power plants and undo a delay on a sales ban on outdoor wood boilers.

Speaking outside the governor's mansion, Green Party officials said the governor's environmental stances are lukewarm at best. "He is not doing enough," said Mark Dunlea, chairman of the party's Issues Committee.

Natural gas hydrofracking, a technique that relies on a high-pressure mix of chemicals, sand and water to shatter gas-bearing rock formations deep underground, is still being studied by the state Department of Environmental Conservation before it issues rules on the process.

"Hydrofracking will destroy our countryside while threatening our water supplies. New York has adopted some good statements in support of developing renewable energy, but this year's budget failed to make new major investments while continuing the deep environmental cuts of recent years," said Peter LaVenita, Green state co-chair.

Cuomo has said he is against hydrofracking if it threatens drinking water aquifers and that he wants to proceed with caution on any use of the technique.

Dunlea also criticized an emergency decision earlier this month by the DEC to give businesses another three months to sell outdoor wood boilers that don't meet new stricter pollution rules. The deadline for such sales was extended from April 15 to July 15.

"They kind of snuck this through. This is something that the governor could have done correctly, but they reversed their position," Dunlea said. Critics say the boilers release excessive levels of unhealthy pollution, but supporters defend the units as important sources of home heating in rural areas.

Some boiler models currently sold in the state meet new emissions requirements, while others do not. More than 14,500 boilers were installed across the state from 1999 to 2007 as more people turned to wood a low-cost way to heat their homes.

Just one of the dirtiest wood boilers can create the same emissions as 1,000 oil furnaces, according to DEC, and can send out smoke that can worsen asthma and other breathing conditions.

Green Party officials also renewed calls for the state to shut down nuclear power plants at Indian Point and near Lake Ontario -- Fitzpatrick and Nine Mile Point Unit 1 -- that share the same design as the tsunami-damaged reactors in Japan.

Cuomo has made it clear that he'd like to see Indian Point shut down.

David Doonan, mayor of Greenwich, Washington County and Green Party member, said his town is considering a resolution opposing calls by Congressman Chris Gibson to site a nuclear power plant in his 20th District.

"They're basically sitting time bombs," said Doonan. "To build a new one without knowing what to do with the waste is morally reprehensible."

## **Greens Have Earth Day Challenge For Cuomo (GOTH)**

By David King

Gotham Gazette, April 25, 2011

As the battle over hydrofracking heats up thanks to a chemical spill in Pennsylvania and the Department of Environmental Conservation's impending draft environmental impact statement the Green Party is challenging Cuomo to support a ban on hydrofracking. That of course is not all they want of Cuomo. They would also like him to immediately shut down ♦ the nuclear reactors at Indian Point, Nine Mile Point and Fitzpatrick. Check out their full list of demands: ♦

On Earth Day, Green Party Urges Cuomo to Shut Down Nukes, Ban Hydrofracking

NY Should Invest in a Green New Deal to Provide Jobs and a Carbon Free Economy

The Green Party of New York observed Earth Day today by calling upon Governor Cuomo to support a ban on hydrofracking for natural gas and an immediate shut down of not only Indian Point but the nuclear reactors at Fitzpatrick and Nine Mile Point Unit 1 that are the same design as the Fukushima Daiichi plant in Japan

The Greens criticized the Cuomo administration for its recent decision to delay the ban on the sale of outdoor wood burners which cause tremendous air pollution and negative health impacts, and his failure to support a ban on the hydrofracking of natural gas.

"Investing time and resources into hydrofracking of natural gas is another case of building a bridge to nowhere. Natural gas is just another fossil fuel. Hydrofracking will destroy our countryside while threatening our water supplies. New York has adopted some good statements in support of developing renewable energy but this year's budget failed to make new major investments while continuing the deep environmental cuts of recent years. And the state's draft energy master plan wants to construct 20 new nuclear power plants. The tragedy in Japan is just the latest evidence that nuclear power is a bad energy solution," said Peter LaVenia, co-chair of the state Green Party.

The Green Party released its new national platform. The section on ecological sustainability is at <http://www.gp.org/committees/platform/2010/index.php>

The Greens want New York to shut down all ♦ its nuclear power plants and to transition to a carbon free economy within the next decade through massive investment in green renewable energy such as conservation, wind and solar as well as mass transit.

In his recent Gubernatorial campaign, the Greens' Howie Hawkins outlined how a Green New Deal (aka Climate Action Jobs Program) would be financed through various taxes (e.g., stock transfer tax, bankers bonuses) on Wall Street and the wealthy (steeper personal income tax rates), a state carbon tax and at least a 50% cut in the federal military budget. The Greens support providing living wage green jobs to all New Yorkers who can't find one in the private sector

The Green Party's David Doonan, Mayor of Greenwich in Washington County, has introduced a resolution in opposition to the efforts by Congressman Gibson to site a nuclear reactor in the 20th Congressional District. "They're basically sitting time bombs," Doonan said. "To build a new one without knowing what to do with the waste is morally reprehensible."

The Indian Point Nuclear plant is located at the intersection of two earthquake faults and has been cited for many safety violations over the years. ♦ The NRC said that the plant has the highest risk of core damage from an earthquake among all U.S nuclear plants. ♦ Located only 25 miles from NYC and within a 50 mile radius of 25,000,000 people, there is no way that this population can be evacuated in time in case of a serious nuclear event.

Nationwide, the Greens are calling for the early retirement of all nuclear power reactors as soon as possible (in no more than five years), and for a phase-out of other technologies that use or produce nuclear waste. All six of the "low-level" nuclear waste dumps in the United States have leaked

The Greens said that the Republican Party are climate change deniers while the Democrats have walked away from any meaningful action in the US to curb carbon emissions while continuing to block needed international curbs on greenhouse gases.

"The Democrats tell their supporters they can't act on climate change because they have to fix the economy first but they continue to promote more tax cuts for the rich while they slash funding for an array of domestic programs. Even countries like

China realize that their future lies in investing in the technology to make the transition to a green economy,” said Mark Dunlea, co-chair of the Issues Committee.

The Green national platform outlined an array of environmental reforms.

Dunlea added “Our food system needs to be de-carbonized. Most politicians say they support local food systems but all we hear is lip service. None of them have taken the lead to enact sustainable organic growing standards, establish meaningful standards for the purchase of local foods, or make infrastructure investments in small scale food processing.”

The Greens said the state and federal government need to adopt a sustainable agriculture policy. New York should do more to support producer and consumer cooperatives, community kitchens, Community Supported Agriculture (CSA), urban agriculture, and community farms and gardens. Cuomo still had not made public the details of the low-income CSA initiative that Cuomo announced in his state of the state address. It called for the NYS Food Policy Council to be overhauled to add in stronger representation from food justice and anti-hunger advocates and family farmers.

At the federal level, the Greens called for an overhaul of the current federal Farm Bill to shift funding from agribusiness to family farms, and to support sustainable agriculture systems that promotes healthy, local, nutritious foods rather than subsidizes fats and sugar. The Farm Bill should also lead the way in helping our agriculture system respond to climate change.

The Greens want New York to adopt the Precautionary Principle and the Zero Waste Movement. The Greens called for the phase out all avoidable production and sale of toxic metals, persistent organic pollutants, persistent bio-accumulative toxins, synthetic petrochemicals, and halogenated chemicals, replacing them with non-toxic alternatives. The Greens said that the state needed to improve the performance of its Pollution Prevention Institute. The Greens would make manufacturers responsible for the full life cycle of their products by requiring them to take back used products and packaging for remanufacturing, reuse, or recycling. It supports a tax on plastic bags. Corporations should be held strictly liable for the consequences of the pollution they produce, including robust eco-taxes to capture the social costs of such products (e.g., health impacts, clean up costs.)

The Greens called upon the state to provide more leadership in improving municipal recycling programs, including the construction of regional Material Recovery Facilities to strengthen the collection and marketing of recyclables. The Greens remain opposed to garbage incinerators.

## **State Green Party Wants Fracking Banned, Nuke Plants Closed (POTH)**

By Cara Matthews

Politics on the Hudson (blog), April 23, 2011

In an Earth Day news conference in front of the Governor’s Mansion in Albany, the state Green Party called on Gov. Andrew Cuomo to ban hydraulic fracturing for natural gas in the state and close the Indian Point nuclear plant in Buchanan, Westchester County, as well as the nuclear reactors Fitzpatrick and Nine Mile Point Unit 1 in Scriba, Oswego County.

The state should transition to a “carbon-free economy” in the next 10 years by investing heavily in renewable energy like wind and solar, as well as conservation and mass transit, according to the party.

“Investing time and resources into hydrofracking of natural gas is another case of building a bridge to nowhere. Natural gas is just another fossil fuel. Hydrofracking will destroy our countryside while threatening our water supplies,” Peter LaVenja, co-chairman of the state party, said in a statement.

“New York has adopted some good statements in support of developing renewable energy but this year’s budget failed to make new major investments while continuing the deep environmental cuts of recent years. And the state’s draft energy master plan wants to construct 20 new nuclear power plants. The tragedy in Japan is just the latest evidence that nuclear power is a bad energy solution,” he said.

Some of the other measures the state Green Party wants include :

—A Green New Deal to create jobs. It would be funded through various taxes on Wall Street and the wealthy, such as bankers’ bonuses and higher personal income-tax rates, a state carbon tax and a cut in the federal military budget of at least 50 percent.

—A “de-carbonized” food system that includes sustainable organic growing standards, meaningful standards for the purchase of local foods and infrastructure investments in small-scale food processing. New York should do more to support producer and consumer cooperatives, community kitchens, urban agriculture, and community farms and gardens.

The Green Party said in a statement that Cuomo hasn’t made public details of his plans to overhaul the state Food Policy Council to include more representation from anti-hunger and food-justice advocates and family farmers.

At the federal level, the party is calling for an overhaul of the current federal Farm Bill to provide more funding to family farms and support sustainable agriculture systems that promote healthy, local and nutritious foods. The party just released its new national platform.

## **Plant Has Multiple Safety Features (CHAROBS)**

By Dave Vieser

Charlotte (NC) Observer, April 25, 2011

The likelihood of a nuclear disaster at Duke Energy's McGuire Station similar to the one being experienced in Japan is virtually non-existent, according to site Vice President Regis Repko.

Repko outlined design features built into the 800-acre Huntersville facility, which offer multiple layers of protection in the event of any emergency, for about 50 local business leaders April 20 in Cornelius.

"The videos from Japan convey a horrific situation which is hard to imagine" said Repko.

"In truth, it was the tsunami, not the earthquake, which caused so many problems with the Fukushima Power Plant.

"At McGuire, we have a robust design and numerous procedures built into our operations which, we believe, would prevent such a nuclear emergency from ever occurring."

Repko emphasized three major areas at McGuire with extra safeguards: Seismic impact:

McGuire was built to withstand earthquakes far beyond those experienced in the past in this part of the country. In contrast, the Japanese plant sits on the rim of the seismically active Pacific Ocean area. Water intrusion/flooding:

A number of systems have been installed at McGuire to handle the unlikely failure of all upstream water control facilities, such as dams, on Lake Norman and the Catawba River chain. This renders water intrusion into the facility virtually impossible. Fuel storage:

McGuire's fuel-storage facilities are superior to the above-ground units employed and ultimately compromised in Japan.

McGuire Nuclear Station is off N.C. 73 in Huntersville on the south end of Lake Norman. About 300,000 live within the 10-mile radius of the plant used to determine who should evacuate in case of an emergency. The towns of Cornelius, Huntersville and Davidson are within that 10-mile radius, as is Denver. The lake provides cooling water for McGuire, which actually has two separate nuclear units, each of which generate about 1100 megawatts of electricity or enough to power the entire city of Charlotte. Unit 1 began commercial operation in 1981, followed by Unit 2 in 1984.

Another factor working in favor of McGuire, according to Repko, is the experience of plant employees.

"We have about 1,200 employees at McGuire with an average experience of over 20 years. In fact, a good many of them were involved with the plant during its construction."

In addition to the safety precautions built into the plant, the Nuclear Regulatory Commission (NRC) conducts periodic safety inspections and drills to ensure that the facility is operating properly and is safe from attack.

During some of these inspections, the NRC's terrorism team actually conducts a mock attack on the plant.

"This is like the real thing: The NRC team, which is comprised of ex-Navy seals and similarly experienced operatives, makes an aggressive attempt to penetrate our property just to test our resources. So far, they have never succeeded."

Repko says these mock attacks are so real that Duke has to have a fence repair crew on stand-by since the NRC team will often cut their fence in an effort to get to the plant.

In attempting to explain the basic operation of a nuclear plant, Repko, a Pennsylvania native who lives with his wife, Mary, and their two sons in Denver, said the second part of the production process at McGuire is not unlike a plant powered by fossil fuel such as coal, or natural gas. The difference is that the use of nuclear fuel in the first stage is far more cost efficient. In addition, there are no carbon emissions.

When asked why there aren't more nuclear power plants throughout the country, Repko attributed it primarily to lack of education and understanding about the safety features built into the plants.

"When I show some of my fellow plant directors around the country photos we've taken each summer showing Lake Norman boaters enjoying the Charlotte Symphony Orchestra with the nuclear plant in the background they inevitably say that it could never happen in their part of the country." Dave Vieser is a freelance writer for Lake Norman News. Have a story idea for Dave? Email him at davidvieser@gmail.com.

## **Carolina Nuclear Zones Studied (RHH)**

By Bruce Henderson And John Fryman

Rock Hill (SC) Herald, April 25, 2011

A federal safety review of US nuclear plants after the crisis in Japan will include whether to expand the 10-mile evacuation zones around plants like Duke Energy's Catawba plant on Lake Wylie.

The emergency planning zones haven't been changed since they were first required shortly after the worst US nuclear accident, Three Mile Island in 1979. That was a few years before Duke Energy finished its Catawba plant near York, as well as and its McGuire plant in Huntersville, N.C.

Much has changed around their rural sites, notably the number of people who now live within 10 miles of the two plants. Official estimates put the number at 370,000, while an Observer analysis of 2010 demographic data says nearly 394,000. According to census data, 213,407 live within 10 miles of the Catawba plant.

Clear out a 50-mile radius, as US authorities advised Americans near Japan's crippled Fukushima Daiichi plant to do, and the figure jumps to more than 2.5 million people around each plant.

The Nuclear Regulatory Commission says it would issue the same advice for an accident of equal magnitude on US soil. Some members of Congress have asked whether a 50-mile evacuation zone should become the US standard.

"When all else fails, we have to be absolutely certain that the way to evacuate these areas is foolproof," Sen. Frank Lautenberg, D-N.J., said at a Senate hearing this month.

The NRC set up a safety-review task force as the Japanese plant continued to leak radiation. Expanding evacuation boundaries "is on the table, as is everything else at this point," said Roger Hannah, an NRC spokesman in Atlanta.

Susan Cutter, director of the University of South Carolina's Hazards & Vulnerability Research Institute, said no large-scale accidents have occurred in the United States to test the 10-mile zones.

"I think it would be prudent to reassess the whole planning process given what has gone on," Cutter said. The US zones are smaller than the 12-mile radius Japan cleared around the Fukushima plant, she noted, and the 30-mile zone around Chernobyl, the Ukraine plant that released massive amounts of radioactive material in 1986.

The 10-mile radius was based on simulations of nuclear plant accidents that showed at what distance a radioactive plume is likely to hurt people.

"We have no evidence today that undermines" those findings, said John Keeley of the Nuclear Energy Institute, an industry group.

Duke has no position on expanding the zones, said spokeswoman Rita Sipe.

"Our industry wants to clearly understand the events of Japan and to look at lessons learned," she said. "We know the NRC will do a thorough review."

But physicist Edwin Lyman of the Union of Concerned Scientists, a watchdog group, said the 10-mile zones are inadequate and not science-based.

Lyman said his simulations of nuclear accidents show that lethal doses of radiation could extend beyond 10 miles. Fukushima, where high-level radiation reached a village 25 miles away, made that clear, he said.

"Right now, people in downtown Charlotte are not aware that they could be at risk from Catawba and McGuire," Lyman said. "There's no legal requirement that they even be warned."

#### High-traffic concerns

Some landowners predicted nobody would want to live near a nuclear plant when Catawba and McGuire were under construction in the early 1980s. They were wrong. Lakes Wylie and Norman became irresistible lures to home buyers.

Crescent Resources, Duke Energy's former land subsidiary, developed communities near both plants.

Lake Wylie resident Tabitha Mendoza, who lives less than five miles from the Catawba plant, worries that the area could be an easy terrorist target.

"There are not that many ways in and out of Lake Wylie, so yes, it does concern me," she said by email. "I never really thought much about it before, only when the test alarms would go off. But now, I think about my 4-year-old and that it is definitely possible that he could see a terrible disaster such as Japan in his lifetime, if not in mine."

Local emergency officials say they will do as federal authorities instruct. But they note that widening the zones would mean preparing to move many more people, likely further snarling traffic, involving more jurisdictions and changing locations of shelters.

"It would be a major departure if they change it," said Wayne Broome, Charlotte-Mecklenburg's emergency management director. "If they wanted to do it right and take the politics out of it, they probably should wait until the final report is out for Japan."

#### Complicating factors

Duke estimates it would take four to eight hours to evacuate the zone around Catawba.

It's unlikely that an entire zone would be evacuated. Depending on how the wind blows a plume of radiation, some people may be advised to close windows and doors and stay where they are. Accidents are also most likely to unfold over several hours, allowing more response time.

But expanding the boundaries "complicates the management of the evacuation in the same way that managing a hurricane on the Fourth of July complicates an evacuation," said Cutter, the USC professor.

It would also mean responding to a larger area with a lower risk from radiation, said Dr. Julie Casani, director of public health preparedness at the N.C. Department of Health and Human Services.

"How much risk are you willing to accept and how much benefit are you willing to pay for?" she said. "To me, it's a balance, and it needs to be based on the science and on peoples' tolerance for risk.

"That's what this is all about. It's an insurance policy."

## **Hearing To Address Nuclear Safety Fears (BOS)**

By Robert Knox

Boston Globe, April 25, 2011

Deciding it's time for public reassurances, Plymouth officials have scheduled a public meeting next month to discuss the safety of the Pilgrim nuclear power plant with its owners. A large crowd is expected.

Selectmen will move their May 10 meeting with representatives from Entergy, Pilgrim's owner, from Town Hall to the Plymouth North High School auditorium to accommodate those from Plymouth and the region concerned about nuclear safety in light of Japan's nuclear crisis.

"This is not your average meeting," Town Manager Mark Stankiewicz said.

Citing a recent State House hearing, public nervousness over nuclear reactors in New England and New York, and a planned rally outside the Plymouth plant on May 7, he said the forum could draw a large crowd.

"We hope people will be respectful and civil," Stankiewicz said.

Selectmen are seeking questions in writing from the public by May 3 to ask Entergy officials at the meeting.

A local merchant who said his customers were worried had suggested a meeting to address concerns about Pilgrim, which shares a design and an age with the damaged Fukushima reactors in Japan.

Stankiewicz said Pilgrim officials met with safety and other top officials a few days after the March 11 earthquake and tsunami damaged the Fukushima reactors, to seek assurances that the vulnerabilities exposed in Japan did not exist at Pilgrim. The Japanese plants' backup power sources cut off after outside power was lost, water cooling systems failed, and radiation escaped from the damaged buildings.

Pilgrim's enhanced safety systems, including underground fuel tanks for backup power systems in case of emergencies, soothed their concerns, Stankiewicz said. Entergy officials also pointed out that Plymouth, protected by the geography of Cape Cod Bay, is much less vulnerable to tidal waves from earthquakes and strong storm surges. Because the ocean basin is much shallower here, massive waves cannot build as easily as they do off Japan.

"There are redundancies," Jack Alexander, Entergy's manager of government relations, said of Pilgrim's safety features. "Since 9/11 and some blackout events, those lessons learned have been studied and modifications have been made to minimize risks and optimize safety."

Alexander plans to represent Pilgrim at the Plymouth meeting.

## **TVA Plant's Old Design Brings Fresh Worries (TENN)**

By Anne Paine

Tennessean, April 24, 2011

The Bellefonte nuclear reactor that the Tennessee Valley Authority is positioning itself to complete in northern Alabama, 110 miles from Nashville, was designed in the 1960s and 1970s.

A blueprint from yesteryear doesn't worry the public power producer.

Various components will be modernized, and starting from scratch would cost ratepayers a lot more money, according to its staff.

Critics argue that safety and reliability issues are raised by the old design, the deterioration of work already done, the cannibalizing of plant parts and a failure to keep tight controls over the site.

Some also question the need for another TVA nuclear plant.

In the wake of Japan's nuclear crisis, TVA staff delayed asking for a board vote for funding to complete Bellefonte. Still, more than 500 workers are busy on the site with engineering, assessment and other non-construction work.

"TVA is rushing ahead with a 40-year-old design," said Stephen Smith, executive director of the Southern Alliance for Clean Energy in Knoxville.

"They may be able to tweak it a little bit, but that particular design has not evolved. No one is operating a reactor like it anywhere in the world."

Terry Johnson, a TVA spokesman, said the project is being closely scrutinized and changes will be made as needed.

"Virtually all the equipment involved in the safety of the reactor will be inspected," he said.

"We're going to replace the steam generators, redesign the main terminal, put in digital instrumentation and controls. ..."

Completing the plant, which could cost up to \$4.8 billion for one reactor, would put an asset to work for TVA, so customers would benefit, he said.

About \$4.3 billion has been spent on Bellefonte since the 1960s, with work beginning in the 1970s to build two reactors in Hollywood, Ala., beside the Tennessee River. TVA suspended work in 1988, as demand for power dropped and costs rose.

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Partially complete

The Unit 1 reactor, the furthest along, had been about 90 percent complete. Today, after removal of many parts and the aging of others, it's considered about 55 percent finished.

TVA lists in its long-term planning document the possibility of spending an additional \$3.7 billion to finish the second reactor, too. They would have some shared facilities, keeping costs down on the second.

Arnold Gundersen, chief engineer for Fairewinds Associates, compared moving forward with Bellefonte's design to using an early version of Windows on a computer.

"This is essentially first-generation nuclear technology," said Gundersen, who worked in the nuclear industry for more than 35 years. "So now we're on fourth-generation. The new designs are so much better analyzed than these."

Gundersen served as an expert witness for the Blue Ridge Environmental Defense League, or BREDL, which has challenged TVA and the Nuclear Regulatory Commission over Bellefonte.

Bellefonte's completion would result in additional reliable, low-cost electricity without releasing carbon dioxide and other pollutants into the air, TVA officials say.

TVA's coal-burning units, some of which the board agreed in April to shut down, emit greenhouse gases that add to global warming and climate change.

Coal has been TVA's main fuel source for electricity, traditionally producing about 60 percent of what it sells, while nuclear has provided about 30 percent.

Hydroelectric is the next largest chunk at 8 percent to 9 percent.

The Southern Alliance for Clean Energy is among groups that say TVA should do more in the way of energy efficiency and alternative energy than it plans to do, and hold off on costly nuclear building.

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TVA has six reactors at its three nuclear plants: Browns Ferry, 100 miles south of Nashville; Sequoyah, 20 miles northeast of Chattanooga; and Watts Bar, 60 miles southwest of Knoxville.

Another reactor that is estimated at \$2.5 billion to complete is scheduled to open next year at Watts Bar. Plant shut down

Few of the plants in the nation have reactors designed by Babcock & Wilcox, as Bellefonte's are. Three Mile Island has them, though Bellefonte's reactors would be larger and create more heat and energy, Gundersen said.

The only one like this design that has ever operated was in Germany. It commercially produced electricity for about a year before being shut down. Court battles raged for more than a decade over the seismic suitability of its site, among other issues.

TVA's Johnson said politics resulted in its closing.

Gundersen said that when he was the lead nuclear engineer for New York State Electric and Gas, the utility rejected the design.

"We felt it was just not conservative enough, not beefy," he said, adding that its steam generator system has little margin for error.

Johnson said he doesn't know of any safety problems for this type of generator.

TVA has considered building two new-generation Westinghouse Advanced Passive 1000 reactors at Bellefonte.

They are touted as simpler reactors with backup cooling systems that rely on gravity and can keep reactors safe even if electricity were cut off.

A major cause of the damage at the Fukushima nuclear complex in Japan after an earthquake and tsunami hit was a blackout and failure of auxiliary power systems.

Cooling water couldn't be pumped to reactors or pools containing highly radioactive spent fuel. Radioactive materials from the site wafted around the globe, with trace amounts showing up in air and rain samples in parts of Tennessee and nearby states. Cost comparison

Two AP 1000 reactors would range in cost from \$9.8 billion to \$17.5 billion, according to TVA information.

That compares with about \$8.5 billion for completing two of the Babcock & Wilcox version, because part of the infrastructure is in place and paid for.

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"The newer reactors are going to be a bit safer overall when you look at the package, but that's not to say that any of the reactors are unsafe," Johnson said.

Bellefonte would have a series of power backup systems that would avoid what happened in Japan, he said.

A major complaint about Bellefonte relates to TVA's decision at one point to scrap the project that had been frozen for almost two decades.

Beginning in 1988, construction halted but staff kept close watch, keeping equipment in order and documentation on the project, with the NRC conducting regular inspections.

In 2006, TVA chose to abandon it and asked the NRC to terminate Bellefonte's construction license.

The quality assurance oversight to meet federal regulations and industry protocol was dropped, saving money.

TVA had been paying about \$5 million a year to maintain the project on its 1,500-acre site.

Steam generator tubing, reactor system coolant piping and other materials were cut out and sold for scrap or other use, bringing in tens of millions of dollars. Controversial move

In 2008, TVA changed its mind again and, in a controversial move, the NRC agreed to reinstate the permit to a "deferred" status, despite the lag in quality assurance oversight.

Smith's group, along with BREDL and others, fought the change as a security and safety risk, and they weren't lone voices.

An NRC senior project manager, Joseph Williams, disagreed with other staff that the license, once terminated, should or could be given back to TVA. He said a new safety evaluation was needed before any permits were reissued.

NRC Chairman Gregory B. Jaczko also opposed the move, saying there was "an inherent danger in" reissuing a permit that, in effect, no longer existed. He was the minority in a 2-1 vote on the commission.

The Blue Ridge group and clean air alliance pressed the commission, saying it had violated its regulations.

In answer to the groups' challenge, Jaczko again was the minority voice, saying that reactivating the permit established "a dangerous precedent" that allowed a utility to avoid requirements and NRC oversight "knowing that it can be simply reinstated later regardless of the condition of the site."

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"When we ignore these fundamental tenets of our regulatory process, we compromise our duty to public health and safety," he said. Case is pending

BREDL has taken the case to the District of Columbia US Court of Appeals, where it is pending.

Johnson said TVA is moving ahead with care.

"We're not just going to go in and start up the plant," he said.

TVA spent almost \$50 million last year and has budgeted \$248 million this year as it looks over the site and makes preparation to resume construction, if the TVA board approves it. The topic is expected to come up at its August meeting.

TVA probably would replace the internal mechanisms of the turbines and the steam generators, along with other items. Some of the key equipment in place is made of concrete that generally doesn't deteriorate with age, Johnson said.

That includes the reactor vessels, in which the high-temperature and highly radioactive nuclear reactions take place. Nuclear plants basically heat water to create steam that turns turbines to generate electricity.

The concrete on the reactors is 3.5 feet thick, with a quarter-inch steel liner.

In 2009, one of the scores of straps that wrap the concrete reactor vessel and keep it together under pressure snapped with a large bang. TVA couldn't determine what the noise came from for about a week.

Eventually, TVA learned that water had entered a greased coupling that held the strap anchored in bedrock. Corrosion resulted and the coupling gave way.

Eight had failed in the 1980s and another band snapped after the other one in 2009, when they were being retightened, Johnson said. But one or two don't threaten the vessel's integrity. Couplings checked

NRC spokesman Roger Hannah said that NRC staff has inspected the couplings "and will continue to inspect that" to make sure the same won't happen on other couplings.

The fact that TVA and the NRC stopped their close scrutiny of the plant and its components for about two years will be factored in, he said.

When asked about questions of trust it raises in the public, he said, "If they do decide to go forward and eventually file a license application, we'll increase our inspection oversight and make sure they can account for what happened. And, we can look at the equipment very, very carefully."

Several countries and utilities have put nuclear plans on hold or canceled them since the Fukushima accident.

"If I was on the TVA board, I would sure be looking at wrapping up my energy efficiency and renewable energy and natural gas options before putting a lot of effort into new nuclear reactors, or pushing an incompleated one forward," said Peter Bradford, a former member of the NRC who serves on the board of the Union of Concerned Scientists:

## **Road To Alabama Nuclear Plant Is Narrow (AP)**

Associated Press, April 23, 2011

ATHENS, Ala. (AP) — Horace Haney is adamant Nuclear Plant Road is ill-equipped to serve as an evacuation route.

He said it's not even adequate as a route home. That's why the Nuclear Plant Road resident put a bright yellow sign at US 31 and Nuclear Plant Road that states, "Warning! Dangerous Road."

"I was hoping that maybe the sign would bring some attention to the condition of the road," Haney said. "It's in bad shape. Somebody's going to have a bad wreck. When it was raining so hard like Friday night, you can hardly see anything."

Athens and Limestone County leaders are trying to get a grant to fund a \$2.5 million upgrade for the road, which is the only eastward evacuation route from Browns Ferry Nuclear Plant. The road is only 19 feet wide with no shoulder, has a sharp curve, a railroad crossing with no gates, faded striping or no striping, and a weight-restricted bridge.

The concern is if there is a disaster at the nuclear plant, or a hazardous spill from a tanker truck or train, the road could not handle an evacuation. District 3 Commissioner Bill Latimer, who represents that district, estimates about 300 people live along Nuclear Plant Road. Workers who live in Madison County also use the road going to and from the plant.

"If the road was clogged with traffic, there's no room for motorists to move over to allow emergency response vehicles through," Latimer said. "And it's not designed to move traffic quickly."

Browns Ferry has a reactor design similar to the reactors in Japan that malfunctioned after a magnitude 9.0 earthquake and tsunami.

The Tennessee Valley Authority has said Browns Ferry was designed to withstand a 6.0 magnitude quake.

The plant, which operates three reactors, also is the storage site of more than 1,400 metric tons of spent fuel and rods that lie in three pools on a concrete pad.

"Anything could happen," said Athens Mayor Ronnie Marks. "There is an opportunity for something to happen, and this evacuation route needs attention. We need to put all our emphasis on this road."

Latimer agreed.

"I don't think we'll have a tsunami come up the Tennessee River, but we have tornadoes and earthquakes," Latimer said.

The city and county to date have been unsuccessful in getting any federal funding to upgrade the road. Council President Jimmy Gill, who represents the residents of Black's Landing near the plant, said Homeland Security should contribute money because the road is an evacuation route for a nuclear plant.

"It doesn't seem fair for them not to put some money into this," Gill said. "It doesn't seem fair that the city and county should have to be responsible for all the cost."

The city and county are going to make a grant presentation to the Alabama Industrial Access Road and Bridge Corp. in June in an attempt to get a \$2 million grant. The City Council has approved contributing up to \$250,000 toward the project, and Latimer said he will use district money or borrow from the county's public building, road and bridge fund to add \$250,000.

If the city and county do not get the grant, the project will not go forward.

Marks said the \$2.5 million price tag includes widening the road to 22 feet, adding shoulders, improving drainage and installing safety gates at the railroad tracks.

Latimer got a portion of the road paved and striped from the entrance of the nuclear plant to Cowford Road for \$200,659, but there still are 8.2 miles remaining. The city and county plan to emphasize at the grant meeting that Browns Ferry is undergoing a \$160 million cooling-tower project.

The project involves the construction of a new 28-cell cooling tower and the replacement of four of the six existing towers by the Tennessee River. The project's scheduled completion date is 2013.

"If Homeland Security could pitch in, especially if we only get part of the grant, we could make this road safer," Marks said. "If this isn't a Homeland Security issue, there isn't one."

## **EMA Urges Earthquake Preparedness » Local News » The News-Courier In Athens, Alabama (ATHENNC)**

By Adam Smith

Athens (AL) News Courier, April 25, 2011

— Up until late last month, the earthquake threat for North Alabama seemed relatively small.

However, two Tennessee Valley towns — Elkmont and New Market — experienced minor earthquakes within just five days of each other, though neither measured above 2.5 and no damage was reported.

“There is some sporadic (activity) around that part of the state, but mostly toward the mountains in the northeast,” said John Bellini, a geophysicist with the US Geological Survey’s National Earthquake Center. “It’s normally a very low activity area; it’s not a seismically active state.”

Despite a seemingly small earthquake threat, the Alabama Emergency Management Agency is encouraging residents, schools and businesses to take part in The Great Central US Shake Out preparedness drill, to be held Thursday.

The exercise, organized by the Central United States Earthquake Consortium, and featuring participation from Alabama, Arkansas, Georgia, Kentucky, Illinois, Indiana, Mississippi, Missouri, Oklahoma, South Carolina and Tennessee, will start at 10:15 a.m. The overall purpose of the drill is to have participants simultaneously practice the recommended action during an earthquake — drop to the ground, take cover and hold on until the shaking stops.

According to a press release from the Alabama EMA, scientists estimate a 25 to 40 percent probability of a damaging earthquake occurring in the central US within the next 50 years.

Art Faulkner, director of the Alabama Emergency Management Agency, said the drill has two primary goals — to put the danger of earthquakes on the radar screen of Alabamians and ensure residents know what to do in case of an earthquake.

“We prepare for hurricanes, tornadoes and things of that nature, but we want them to be just as prepared for earthquakes,” he said. “Unlike the severe weather that moved through the state last Friday and Saturday, there is no advanced warning for an earthquake, so it makes it that much more important that you know what you’re going to do.”

More than 1 million people are expected to take part in the Shake Out, though only two Limestone County residents had registered as of Thursday. And despite having a locally recorded earthquake, no schools or businesses in Athens or Limestone County had registered to participate, even though six schools in Madison County and one in Morgan County had registered.

Given the close proximity of Browns Ferry Nuclear Plant and the recent recorded earthquakes, Faulkner said “some areas of the state should be more aware” of the drill than others.

“If nothing else, this drill is going to show us where we may need to focus more concentration of preparedness efforts and public information to first responders,” he said.

Daphne Ellison with the Limestone County EMA said the information had been sent to local schools, but schools leaders may not have known they had to register to participate. She said the local EMA would be participating in the drill, though she didn’t have specifics on activities.

“At this point in our plan, we may pretend that we’re going to send out a press release to let everyone know what happened,” she said. “We’ll just practice what we would do in that situation.”

For more information on the Great Central US Shake Out, visit [www.shakeout.org](http://www.shakeout.org).

## **Japan Disaster Affecting Future Watts Bar Drills (RCN)**

By Damon Lawrence

Roane County (TN) News, April 25, 2011

Disaster drills at TVA’s Watts Bar Nuclear Plant in nearby Rhea County could be more challenging in the future because of the disaster that occurred in Japan.

“Used to, we might have an event that was an earthquake at one unit that would result in damage to the plant and possible releases of radiation,” said Ray Golden, TVA senior manager of nuclear communications.

“I think going forward, what you’re likely to see is that we might combine events so we might have a simulated emergency where we have an earthquake and a dam breaking simultaneously,” he added.

“That would be much, much more challenging for all parties involved.”

In March a massive earthquake and tsunami severely damaged the Fukushima Daiichi nuclear plant in Japan.

The US Nuclear Regulatory Commission said it is believed that the back-to-back disasters exceeded the plant’s design limits.

“I believe as a result of the event in Fukushima, when we do these drills and exercises going forward, it probably will be longer in duration and more challenging in what we call the scenarios,” Golden said.

Golden said the next graded exercise for Watts Bar is this October.

“It’s not just TVA that’s involved,” he said. “When we do an actual graded exercise, it’s evaluated by the Nuclear Regulatory Commission and by FEMA. There’s usually about 1,500 people that participate in those graded exercises.”

An incident at Watts Bar might not be isolated to Rhea County. The plant is about 13 miles south of the Roane County line.

Golden and Rhea County Emergency Management Director Billy Cranfield said prevailing winds blow to the northeast, which could bring any fallout toward Roane County.

"We have meteorological instruments onsite that would give us wind direction, wind speed, and that type stuff," Golden said.

In the event of a real emergency, Golden said TVA would make a recommendation to the state on how best to respond.

"We would say this is Watts Bar, there's been an accident at the plant and based on this accident, we're recommending the following," he said.

"The cities, the counties and the state take all that information under advisement. They can either accept the recommendation and turn it into an order or they can enhance it."

For example, TVA could recommend evacuating people within a five-mile area and the state could decide to evacuate everyone within a 10-mile area.

"It's important that people understand TVA doesn't have the right or responsibility to move people," Golden said. "That lies with the counties and the state officials."

US Sen. Lamar Alexander and Nuclear Regulatory Commissioner Bill Ostendorff toured Watts Bar on April 18.

Both said the facility is safe.

"I saw a professional workforce, who I believe is very committed to safety and is committed to doing things the right way," Ostendorff said.

The NRC will hold a meeting and open house on April 28 to discuss its assessment of safety for Watts Bar Unit 1 during 2010.

The meeting is scheduled for 2 p.m. at the Comfort Inn on Decatur Pike in Athens.

A presentation on Watts Bar Unit 2, which is under construction, is scheduled for 3 p.m.

The NRC concluded Unit 1 operated safely last year and there was no inspection findings or performance indicators to cause the agency to increase its level of oversight and inspection.

"Safety is such an important area that we can never become complacent about safety," Ostendorff said.

"But I'm confident that our processes are such that we have a very good oversight network in place to monitor and if there's a problem, we'll take action about it."

## **Marchers Remember Chernobyl (WLUKTV)**

By Beth Jones

WLUK-TV Green Bay, WI, April 25, 2011

Protesters hit the streets in Kewaunee County opposed to the area's two nuclear power plants.

Saturday's action follows ongoing troubles with damaged nuclear plants in Japan.

It also marks the approach of the 25th anniversary of the Chernobyl nuclear disaster in the Ukraine.

It's been almost exactly two and a half decades since the Chernobyl nuclear meltdown.

Those who lived near the plant in the Ukraine back then say it was a tough time for everyone.

"I just remember the emotional impact it had on people and even to this day, 25 years ago, I'm keenly aware of the radiation being in the fallen leaves in the fall, in the tap water," explained former Ukraine resident, Natasha Akulenko.

Natasha Akulenko lived through that disaster and now is marching in protest of nuclear power plants to prevent another.

More than two dozen people from all over the state protested peacefully around the Kewanee Power station and Point Beach Nuclear Power Plant.

Members of the non-profit group, "Nukewatch," say they want to promote a nuclear-free future, in remembrance of what happened at Chernobyl, and what is ongoing at damaged plants in Japan.

"We just think the risks are too high to justify operation of nuclear reactors," said Nukewatch Co-Director John LaForge.

The two nuclear power plants combined produce enough electricity to power more than one million homes in Wisconsin.

But marchers feel there are better alternatives to nuclear power.

"We're asking for the phase out of nuclear, and its replacement with renewables like wind, and solar and energy efficiency," said "Beyond Nuclear" group member, Kevin Kamps.

Marchers say they don't want what happened in Chernobyl or Fukushima to happen here, and they believe it could.

The Associated Press reported earlier this month that both plants drew extra attention several years ago from regulators because of spotty safety records.

However officials say operating under new ownership the plants have improved those safety grades.

Point Beach officials say safety remains their number one priority.

"It's about having redundant systems in place," said Point Beach Communications Manager, Sara Cassidy. "It's about having back up diesel generators that are ready in case we need them. It's all about doing what we can to make sure we're promoting public health and safety."

The Kewaunee Power Station is licensed to 2033.

Point Beach is licensed to 2030 and 2033.

And in addition to federal regulators, these protesters say they too will continue to keep a watchful eye on the plants.

FOX 11 did contact the Kewaunee Power Station, however no one was available for comment.

## **Protestors In Kewaunee Remembering Chernobyl (WTAQ)**

WTAQ-FM, April 25, 2011

A group of protestors took to the streets in Kewaunee County making their voices heard against the area's two nuclear power plants.

The marchers marked the approach of the 25th anniversary of the Chernobyl nuclear disaster in the Ukraine, along with ongoing problems with damaged nuclear plants in Japan.

Those who lived near the plant in the Ukraine back then say it was a tough time for everyone.

"I just remember the emotional impact it had on people and even to this day, 25 years ago, I'm keenly aware of the radiation being in the fallen leaves in the fall, in the tap water," former Ukraine resident, Natasha Akulenko told FOX 11.

Over two dozen people from all over the state protested peacefully around the Kewaunee Power station and Point Beach Nuclear Power Plant.

Members of the non-profit group, "Nukewatch," say they want to promote a nuclear-free future.

"We just think the risks are too high to justify operation of nuclear reactors," Nukewatch Co-Director John LaForge told FOX 11.

The two nuclear power plants combined produce enough electricity to power more than one million homes in Wisconsin.

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The Kewaunee Power Station is licensed to 2033. Point Beach is licensed to 2030 and 2033.

## **Anti-nuke Walk Remembers Chernobyl (GBPG)**

Green Bay (WI) Press-Gazette, April 22, 2011

Critics of nuclear power will walk the seven miles between two Wisconsin nuclear reactor sites Saturday, commemorating the 25 years since the radiation catastrophe at Chernobyl, Ukraine.

The walk is to begin at noon near the Kewaunee Power Station in Carlton, Kewaunee County. Walkers and bicyclists will proceed south along Wisconsin 42 to the Point Beach nuclear power plant in Two Creeks, arriving about 3 p.m. A picnic is planned at Point Beach State Park.

The event comes three days prior to the 25th anniversary of the day Chernobyl suffered explosions and a fire that spewed radiation.

Wisconsin-based Nukewatch is an environmental and peace-action group dedicated to the abolition of nuclear power, weapons and radioactive waste.

## **Malloy Proposal Would Avert Millstone Shutdown (NLDAY)**

By JC Reindl And Patricia Daddona

New London (CT) Day, April 22, 2011

The corporate owner of the Millstone Power Station in Waterford said Thursday that it would drop its threat to close the plant and absorb the cost of a new annual \$40 million tax if Gov. Dannel P. Malloy's revised plan for an across-the-board electricity generator tax replaces a more onerous proposal in the legislature.

Ken Holt, spokesman for Dominion Resources Inc. of Richmond, Va, said the company agreed to Malloy's proposal for a temporary, two-year tax that would apply to all forms of electricity generation but renewables. The tax is projected to raise \$72 million a year, at an annual cost to the state's only nuclear generator of about \$40 million.

"We understand the need for this tax, and we appreciate the challenge Governor Malloy has in developing a balanced budget for the state under such difficult circumstances," Holt said Thursday. "This tax proposal limits the potential negative effect on consumers and businesses, is designed to address the state's short-term financial needs, and is applied to electricity generators in a much more balanced and fair manner."

The governor's proposal contrasts sharply with the one from the legislature's Energy & Technology Committee, which would tax Millstone 2 cents a kilowatt hour, or more than \$332 million a year. Other electricity generators would be taxed at lesser rates under that plan.

Several legislators as well as Malloy have predicted that the energy committee's tax will not pass.

"I'm far more confident than I was even two or three days ago that this is off the table," said state Rep. Betsy Ritter, D-Waterford, who has fought the larger nuclear tax since it emerged in legislative committee last month. "I am getting from the legislature as a whole that that would not be well received. It was a punishing message to send to other groups, to anybody else who happens to make money in the state."

Dominion is "going to absorb the costs" of the new tax, and doesn't plan any ratehikes or cutbacks at Millstone because of it, Holt said. The plant and its two operating reactors directly employ 1,080 people and about 350 supplemental personnel.

The governor's proposal, which budget chief Ben Barnes said is based on talks with General Assembly leadership and the chairmen of the budget and finance committees, would tax electricity at .0025 cents a kilowatt hour in the next two fiscal years beginning July 1, up from his original proposal of .002 cents per kWh.

Dominion had said the original proposal would cost it roughly \$30 million.

Malloy and Democratic lawmakers announced Wednesday they had reached a deal on a two-year budget plan, even though negotiations with state workers for about \$1 billion a year in possible concessions are still pending.

The co-chairmen of the Energy & Technology Committee, state Sen. John W. Fonfara, D-Hartford, and state Rep. Vickie Nardello, D-Cheshire, could not immediately be reached for comment.

## **Connecticut Agreement Scraps Nuclear Plant Tax Plan (AP)**

Associated Press, April 22, 2011

A Connecticut tax on electric generators targeting the Millstone nuclear plants has been replaced by a lower tax in a budget agreement between Gov. Dannel P. Malloy and legislative leaders.

Generators would instead be taxed .0025 cents per kilowatt hour, or 25 cents per \$100. The original proposal endorsed by a legislative committee would have raised \$340 million, with \$332 million from Millstone. It was opposed by Millstone owner Dominion Resources, and a bipartisan coalition of legislators, businesses and labor representatives.

The agreement also urges Malloy to scrap his proposed two-tenths of a cent tax per kilowatt hour. The revised tax would raise \$72 million in revenue, more than Malloy's initial proposal.

Millstone spokesman Ken Holt says the revised tax is more balanced and Dominion is dropping its threat to close the southeastern Connecticut plants.

## **The News Tribune - Heart Of America's Hanford Waste Lawsuit Dismissed (print) (TACOMA)**

Tacoma News Tribune, April 25, 2011

The News Tribune - Heart of America's Hanford waste lawsuit dismissed (print)

Federal Judge Edward Shea has dismissed a lawsuit filed by Heart of America Northwest against the Department of Energy over proposals to send radioactive waste to Hanford for disposal or storage.

Heart of America members now are not being harmed, so do not have standing to bring a lawsuit, the judge ruled in Eastern Washington District US Court in a written decision Friday.

DOE argued that it had committed in a 2006 settlement agreement with the state of Washington not to import off-site radioactive waste to Hanford at least until a decision is issued based on a forthcoming study.

A draft of that study, the Hanford Tank Closure and Waste Management Environmental Impact Statement, was released in October 2009 and a decision could be issued in 2012 after the final version of the study is released.

There is no allegation that DOE is importing low level radioactive waste or mixed low level radioactive waste in violation of the agreement, Shea wrote.

The 2009 draft study proposes extending a 2005 ban on importing most types of waste to Hanford longer than the current settlement agreement covers. It proposes extending the ban at least until the Hanford vitrification plant is operating fully, which is estimated to be in 2022. The \$12.2 billion plant is being built to treat much of Hanford's worst wastes.

Any harm to the members of Heart of America would occur, if at all, only if a future decision is made to import waste to Hanford, DOE said in court documents.

"A challenge to such a hypothetical future decision, if such a decision is ever made, is not yet ripe" for consideration by the court, DOE said in court documents.

Heart of America, a Seattle-based Hanford watchdog group, argued that DOE had not withdrawn its 2004 decision to send up to 107,000 cubic yards of low level and mixed low level waste to Hanford. The decision was based on an environmental study that was found to contain errors in 2005, and DOE responded by canceling waste shipments to Hanford. It also said a new study would be done.

The new study must "have detailed information on significant environmental impacts," Shea wrote.

Heart of America has argued that the draft 2009 study did not look at the same fundamental issue as the 2004 environmental study -- whether imported waste could be buried at Hanford. Instead it looked only at where imported waste could be buried at Hanford, according to Heart of America.

The draft 2009 study continues to rely on the flawed 2004 study, Heart of America argued.

"Such reliance is arbitrary and capricious" and a violation of federal environmental laws requiring a thorough look at environmental impacts of importing waste, the lawsuit said.

Shea said during a hearing in Spokane earlier this week that he was dismissing the lawsuit and his written ruling Friday expanded on the decision.

Although the lawsuit was dismissed, Heart of America was pleased that the judge found that even though the group was not a party in the 2006 settlement agreement, it can pursue litigation if DOE does not abide by the decision and the state elects not to litigate.

"The department is pleased Judge Shea agreed with the government's position that the complaint filed by Heart of America should be dismissed," DOE said in a statement. "DOE is not shipping waste from other environmental cleanup sites to Hanford now and has no plans to do so."

This is not the end of the issue, said Gerald Pollet, executive director of Heart of America, after the ruling.

At meetings to discuss Hanford concerns, the public asks how DOE can clean up the nuclear reservation when it continues to plan to add more waste, he said.

"This is going to continue to be the public's top concern until the Energy Department simply withdraws the decision to use Hanford as a waste dump," he said.

## **Community Vital To Hanford Cleanup (TRICITYH)**

By Matt McCormick and Stacy Charboneau

Tri-City Herald (WA), April 25, 2011

During our State of the Hanford Site Cleanup meetings in March, we heard many views, concerns and suggestions, with emphasis on requesting more funding for cleanup, accelerating the pace of our work and protecting the Columbia River.

Thanks to those who attended the meetings. Continued community involvement will produce quality cleanup and helps sustain funding for this critical work.

Not surprisingly, one issue that came up at the meetings was unrelated to our environmental cleanup mission at Hanford.

Because of recent events in Japan, more people are talking about nuclear activities than they were a month ago. Interest in nuclear activities creates an opportunity for education, public discussion and debate.

That is why we would like to take this opportunity to provide context for what the Department of Energy is doing here at Hanford.

It's clear from our meetings that many people around the Northwest don't know that the commercial nuclear reactor at Hanford is owned and operated by Energy Northwest, not the Department of Energy.

Environmental consequences of Hanford's past operations are well known to most Mid-Columbia residents, but it's easy to forget the magnitude of the problem.

From the 1940s to the 1980s, Hanford produced more than half of the plutonium for the US nuclear weapons program. During that time, millions of cubic feet of solid waste was placed in trenches and other burial sites.

More than 50 million gallons of radioactive waste was stored in large underground tanks. About 450 billion gallons of less-contaminated liquids were discharged to the soil, creating an area of groundwater contamination in excess of 100 square miles beneath the site.

In addition, approximately 2,300 tons of leftover spent nuclear fuel was stored in water-filled pools near the Columbia River, which runs through the site.

Over the years, dozens of the large underground tanks had leaked contaminated liquids into the soil.

Today, we're engaged in cleanup of buildings, soil, debris, groundwater and liquid wastes that once were contaminated with radioactive material.

While several facilities on the site still store or contain hazardous materials, the material is monitored and configured to protect the public and the environment.

With continued proper storage and handling, the residual wastes do not pose a threat to site workers, visitors or the public.

Since cleanup began in the late 1980s, DOE and its contractors have addressed some of the most urgent environmental and public health risks. For example, 2,300 tons of spent nuclear fuel has been removed from storage pools near the river and placed in dry storage at the center of the site.

Twenty tons of leftover plutonium material has been stabilized and shipped out of the state. Eighty million gallons of groundwater are processed each month to remove contaminants, with more than 5 billion gallons treated to date.

Removable liquids have been retrieved from large, single-shell underground storage tanks, and a plant for treating the large volume of sludge and solid material remaining in the tanks is more than half built. The nine reactors on site that once irradiated uranium to produce plutonium have been emptied of fuel, and five have been demolished down to the shield walls surrounding the reactor cores.

Much has been done and there is more work ahead. Cleanup of the Hanford site is complex and is expected to take decades, primarily because of the amount and extent of contamination that resulted from producing plutonium -- not power -- for the United States.

The work is some of the most challenging and heavily regulated in the United States, and it hasn't always gone as planned. But workers, regulators, community members and others share a common goal to ensure safety is our No. 1 priority and that cleanup is completed safely and efficiently. We would like to build on that common ground.

We invite you stay or get involved, whether it's attending a Hanford public meeting, commenting on cleanup decisions or taking a tour of the site. Hanford is an unprecedented environmental cleanup effort. And it's in your backyard.

For more information, we invite you to visit our website at [www.hanford.gov](http://www.hanford.gov) or view the first of several video chapters on Hanford at [www.youtube.com/hanfordsite](http://www.youtube.com/hanfordsite).

\* Matt McCormick is manager of the Department of Energy's Richland Operations Office. Stacy Charboneau is acting manager for the Office of River Protection.

Read more: <http://www.tri-cityherald.com/2011/04/24/1462371/community-vital-to-hanford-cleanup.html#ixzz1KWoEqZ8M>

## **'All Of The Above' Is No Energy Policy: Part 2 (HUFFPOST)**

By William S. Becker

Huffington Post, April 23, 2011

Even renewable energy hawks -- most of us anyway -- will concede that the United States cannot go cold turkey from oil tomorrow, or shut down all coal-fired power plants this week, or flip the off-switch tonight on nuclear power.

What we should not concede, however, is the need for the most aggressive possible push to get renewable energy on line. It should be our top national energy priority for many reasons, ranging from environmental protection to national security, and from economic vitality to social equity.

President Obama's recent "Blueprint for a Secure Energy Future" is as close as he's come so far to issuing a comprehensive national plan for the transition to clean energy. I credit the president for understanding that energy efficiency and renewable energy are a practical, vital and near-term part of our national energy mix.

Not everyone gets that, or admits it. In a recent example of cluelessness, USA Today published a vigorous defense of plastic grocery bags by Jonah Goldberg, a visiting fellow at the American Enterprise Institute. Goldberg panned the president for being "convinced that we can 'win the future' with such boondoggles as high-speed rail and impractical fads such as wind and solar energy (emphasis mine)." USA Today notes that Goldberg is a member of the newspaper's Board of Contributors, as though defending grocery bags and classifying renewable energy as a "fad" qualifies as a contribution to public discourse.

What's really impractical, of course, is the idea that America can compete and thrive in the 21st Century with the same finite dirty fuels that powered us the past 200 years. From childhood asthma to foreign wars, there are myriad reasons fossil energy industries should be, and inevitably will be, dead men walking. There are populist arguments for renewables, too -- a fact our struggling middle-class families should recognize. A staff report for the vice president's Middle Class Task Force notes: Green jobs have the potential to be quality, family-sustaining jobs that also help to improve our environment. They are largely domestic jobs that can't be offshored. They tend to pay more than other jobs, even controlling for worker characteristics...After decades in

which the middle class has not gotten its fair share of the rewards from American growth and prosperity, the green sector of the economy represents a source of high- quality, well-paid jobs for the middle class.

Or as Van Jones put it last week during his speech to Power Shift 2011: The stereotype is that solar power is just hippie power. But it's also cowboy power, farmer power, rancher power and Appalachian mountain power.

Sadly, invoking the real power of renewable resources is where the president's blueprint falls short. As I pointed out in Part 1 of this post, the president has joined the "all of the above" club that argues we need all forms of energy to meet our rising demand. A plan that fails to acknowledge the relative costs and benefits of different energy resources -- and to favor those that give us the most benefit with the least life-cycle costs -- is not a roadmap to the future. It's the path of least political resistance, a reelection strategy rather than a national policy.

The president's blueprint has other shortcomings mixed among its good parts. For example, its definition of "energy security" needs to be broader and cleaner. If we define "energy security" accurately as an economy powered by sustainable resources that increase our financial and military stability, protect the environment throughout their life cycle, conserve critical finite resources such as water, and don't leave future generations with costly and toxic liabilities, then nuclear power and coal simply cannot qualify.

Second, while it acknowledges that America has only 2 percent of the world's oil reserves and that oil prices are determined by a quirky global market, the president's blueprint nevertheless promotes more domestic petroleum production as a path to greater security. However, since the United States does not control the oil market, more domestic production won't protect us from skyrocketing gasoline prices and supply volatility. That point needs to be made to the American people again and again, if only to immunize us against ludicrous Beckisms like that of Rep. Paul Ryan (R-WI) who earned points as a demagogue when he blamed rising gas prices on the Obama Administration's "dubious environmental goals."

If you want to end an addiction to oil, it is not enough to change who supplies the drug. You have to stop using the stuff before it kills you, or permanently damages your life. The Obama Administration has done some historic therapy on America's oil addiction, including new vehicle efficiency standards, but the president's blueprint doesn't lay out the path to full sobriety.

Third, by describing a future in which we burn oil and coal indefinitely, the president calls into question the depth of his concern about climate disruption. Clean coal is a mirage. The president's goal to reduce America's oil imports a third by 2025 is not sufficiently aggressive to address global climate change. Oil is oil. It produces carbon emissions whether it comes from the Persian Gulf, Canada, the Gulf of Mexico or the Interior West.

Nor is the blueprint aggressive in ending our dependence on other finite fuels. On the contrary, it proposes that we produce more natural gas, nuclear energy and coal power in a suite of clean energy technologies that generate 80 percent of America's power by 2035. That brings us back to the definition of "clean".

So long as the coal industry devastates ecosystems during extraction, injects carbon dioxide into the atmosphere or underground, and creates other poisonous pollutants and liabilities such as toxic sludge and ash, coal cannot qualify as clean.

So long as nuclear power produces deadly wastes we aren't willing to manage, terrorist targets we can't fully protect and the proliferation of weapons of mass destruction in an increasingly unstable world, nuclear power cannot be classified as clean. Neither can natural gas, so long as the industry has not found a way to extract it benignly without methane emissions, saline and radioactive wastewater, or the use of secret fracturing agents.

The idea that energy efficiency and renewable resources can't meet America's energy requirement is a self-fulfilling premise. When conventional wisdom is that renewables will be no more than a marginal contributor to our energy portfolio in the foreseeable future, policy-makers and private investors are less inclined to take the moon shot that would allow sustainable energy to achieve its full potential.

The operative questions in contemporary US energy policy include these: Will the president put his full weight into winning congressional approval of the policies and resources we need to achieve a genuinely clean economy? Will he push Congress aggressively to end taxpayer subsidies of fossil energy? Will Congress recognize that in the 21st century, energy efficiency and renewable energy are the bedrock on which US security and prosperity must be built? Will the American people continue to tolerate a Congress that behaves like a wholly owned subsidiary of the oil, coal and nuclear energy industries?

We are watching corruption, timidity, money, greed, the insatiable appetite for power, fear of the next election, and garden variety stupidity rule America's energy policy. Sadly, that has been the case for a very long time. It has become a perverse tradition handed down from Congress to Congress and White House to White House, even under presidents who have had the best intentions. It need not be this way. And if we really want to "win the future," it cannot continue.

What's next? In Part 3, I'll talk about how members of Congress who vote against low-carbon energy are voting against jobs in their own states. In Part 4, I'll cite some of the analyses of the past few years that conclude renewable energy can make a

far more sizeable contribution to our energy mix than President Obama's energy blueprint and congressional convention acknowledge:

Follow William S. Becker on Twitter: [www.twitter.com/sustainabill](http://www.twitter.com/sustainabill)

## **Public Hearing On WIPP Scope Change Tuesday (CARLSBAD)**

Carlsbad (NM) Current-Argus, April 25, 2011

CARLSBAD — Carlsbad-area residents will have the opportunity Tuesday to voice their thoughts concerning the possibility of opening the Waste Isolation Pilot Plant to receive an additional type of low-level radioactive waste.

The US Department of Energy is eyeing WIPP, a nuclear waste repository located approximately 26 miles east of the city, as a possible site for disposing of Greater-Than-Class C low-level radioactive waste, known as GTCC LLRW, and Greater-Than-Class C-like waste.

The facility now is authorized for the disposal of defense-generated transuranic waste, known as TRU waste, and the disposal there of commercial, low-level and high-level radioactive waste is currently prohibited.

Under federal law, the DOE is required to issue the draft EIS for public review and comment to evaluate any potential environmental impact that might result from the building and operating of new disposal facilities, as well as the possible impacts of using existing facilities.

As a part of that review process, a public hearing is scheduled in Carlsbad on April 26 from 5:30 to 9:30 p.m. at the Pecos River Village Conference Center, 711 Muscatel Ave. Additional hearings are set for April 27 and 28 in Albuquerque and Santa Fe.

Public comment is being solicited through June 27, 2011.

According to documents provided by the DOE, the waste under consideration consists of a small volume of low-level radioactive waste generated by activities licensed by the Nuclear

Regulatory Commission, including electricity production by nuclear power plants, production and use of radioisotopes for disease diagnosis and treatment, oil and gas exploration and other industrial uses.

"GTCC-like" waste consists of DOE-owned or generated waste and non-defense transuranic waste similar to Greater-Than-Class C, for which no disposal facility is currently available.

Neither category of waste includes spent nuclear fuel or high-level waste.

Several sites are under consideration in addition to the WIPP site, including the Hanford Site in Washington, the Idaho National Laboratory, Los Alamos National Laboratory, the Nevada National Security Site and the Savannah River Site in South Carolina. There is, however, no "preferred alternative" site: the DOE is examining each site and will determine which site, or combination of sites, could best serve its needs based on the characteristics of the waste involved, its availability for disposal and other factors.

The DOE maintains a Greater-Than-Class C website, <http://www.gtccceis.anl.gov>, which contains information on the waste, the environmental impact statement and how to get involved in the review process.

The draft EIS also evaluates generic commercial disposal sites in four regions of the United States and includes a "no action" alternative.

The website, <http://www.gtccceis.anl.gov>, includes additional information on Greater-Than-Class C, the environmental impact statement and how to get involved in the review process.

To register to speak at the meeting, visit <http://www.gtccceis.anl.gov/involve/pubschedule/register/index.cfm?/055D541A0C755D8A/index.htm>.

## **Officials back Los Alamos National Laboratory building design in environmental analysis (SANTAFE)**

By Roger Snodgrass

Santa Fe New Mexican, April 25, 2011

Federal officials overseeing Los Alamos National Laboratory released a draft environmental analysis of its plans for a new nuclear facility late Friday.

The document prepared by the National Nuclear Security Administration revised an outdated plan for the high-hazard facility that has been in the works for more than a decade. The building is considered pivotal to development of the next generation of nuclear weapons.

The Chemistry and Metallurgy Research Replacement facility would serve in part as a replacement for a 550,000 square-foot, 60 year-old radiological chemistry building. But the new nuclear facility is also central to developing a long-term capability for storing, handling and processing plutonium materials used in manufacturing and refurbishing nuclear warheads.

The document analyzed four alternatives, including one "no action" scenario. But the new supplemental environmental impact statement acknowledges that the facility as it was previously envisioned could not meet current safety standards. Two other options examined the less favored possibility of not building the nuclear facility but keeping the existing infrastructure or upgrading it to last another 30 years.

The preferred option under the new plan backs the project as it is being designed by LANL with the blessing of Congress and the Obama administration. But it also includes additional measures considered necessary for safety.

A new seismic study completed in 2007 contributed to the decision to rework the design.

The new facility carries a provisional price tag estimated in the \$3.7 billion to \$5.8 billion range. The estimated cost at the lower end represents a tenfold increase over the original estimate.

The new building in either of the new configurations at 344,000 square feet of floor space will be larger than the last version. In one dimension, 42 feet of extra space is prescribed for additional safety systems and equipment, including more fire suppression equipment and the electrical units needed to keep it running under extreme conditions.

Some of the increase in space can be attributed to thicker walls and other features called into play by current concerns related to earthquakes and other safety issues.

Not everyone is likely to be convinced by the new construction options. Earlier this month, the Defense Nuclear Facilities Safety Board wrote a letter to NNSA, raising questions about adequacy of a computer program, SASSI ("System for the Analysis of Soil-Structure Interaction") which is commonly used by DOE planners for seismic analysis in high-hazard nuclear facilities like what is proposed at LANL. The board's stated concern was that "these issues could lead to erroneous conclusions that affect safety-related structural and equipment design."

Nuclear Watch New Mexico criticized NNSA for releasing their proposal on Good Friday and Earth Day. The Los Alamos Study Group, meanwhile, will proceed with its legal challenge on Wednesday in the US District Court in Albuquerque as it seeks a halt to all project planning pending further analysis.

Asked about the timing of the release, Tony Chiri of the NNSA regional office said, "It just worked out that way. We worked every day this week to get ready and managed to get it out a week ahead of the start of the public comment period."

The 45-day public comment period begins with a formal publication in the Federal Register, which has been arranged for April 29.

Public hearings will be held next month in Los Alamos, Española and Santa Fe.

Visit [nnsa.energy.gov/nepa/cmrrseis](http://nnsa.energy.gov/nepa/cmrrseis) for the full supplemental analysis.

## **Draft Study Calls for Staying the Course on Plutonium Lab (ALBQJ)**

By John Fleck

Albuquerque Journal, April 25, 2011

The National Nuclear Security Administration rolled out its draft Supplemental Environmental Impact Statement this afternoon for the Chemistry and Metallurgy Research Replacement project. Late this afternoon.

Last week, it was the 4:15 p.m. Friday revelation of new seismic problems for the lab's Plutonium Facility. This week it was the 4:03 p.m. rollout of the 500-plus page draft report analyzing details of the lab's multi-billion dollar proposal for a new plutonium lab. Pattern?

The quick details:

The "preferred option" is to forge ahead with building the Chemistry and Metallurgy Research Replacement project, with its advertised \$3.7 billion to \$5.8 billion price tag.

No new study of alternative sites. The report relies on previous analysis done for the project's original EIS that concluded, essentially, that Los Alamos was the only practical place to do this.

Only a brief analysis of upgrading the existing CMR building, which is 60 years old and decrepit. Study concludes upgrading the old beast is a non-starter.

I'll have more in tomorrow's newspaper, including comments from project critics who say the study is more rubber stamp for a decision already made than the serious analysis of alternatives that the National Environmental Policy Act requires. But far too much here to digest at the late hour NNSA tossed this over the transom, so there will be more here next week on some of the additional details.

Oh, and did I mention late this afternoon? Do I sound annoyed?

## **Y-12 To Send Unused Reactor Fuel To Nev. For Disposal (KNOXNS)**

By Frank Munger

Knoxville News Sentinel (TN), April 25, 2011

OAK RIDGE - After nearly 30 years in storage at the Y-12 nuclear weapons plant, an unspecified amount of never-used reactor fuel will be repackaged and sent to Nevada for disposal.

The nuclear reactor fuel is a mixture of highly enriched uranium and thorium, and it was once designated for use in a high-temperature gas-cooled reactor, although Y-12 spokesman Steven Wyatt said no one currently at the Oak Ridge plant could remember which reactor.

Wyatt said the fuel was shipped to Y-12 in the early 1980s by California-based General Atomics.

The Oak Ridge disposition project was revealed in a March 18 memo by staff of the Defense Nuclear Facilities Safety Board assigned to Y-12.

According to the memo, the nuclear material is stored in multiple buildings at Y-12. There are 30-gallon, 55-gallon and 110-gallon containers, the memo stated.

Wyatt declined to discuss the quantity of nuclear material or provide details of its composition, but he confirmed that the fuel had never been irradiated in a nuclear reactor.

The defense board's report said the surplus material is HTGR fuel that's composed of "micro-encapsulated particle spheres."

Syd Ball, a semiretired reactor specialist at Oak Ridge National Laboratory, said the description of the material sounded similar to a type of ceramic-coated fuel once used at the Fort St. Vrain nuclear reactor in Colorado. That reactor operated from the late 1970s to the early 1990s.

Wyatt said the plan is to ship the surplus material to the Nevada National Security Site (formerly known as the Nevada Test Site) for disposal.

The defense board report said the material has to be repackaged because the existing containers no longer meet shipping requirements.

The report said most of the material should meet the waste-acceptance guidelines at Nevada and noted that the first deliveries could begin in late April.

However, Wyatt said Y-12 workers had not yet started repackaging the nuclear fuel.

"The project is awaiting final approvals before initiating the fuel repackaging operation," he said by email.

Senior writer Frank Munger may be reached at 865-342-6329.

## **INTERNATIONAL NUCLEAR NEWS:**

### **Japan: No Plans To Expand Evacuation Zone (WSJ)**

By Megumi Fujikawa

Wall Street Journal, April 25, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

### **Japan Commissions Inspection On Reactor (WSJ)**

By Tatsuo Ito

Wall Street Journal, April 25, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

### **No Radioactive Water Leaking From Plant (WSJ)**

By Mitsuru Obe

Wall Street Journal, April 25, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

### **Tepco Pumps 14 Percent Of Contaminated Water From Trenches (BLOOM)**

By Yuji Okada And Michio Nakayama

Bloomberg News, April 25, 2011

Tokyo Electric Power Co. transferred about 14 percent of the highly radioactive water lying in trenches around the No. 2 reactor at its crippled nuclear power plant after six days of pumping.

The company known as Tepco moved 1.41 million liters (372,000 gallons) of the water to a storage unit by 7 a.m. today, spokesman Takashi Kurita said at a press briefing in Tokyo. About 10 million liters is expected to be transferred over 26 days, the company said on April 19.

Tepco is trying to stop radiation leaks from its Fukushima Dai-ichi plant after a magnitude-9 earthquake on March 11 unleashed a tsunami that flooded the station. The water, which was pumped in to cool the reactors, must be removed to carry out repairs to the cooling systems knocked out by tsunami.

"The transfer is taking probably longer than they planned," said Tadashi Narabayashi, a professor of nuclear engineering at Hokkaido University. "This is not an easy job."

Tepco plans to connect power cables between the plant's six reactors today, Teruaki Kobayashi, the company's head of nuclear maintenance, said at today's briefing. The reactors are currently connected in pairs to external power sources.

The company's shares rose as much as 11 percent today to 450 yen in Tokyo and were trading at 430 yen at 1:39 p.m. local time. The stock is down almost 80 percent since the quake and tsunami, which left about 26,000 people dead or missing.

Tepco President Masataka Shimizu told Japanese lawmakers he hasn't decided when to resign to take responsibility for the crisis. Shimizu was asked by lawmaker Teruhiko Mashiko when he will submit his resignation while appearing today before a budget committee of the Japanese parliament.

Board members will have their pay cut by 50 percent after the accident, the Nikkei newspaper reported today, without saying where it got the information.

The company has been criticized by the government for responding too slowly to the crisis that unfolded at Fukushima after the tsunami washed ashore.

Tepco poured millions of liters of water to cool the reactors and spent fuel after the accident, causing flooding in the basements and trenches near the buildings that house them. Some highly contaminated water leaked into the sea and the utility has dumped less-toxic fluids into the ocean.

There are about 50 million liters of other contaminated water lying around reactors No. 1, 2 and 3, the company said on April 5.

About 520,000 liters of water with a level of radioactivity that was 20,000 times the legal limit leaked into the ocean between April 1 and 6, Junichi Matsumoto, a Tepco general manager, said last week.

The central government last week started enforcing a no-entry zone within 20 kilometers (12 miles) of the Fukushima plant as a public health measure after residents returned to the area to check their homes.

The station, where three of the reactors are damaged, is located about 220 kilometers north of Tokyo.

An earlier directive asking about 80,000 residents living within the 20-kilometer radius to evacuate wasn't legally binding. One person per household will be allowed to return to their homes for two-hour periods to retrieve possessions.

Japan's government on April 12 raised the severity rating of the Fukushima crisis to the highest on an international scale, the same level as the Chernobyl disaster in 1986. The station, which has withstood hundreds of aftershocks, may release more contamination than Chernobyl before the crisis is contained, Tepco officials have said.

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To contact the editor responsible for this story: Amit Prakash at aprakash1@bloomberg.net

## **Thousands March Against Nuclear Power In Japan (AFP)**

AFP, April 25, 2011

TOKYO (AFP) – Thousands of people marched in Tokyo on Sunday to demand an end to nuclear power in Japan and a switch to alternative energy after the crisis at an atomic plant hit by the March 11 earthquake and tsunami.

Brandishing placards bearing the slogan: "Bye Bye Genpatsu" (Goodbye Nuclear Power), demonstrators -- including many young people and families -- walked along a route from Yoyogi Park in the centre of the capital.

Organisers estimated 5,000 took part.

"We are worried. Before Fukushima, I wasn't thinking about it but now we must act, we must do it for our children," said Hiroshi Iino, 43, who joined the "Energy shift parade" with his wife and two boys, aged five and nine.

Schoolteacher Yoko Onuma, 48, said she was demonstrating for the second time since the accident at the Fukushima Daiichi plant where radiation leaks have forced the evacuation of some 80,000 people within 20 kilometres (13 miles) of the site.

"Before, I wasn't aware of the dangers of nuclear power," she said.

"But now we have to mobilise many people, as has happened in other countries, such as Germany."

Greenpeace Japan director Junichi Sato, one of the organisers of the protest, said until now few had protested about nuclear power following the quake-tsunami disaster which left more than 26,000 dead or missing.

"Over the past month, everybody was focusing on the victims of the tsunami ... on how to end the crisis," Sato said.

"Outside (in other countries), they jumped directly on the energy issue," he said. "But mobilisation is going to increase in Japan."

Around 2,000 people took part in a separate anti-nuclear demonstration under the slogan "Anti-TEPCO," referring to the operator of the atomic plant, held simultaneously a few kilometres away at Shiba Park.

The issue of possibly phasing out nuclear power is now openly debated on the political scene in Japan.

"We cannot do without nuclear energy, but we have to think about the way nuclear plants are built and the speed of their construction," Katsuya Okada, secretary general of the ruling centre-left Democratic Party of Japan, said Friday.

Before the tsunami which led to the shutdown of a dozen reactors, nearly 30 percent of Japan's electricity was generated from nuclear power.

Resource-poor Japan is highly dependent on Middle Eastern oil but its high-tech companies are also world leaders in many environmental and energy-saving technologies.

## **Nuclear Crisis Takes High Psychic Toll In Japan (WP)**

By Chico Harlan

Washington Post, April 24, 2011

MINAMISOMA, Japan — Defiant about the radiation that threatens his town, Kenichi Suzuki decided weeks ago that he would change almost nothing about his life. But already so much has changed.

His daughter and grandson fled to Tokyo, finding temporary housing on the 19th floor of a downtown youth hostel. The earnings of his family-run transportation business have dropped 50 percent.

Now that the government has declared the 12 miles around the Fukushima Daiichi nuclear facility a no-go zone, Suzuki's home town, a few miles north of that area, feels even more like a place under siege.

"I want my life back," said Suzuki, 61. "And if it's not happening now, I want to know when."

Barring a major release of toxic elements from the stabilizing Daiichi plant, radiation experts predict no long-term health impact on residents in the region.

In towns around the plant, though, radiation releases have already left a ruinous legacy, with tens of thousands stressed and traumatized, either looking for new homes or trying to make sense of their atrophied home towns.

Just more than a month ago, Minamisoma was a city of 70,000. When the March 11 earthquake and tsunami triggered a nuclear emergency at the atomic plant to the south, the city — subdivided, by lines of latitude, into three smaller towns — was at just the distance perfect for maximum confusion. Those who lived in the southernmost strip were required to evacuate. Those in the middle strip were told to stay indoors. Those at the top strip were told they had nothing to fear.

In practice, local officials said, most people in Minamisoma followed their own guidelines, doubtful that the lines between safety and danger had such bold boundaries.

Minamisoma has become a spooky half-town, a bunker for the elderly, the stubborn and the brave. Only about 25,000 people remain, few of them children. Mail service is sporadic. Banks are shuttered. It is a city waiting for things to get better, or worse — even as Tokyo Electric Power Co. (Tepco) said recently that it will need six to nine months to end the nuclear crisis, bringing the Daiichi plant into a state of cold shutdown.

And still, businesses are reopening, with residents, sick of life as evacuees, slowly returning to town.

Lights from restaurants and food specialty stores now dot the main street that was dark late last month. Convenience stores are open and well stocked. At a radiation screening center, just three of 22,182 have been found with levels that the government considers above the limit. (They were ordered to take a decontamination shower.) Those on the city streets now ride their bikes and keep their skin uncovered.

"Initially, even going to the grocery store, people here were dressing as if they were going to outer space," said Katuka Kazuyuki, a Fukushima prefecture emergency operations chief. "But now, nobody is doing that. I think they're just sick of sacrificing their lives."

But sacrifice, as Suzuki has found out, is hard to avoid. Heeding the advice to stay indoors, Suzuki hasn't played golf this spring — something he usually does 30 times a year. He has managed to retain 10 of his 15 full-time employees, but an important subcontractor partner within the no-go zone lost all 250 of its workers to evacuation. Given the government's Thursday no-go order, which strengthens the earlier evacuation notice, Suzuki would face arrest and a \$1,200 fine just for driving south.

For Suzuki, the changes have often yielded anger: He mocks the celebrities on TV who give rah-rah encouragement for those in the northeast, and he rails against Tepco for its failure to send representatives to speak with residents in the damaged towns.

But Suzuki, most of the time, just feels sorrow.

"There's no point in even thinking about the happy days," he said. "Those are just memories."

In the days after the disaster, Suzuki and much of his family headed to Tokyo. By late March, however, he and his son-in-law wanted to return to revive their business. That left Suzuki's daughter, Minako, and her 11-year-old son, Yushin, alone in a city where they knew nobody — one of 10 families at the Tokyo Central Youth Hostel.

Every night before bed, fearful about aftershocks, Minako sets up bags with emergency supplies: water, surgical masks, jackets and shoes. She stays indoors for days at a time. She is trying to find a school for Yushin but worries that he'll be made fun of; friends have told her that Fukushima evacuees have had a hard time at new schools.

"I want to send him to school in Tokyo and see how it goes," Minako said. "But if indeed he gets picked on, we might return to Fukushima. I still don't know where our true base is. I don't know what is best for us."

Yushin added: "I don't want to go home because I'm afraid of the nuclear plant. I heard you'll get cancer."

More than two decades after the 1986 Chernobyl nuclear crisis, the U.N. Scientific Committee on the Effects of Atomic Radiation issued a report on the long-term health implications in areas around the disaster site. The report dealt mostly with resulting physical ailments for those exposed to high levels of radiation, but it also acknowledged problems brought on by anxiety about the future and distress.

For decades to come, Japan's government will track the health of those who lived near the Fukushima plant. But for now, radiation releases have done the greatest damage to the environment, as areas directly around the plant have been dusted with cesium and iodine.

Japan's chief cabinet secretary, Yukio Edano, apologized to residents who lived within 12 miles of the nuclear plant and said that municipal governments would enforce a no-entry area for that zone, with police blocking access.

One member per household will be allowed in to collect belongings, Edano said. Those members can travel by bus and stay for two hours, no longer.

"They will be asked to wear protective gear, and upon return they will be asked to go through radiation screening," Edano said. "We ask them that they bring back as little as possible."

After that, Edano added, "For the sake of safety, we would ask all residents to comply with this order."

## **Tokyo Takes Over PR From Plant Operator (WSJ)**

By Mitsuru Obe And Toko Sekiguchi

Wall Street Journal, April 23, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Japan Announces Emergency Budget For Rebuilding (NYT)**

By Hiroko Tabuchi

New York Times, April 23, 2011

The Japanese government earmarked almost \$50 billion in emergency spending on Friday for the first step in the country's largest reconstruction effort since World War II.

The \$48.5 billion budget is likely to be followed by more spending as Japan takes on the gargantuan task of rebuilding the section of its Pacific coastline ravaged by the March 11 earthquake and tsunami. Parliament is expected to pass the budget next week.

At least 14,133 people have been found dead, an additional 13,346 remain missing and more than 130,000 are living in evacuation centers. Government estimates put the total damage from the quake and tsunami at \$300 billion.

The nuclear crisis set off by the tsunami has added to the human and economic toll. On Friday, the government banned residents from a 12-mile evacuation zone around the Fukushima Daiichi Nuclear Power Station, where several reactors have suffered explosions and radiation leaks. A previous order urged but did not require evacuation from that zone; the government still recommends that residents leave if they are within 19 miles of the plant.

"We all share the hope that reconstruction does not mean a return to where we were, but the building of a brighter future," Prime Minister Naoto Kan said at a news conference.

"I feel it was my fate to be prime minister at a time of great adversity," said Mr. Kan, whose handling of the crises has been criticized sharply in Parliament and in the country at large.

Japan has rebounded from other catastrophes: The 1923 Great Kanto earthquake killed as many as 140,000 people and caused widespread destruction in Tokyo. It also is thought to have wiped out almost 40 percent of the country's gross domestic product. In comparison, the death toll from the March 11 quake and tsunami is far lower, and the economic damage is likely to add up to just a few percent of G.D.P.

Still, Japan faces different challenges now, which could weigh heavily as it rebuilds: a rapidly aging population, a long-stagnant economy and public debt that is already at twice the size of its economy, thanks to profligate public works projects of the 1990s. That debt burden adds serious obstacles to financing the great reconstruction. Raising taxes, for which there appears to be a measure of public support, will dampen already tepid personal consumption levels. Issuing more government bonds will add to the ballooning deficit.

Mr. Kan's grip on leadership also appears to be weakening under the withering criticism, including charges that he bungled the initial response to the nuclear crisis, causing it to worsen.

The president of Fukushima Daiichi's operator, the Tokyo Electric Power Company, visited an evacuation center on Friday. "I have no words to express my regret," the president, Masataka Shimizu, told the evacuees after making his way through cardboard beds and blankets. Television cameras in tow, he knelt and bowed deeply — the ultimate posture of apology in Japan.

Some refugees bowed back, but others heckled him. "We all just want to go home," one told him quietly.

## **Reactor Team Let Pressure Soar (WSJ)**

By Phred Dvorak

Wall Street Journal, April 23, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Chernobyl Nuke Cleanup To Be Costly For Decades (AP)**

Associated Press, April 25, 2011

KIEV, Ukraine (AP) — A week of meetings on the world's worst nuclear accident has highlighted a key message: the Chernobyl cleanup will remain expensive and anxiety-provoking for decades to come.

Still, differences over the true consequences of the 1986 calamity meant that no formal conclusions were issued as the meetings ended Friday.

The Ukrainian government organized four days of conferences in the capital Kiev to mark the 25th anniversary of the April 26, 1986, blast that sent radioactive fallout over much of Europe.

An international donors' conference raised pledges of euro550 million (\$802 million) to build a shelter to cover the exploded reactor building for the next century. But that was short of the euro740 million (\$1.1 billion) sought for the shelter and a facility for storing spent reactor fuel.

Once the enormous shelter is completed and slid over the reactor building on rails, expected in 2015, workers can begin disassembling the reactor and disposing the hundreds of tons of radioactive material inside. It is still not clear how that will be done or how much it will cost.

"Right now, we don't have the processes, but we are working on developing them," Igor Gramotkin, director of the now-decommissioned power plant, told delegates.

The human and ecological tolls of the explosion are equally difficult to nail down.

More than 6,000 cases of thyroid cancer have been detected in people who were children or adolescents when exposed to high levels of fallout in the period immediately after the blast, and at least 28 people have died of acute radiation sickness from close exposure to the shattered reactor.

But Mikhail Balanov of the U.N. Scientific Committee of the Effects of Atomic Radiation told Friday's conference that other medical effects were difficult to project because the margins of error in various studies are too high to allow reliable assessment.

Balanov did say that radioactive contamination of mushrooms and berries — both popular delicacies in Ukraine — remain high "and we will face elevated levels for decades to come."

Concern is high in Ukraine that contaminated mushrooms and berries are sold in unregulated local markets.

Around 115,000 people were evacuated from the plant's vicinity after the blast. A 30-kilometer (19-mile) area directly around the plant remains largely off-limits and the town of Pripyat, where plant workers once lived, today is a ghostly ruin of deteriorating apartment towers.

In the face of continuing uncertainty about the disaster's effects and debate about future measures, the conference delayed its intention of producing a final document.

"It is clear it is not possible to come up with crystal-clear conclusions," said moderator Volodymyr Holosha, director of the guarded "exclusion zone" around the plant.

Throughout the week, officials drew attention to the ongoing crisis at Japan's Fukushima Dai-ichi nuclear power plant, with many declaring that it and Chernobyl show that "radiation does not respect borders."

U.N. Secretary-General Ban Ki-moon used the conference to call for "top-to-bottom" review of nuclear safety standards and for strengthening the role of the International Atomic Energy Agency.

Later Friday, seven employees of the British and French Embassies in Kiev launched a nonstop, 24-hour 110-kilometer (68-mile) charity walk to Chernobyl to raise money for children affected by the disaster.

## **Protests Mount Against Indian Nuclear Plant (AFP)**

By Phil Hazlewood

AFP, April 25, 2011

SAKHRI NATE, India (AFP) – In the busy Indian fishing village of Sakhri Nate, it's obvious what the locals think of the plan to build the world's biggest nuclear power plant just across the creek.

"Say No To Nuclear Power. We Don't Want To Get Sick," reads one slogan in Hindi on the side of a tarpaulin-covered shack selling sweet tea and sugary snacks.

Chalked on a wall around the corner is a message for the French company that has signed a \$9.3-billion deal to supply the plant's first state-of-the-art pressurised water reactors.

"Areva Go Back," it says simply in English.

Opposition to the Jaitapur Nuclear Power Project runs deep in this part of the Konkan region of western India, whose people have earned a living from fishing and farming for generations.

As with many in the hard-to-reach coastal area 400 kilometres (250 miles) from Mumbai, 45-year-old fisherman Abdul Majid Goalkar's argument is well-rehearsed.

At least 5,000 people work on about 600 boats, bringing in 50 tonnes of fresh fish, prawns and squid every day, he says. If the plant is built, he warns, all those jobs are under threat.

"Once they put the (water) pipeline in, we won't be able to go out and fish," he added, gesturing out to sea. "Warm water from the plant will affect the fish stocks, there'll be pollution... It's completely out of the question."

Others want to protect the village's most famous export -- the creamy, Alphonso variety of mango known locally as "the king of fruits" -- grown on rocky, clifftop land earmarked for the 2,318-acre (938-hectare) plant.

"The main business here is fish and mangoes," said Mahesh Karankar, 32, who runs a shop in Jaitapur village. "If that disappears, what will we sell? How will we earn any money?"

Over the last four years, the grassroots campaign against Jaitapur has built up a steady momentum and become increasingly vocal.

But resistance has hardened since the Japanese earthquake and tsunami that crippled the Fukushima plant, forcing a rethink on nuclear safety around the world and calls in India for a halt to atomic expansion.

Pravin Gaonkar, a fisherman and mango farmer spearheading the anti-nuclear campaign, said the Japanese nuclear crisis was all the more relevant, as the Konkan coast is prone to regular seismic activity.

"Before the incident in Japan we were told how technologically advanced it was, how it was an earthquake-prone zone and yet they had nuclear plants. What's happened has completely changed the scenario," the 57-year-old added.

Another development is that the so-far largely peaceful anti-nuclear campaign has turned violent.

On Monday, the police opened fire on a crowd of protesters, killing one and injuring several others.

The victim, Tavrez Sejkar, was buried in the red earth of the steep hillside cemetery in mainly Muslim Sakhri Nate on Wednesday.

At his funeral, attended by thousands of local people still angry at what they say was heavy-handed police tactics, the local imam called him "shahid" -- a martyr to the cause.

Politics has been blamed for the change in atmosphere around the protests, with fingers pointed at the local hardline Hindu nationalist party the Shiv Sena, which has a lengthy track record of violence and agitation.

On Tuesday, tyres were burnt on the main Mumbai to Goa highway and stones thrown at buses, as Sena members tried to enforce a shut-down protest in the area.

The local Sena lawmaker in the Maharashtra state assembly was arrested on suspicion of rioting.

Comparisons have been drawn with Singur in West Bengal state, where Tata Motors abandoned its plans for a new factory to build its Nano car after violent protests from farmers backed by local political parties.

Fast-growing, energy-hungry India, which wants to increase the share of nuclear in its energy mix from three percent to 13 percent by 2030, could pay a high price if Areva followed Tata's example.

At full capacity, the six-reactor Jaitapur plant would provide 9,900 megawatts of electricity -- more than double the current energy deficit in all of Maharashtra, home to commercial capital Mumbai.

Supporters say it could provide power to a chunk of the 500 million homes across the country that are currently off the grid and is vital to India's economic progress.

India's environment minister Jairam Ramesh has angered opponents by insisting that the project will go ahead, even as he conceded that additional safety measures may be required because of Fukushima.

"India cannot afford to abandon the route of nuclear power," he said on April 18. "From a greenhouse gas point of view, nuclear power is the best option."

Professor Surendra Jondhale, head of political science at the University of Mumbai, doesn't think the project will be abandoned, although a delay is likely while the government reviews safety.

Instead he sees it as classic Sena tactics: allying itself with native Maharashtrians who risk losing their traditional way of life and cherished land to "outsiders".

Others suggest the party's real aim is to discredit state industry minister Narayan Rane, a former Sena member who defected to the ruling Congress party and is one of the Jaitapur project's most prominent supporters.

"The Shiv Sena is trying to retain and regain its political stronghold in the Konkan," said Jondhale, who compared the situation to the party's opposition to a power plant backed by US energy giant Enron in the 1990s.

That helped bring the Sena to power in Maharashtra, although they ultimately supported the project.

"Local elections are coming up and next year there are municipal elections in Mumbai, where there is a strong connection to the Konkan. It helps them politically," added Jondhale.

"We are now seeing the real issue being very much politicised. It's overshadowed the real, genuine protests."

Back in Jaitapur, where a giant poster of Shiv Sena leader Bal Thackeray and local leaders has been put up on the main street, locals Mahesh Karankar and Chetan Narkar say the impact of the violence has already been felt.

Police have locked down the area, fearful of further unrest. As a result, three days' worth of fish is rotting in warehouses.

"Whether the Shiv Sena is with us or against us we don't care," said 23-year-old Narkar. "We don't need anyone to help us carry on our protest."

Another demonstration is planned for Sunday. Pravin Gaonkar says there will be no let up after that.

"If the government does nothing, at least 5,000 fishermen and farmers will go to Delhi and protest," he added.

## **Ramesh Presses "pause" Button On Jaitapur Nuclear Plant (PTI)**

PTI, April 23, 2011

Maintaining that concern over Jaitapur nuclear plant in Maharashtra was genuine after the earthquake and tsunami devastation in Japan, Environment Minister Jairam Ramesh today suggested a "pause" for the project till a transparent atomic policy is formulated.

He said the Jaitapur plant can be put on hold till various issues are sorted out.

"We cannot abandon the project. But I am neither pleading reversal or fast progression as a pause is the best option till a transparent nuclear policy is formulated", Mr. Ramesh told reporters here adding "I have conveyed my sentiments to Prime Minister Dr Manmohan Singh".

He said "we should not have any secret atomic policy".

Mr. Ramesh, who was here to lay the foundation stone of a bio-remediation project for cleaning of the Budha Nulla, said he was against use of bullet on demonstrators in Jaitapur.

"In a democratic set-up, the law maintaining agencies must learn to settle the issue amicably", he said adding the State government must not fire on the protestors.

One person was killed in police firing on anti-nuclear plant protesters in Jaitapur early this week.

Accompanied by the local MP and Congress spokesperson Manish Tewari, Mr. Ramesh said the bio-remediation project is the largest project of its kind where bacteria would be used for cleaning of the water-bodies (Buddha Nallaha).

The Rs 16 crore project will be fully funded by the Union Ministry for Environment.

There are five places across the country where such bio-remediation projects have been launched. He said, the effects of the project will be seen within one year of its launch.

The minister said the project will be closely monitored not only by the union ministry, but by experts as well as the public representatives including the media.

He said effective monitoring was essential for all these projects so that these are taken to their logical conclusion.

He hoped the State government will implement the projects as had been promised to him by Chief Minister Prakash Singh Badal and Deputy Chief Minister Sukhbir Singh Badal when they had met him in Delhi recently.

Mr. Ramesh said that during the last one year the Union Environment Ministry had sanctioned Rs 316 crores for various projects in Punjab.

During a ten-year period between 1998 to 2010, the Environment Ministry had sanctioned Rs 216 crores to Punjab.

The minister expressed concern over environmental degradation in Ludhiana district.

He said Ludhiana is the richest district in the country but is not as clean as it should have been. "Ludhiana is rich but not clean", he remarked, adding more attention needed to be given to the cleanliness.

Giving details of the project, he said, the bio-remediation project is cost effective and cheaper than conventional treatment, easy to handle and does not need highly-skilled manpower and electricity to run the treatment process.

He said the Central Pollution Control Board had identified seven firms for executing bioremediation projects in open drains especially for the drains adjoining the river Ganga.

## **CERN Atom Smasher Sets New Record (AFP)**

AFP, April 22, 2011

GENEVA (AFP) – The world's biggest atom smasher has set a new world record for beam intensity, a key measure of performance and power, the European Organisation for Nuclear Research (CERN) said Friday.

On a quest to unlock some of the universe's deepest secrets, the Large Hadron Collider (LHC) in Geneva collided beams with a luminosity exceeding the mark set last year by the US Tevatron accelerator, CERN said.

In particle physics, luminosity affects the number of collisions -- the higher the luminosity, the more particles are likely to collide.

"Beam intensity is key to the success of the LHC, so this is a very important step," said CERN Director General Rolf Heuer.

"High intensity means more data, and more data means greater discovery potential," he said in a statement.

The new record measured a level of luminosity of 467,000 billion billion billion -- 467 followed by 30 zeros -- per square centimetre per second, which corresponds to several million particle collisions per second.

Enhanced power boosts the odds of identifying extremely rare sub-atomic particles, especially the elusive Higgs boson, or 'God particle'.

Earlier experiments have found most of the tiny and ephemeral matter predicted by the so-called Standard Model of particle physics -- except the Higgs boson.

Many scientists believe only the 27-kilometre (16.8-mile), 3.9-billion-euro (5.2-billion-dollar) LHC may be powerful enough to detect it.

The current run of LHC experiments is set to continue through 2012, by which time it should be possible to determine if the Higgs boson truly exists, CERN said.

"There's a lot of excitement at CERN today, and a tangible feeling that we're on the threshold of new discovery," said Serge Bertolucci, CERN's Director for Research and Scientific Computing.

So far, CERN has cranked the cathedral-sized machine up to energy levels of 7.0 trillion electronvolts (TeV), or 3.5 TeV per beam, more than three times the level attained by any other accelerator.

It is aiming to trigger collisions at 14 TeV -- equivalent to 99.99 percent of the speed of light -- in the cryogenically-cooled machine after 2011.

At full throttle, the collisions should create powerful but microscopic bursts of energy that mimic conditions close to the Big Bang.

Even if validated, the Standard Model only accounts for about five percent of energy and matter in the Universe.

Dark matter and dark energy are thought to make up the rest, but have yet to be detected.

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**From:** Jaczko, Gregory <Gregory.Jaczko@nrc.gov>  
**Sent:** Tuesday, April 26, 2011 7:10 AM  
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**Subject:** FW: NRC News Summary for Tuesday, April 26, 2011  
**Attachments:** NRCSummary110426.doc; NRCSummary110426.pdf; NRCClips110426.doc; NRCClips110426.pdf

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**From:** Bulletin News[SMTP:NRC-EDITORS@BULLETINNEWS.COM]  
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CA/57



# NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

TUESDAY, APRIL 26, 2011 7:00 AM EDT

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## **NRC NEWS:**

### **NRC Says Enhanced Oversight Of San Onofre Station Will Continue.**

The North County (CA) Times (4/26, Sisson) reports, the NRC said it will continue "to conduct extra safety inspections at San Onofre Nuclear Generating Station because the plant has failed to make improvements in areas previously cited by the federal agency, officials said in a recent assessment letter to plant owner Southern California Edison." The Commission's letter, released last month, says that while it "is generally pleased with safety operations at the seaside power plant...regulators still have concerns with how workers and managers at the plant perform their duties." Those NRC concerns include "a lack of adequate design documentation and work instructions; improper error-prevention techniques; and [Edison's] efforts to make sure projects are properly overseen by management." NRC said these issues have been raised the last seven consecutive review sessions.

**San Onofre Safety Culture Seen As Deficient.** In an op-ed appearing in the Los Angeles Times (4/26, 657K) USC Engineering Professor Najmedin Meshkati, says that while many are "rightly preoccupied" with the ongoing nuclear crisis in Japan "there are more immediate problems" at the San Onofre power plant, which NRC officials plan to discuss at a "public meeting Thursday in San Juan Capistrano to review the performance and safety culture of San Onofre." The Times adds, "Safety culture is typically defined as the set of characteristics and attitudes in organizations and individuals that establishes safety issues as an overriding priority." San Onofre Station has, for many years, been under NRC "scrutiny for failure to address several longstanding issues related to its safety culture."

KGTV-TV San Diego (4/25, 9:08 p.m., EDT) broadcast, "A month after telling operators of the San Onofre Nuclear Plant that they were still having trouble with worker culture, the Nuclear Regulatory Commission wants to answer questions from the public. According to our media partner, the 'San Diego Union-Tribune,' the agency has scheduled a public meeting in San Clemente on Thursday. Inspectors say the plant is operating safely and they've improved efforts to identify problems and fix them. But the NRC says front line workers are still afraid to bring up problems with their immediate bosses."

### **GINNA Plant Shut Down For Refueling, Maintenance.**

The Rochester Democrat & Chronicle (4/26, Orr, 130K) reports, Constellation Energy Nuclear Group's Ginna plant in Ontario, Wayne County "was shut down Saturday night for routine refueling and maintenance." While the 41-year-old plant is shut down, Constellation will

also "undertake maintenance operations, including an inspection of the generator that would provide electricity to safely shut down the plant if off-site power failed. An auxiliary reactor feedwater pump will be upgraded, and bolts that help hold fuel rods in place inside the reactor vessel will be replaced or inspected, Constellation spokeswoman Maria Hudson said."

On its website, WHAM-TV Rochester (4/25) noted that there "is no specific date when Ginna will be back on line, but last time they went off – it took about three weeks."

On their websites, WHEC-TV Rochester (4/25) and WIVB-TV Buffalo (4/25, Sanders) also carried similar coverage.

### **Constellation Returns Nine Mile Point Unit 1 Reactor To Full Output.**

Power-Gen Worldwide (4/26) reports, Constellation Energy "said Nine Mile Point Nuclear Station Unit 1 in New York returned to 100 percent power following the completion of a planned refueling and maintenance outage." The outage began March 21 "and was safely completed on April 19," and during the shutdown "workers performed more than a thousand safety inspections and maintenance activities on a variety of plant components and systems. Many of the activities performed during the outage cannot be accomplished while the unit is operational, and all are designed to ensure the continued safe, efficient and reliable production of electricity."

**Nine Mile Point Siren System To Be Tested.** The Oswego County (NY) Today (4/26) reports, "The Oswego County Emergency Management Office has announced that the system of emergency notification sirens surrounding the three nuclear power plants at Nine Mile Point are scheduled to be tested during the week of May 2 through 6 between 4 and 8 p.m." During the quarterly test, each siren will be activated, and the "Emergency Management Office will be testing the sirens in conjunction with a new radio control system."

### **NRC Approves 20-year License Extension For Palo Verde Plant.**

The Arizona Daily Star (4/26, 98K) reports, "After a two-year review, the US Nuclear Regulatory Commission has extended the operating licenses of Palo Verde Nuclear Generating Station, plant operator and part-owner Arizona Public Service Co. said." APS said the plant has recently has upgrades to equipment, "including replacement of key reactor components and an ongoing overhaul of the plant's cooling towers, [that] have positioned Palo Verde 'for continued safe and reliable operation.'" A "water agreement between Palo Verde's owners and Phoenix-area cities guarantees a supply of treated effluent for cooling water to the plant through 2050, the utility said."

## **Southern Brings Plant Vogtle Unit 1 Back Online After Scram Shutdown April 20.**

Bloomberg News (4/26, McClelland) reports, "US nuclear-power output increased as three reactors shut and four started amid seasonal refueling, the Nuclear Regulatory Commission said." Output nationwide increased by "260 megawatts from April 21 to 72,041 megawatts, or 71 percent of capacity, the lowest level since Oct. 22, 2006, according to an NRC report today and data compiled by Bloomberg." Among the list of reactors increasing or decreasing output, Bloomberg says Southern Co. "switched on the 1,109-megawatt Vogtle 1 reactor in Georgia after it automatically tripped offline April 20 while at full power." Though the NRC said the cause of the trip remains under investigation, the unit was "operating at 30 percent of capacity."

WAGT-TV Augusta, Georgia (4/25, 11:07 p.m., EDT) broadcast, "A nuclear reactor that went down at Plant Vogtle is now operating at 50%. A spokesperson for Southern Company tells us they are testing faulty parts. The reactor is expected to be fully operational by Thursday. It unexpectedly shut down at the Waynesboro site on Wednesday. While people who live near the plant expressed concerned about the incident, the Nuclear Regulatory Commission says there were no leaks or damage as a result of the shut down." WBJF-TV Augusta, Georgia (4/25, 11:04 p.m., EDT) also broadcast this story.

### **Georgia Power Nuclear Reactor Payment Dispute.**

WSB-TV Atlanta (4/25, 12:47 p.m., EDT) broadcast, "Georgia Power will present the case this week on why customers should foot the bill on any construction cost overruns. Georgia Power objects to plan that would cut its earnings if the price of building two nuclear reactors at Plant Vogtle exceeds \$14 billion. The utility will file the case on Wednesday. The Public Service Commission is set to rule in August."

## **Vermont Lawmaker To Bring Bill Outlawing Operation Of A Nuclear Reactor.**

The Brattleboro (VT) Reformer (4/25, Garofolo) reports, "State Rep. Richard Marek will introduce a bill this week that would make it a criminal enterprise to operate a nuclear plant in Vermont without receiving the approved permit from state lawmakers and the Public Service Board." Marek plans to outline his bill that he says will "put Vermont in a position where a statute pertaining to nuclear plants would be similar to other laws addressing illegal activities." The Reformer says the bill was drafted before Entergy filed its lawsuit against the state, and says it "would deem it against the state's public policy to violate Vermont law by operating a plant without the required approvals and would declare any attempt to indemnify or reimburse for any penalties incurred of the foregoing violations as a separate infraction."

The Rutland (VT) Herald (4/26, Smallheer) reports, "Rep. Marek says current Vermont law is inadequate to prevent Entergy Corp. from thumbing its nose at the state of Vermont next year and keep its Vermont Yankee nuclear plant running." According to the "Marek said he drafted the legislation well before Entergy filed suit against the state last week."

## **Anti-Nuclear Group Wraps Up Protest March From Indian Point To Vermont Yankee.**

The Brattleboro (VT) Reformer (4/25, Weiss) reported on the 206-mile protest march from Indian Point plant in Buchanan, New York, to Vermont Yankee plant. "On April 10, about 24 people started the walk, led by Japanese Buddhist nun Jun San Yasuda. Yasuda, a member of the Grafton (N.Y.) Peace Pagoda, said in a press release that she organized the walk to support those who were affected by the Fukushima Nuclear Power Plant in Japan." The Reformer adds, "About 70 people joined them for the walk along the Connecticut River and then for a prayer vigil at the gates of Vermont Yankee."

### **Activists Arrested In Protest At Vermont Yankee.**

The Springfield (MA) Republican (4/26, Johnson, 67K) reports, "Seven long-time Pioneer Valley activists were among 11 women arrested Friday afternoon after chaining themselves to the main gate of the Vermont Yankee nuclear power plant in an attempt to shut the facility down." The protest, "coinciding with the observance of Earth Day, sought to have the controversial nuclear plant closed immediately." Among those arrested were: "Frances Crowe, 92, and Paki Wieland, 67, both of Northampton, Marcia Gagliardi, 63, and Hattie Nestel, 72, both of Athol, Jean Grossholtz, 82, of South Hadley, Ellen Graves, 70, of West Springfield, and Betsy Corner, 63 of Colrain."

## **NRC To Discuss Cooper Station Performance At Public Meeting.**

The Omaha World-Herald (4/25, Gaarder, 148K) reported, the NRC will discuss Cooper Nuclear Station's 2010 performance during a public meeting in Brownville May 5 and residents will "have a chance next month to directly question regulators about the reactor's safety." The NRC said its reviews across the country have drawn more than the usual number of attendees thanks to the nuclear crisis in Japan, which has prompted "more people to attend and ask questions about American reactors. 'We're pleased we're getting more people coming out; we don't often get a big attendance,' said Victor Dricks, a regional spokesman for the NRC." Though the Cooper Station operated within necessary safety margins, the NRC "advised the Nebraska Public Power District of concerns about some of the decision-making at the plant," which it believes did not reflect "conservative enough assumptions."

## **Exelon Returns Limerick Station To Full Power, Following Refueling, Maintenance**

**Outage.** Limerick (PA) Patch (4/25, Powell) reported on the return to service of the Unit 2 reactor at Exelon Nuclear's Limerick Generating Station, following an extended refueling and maintenance outage. "While the unit was shut down, employees and almost 1,900 supplemental workers replaced one-third of the reactor's fuel and performed extensive inspections, tests, maintenance and modifications on a variety of components and equipment, the company said in a statement released this morning." Limerick site vice president Bill Maguire said the outage included some "13,000 activities that were performed to prepare the unit for safe and reliable operations through the next 24-month operating cycle," including "replacement of the unit's three main power transformers to ensure continued reliable operations for many years to come."

## **Byron Plant Returns To Service Following Refueling, Maintenance Outage.**

On its website, WREX-TV Rockford, Illinois (4/25) reported refueling and upgrade work to Byron Generating Station's Unit 1 reactor has been completed and the plant "went back online Sunday after it was shut down for several weeks for its scheduled refueling, extensive inspections, testing and other maintenance." Site VP Tim Tulon said the "workforce safely completed a large amount of work that will ensure the safe, reliable production of environmentally-friendly electricity for the next operating cycle." Tulon added that Exelon is glad for the "improvements to an already safe and reliable unit" and he said "the influx of extra outage workers brought a temporary boost in employment and more business to local retailers." Reuters (4/26, Samanta) also briefly covers the plant's return to service.

## **Exelon To Construct Dry Cask Facility For Clinton Station.**

E&ENews PM (4/26, Northey) reports on Exelon's plans to "build a \$30 million storage system for the dry cask storage of spent nuclear fuel from its Clinton Power Station in Illinois." The above-ground facility is "expected to cost up to \$10 million annually to operate" and it should "be ready for the first shipment of fuel by 2015." Currently, spent fuel from Clinton Station is stored "in a single wet pool adjacent to the 24-year-old, 1,065-megawatt reactor."

WCIA-TV Champaign, Illinois (4/25, 7:05 p.m., EDT) broadcast, "The Clinton Power Station is running out of room for its spent fuel. Now it's trying a new method for storing it. Instead of keeping it below the surface it will rest in canisters above ground. All the construction will happen on the plant's property. Representatives say it's 100% safe. .... The waste

would be sealed in a 350 ton concrete cask, just like the ones in this picture off the Nuclear Energy Institutes website. Although it's a new move for Clinton, the tactic is already being used at two nuclear plants in Illinois. ... Station reps say the casks are fully regulated by the Nuclear Regulatory Commission." The broadcast cited local resident Dave Rudisill, who expressed confidence in the NRC, "I pretty much trust the regulatory commission, so if they say it's safe I figure it is."

## **Xcel To Shut Down Prairie Island Plant For Refueling Outage.**

The Red Wing (MN) Republican Eagle (4/26, Gorvin, 7K) reports, "Prairie Island nuclear plant is gearing up for another refueling outage" and plant officials say the outage will begin "sometime between now and the end of the month." In "addition to the refueling, Xcel also takes the opportunity to do maintenance work and minor modifications on other parts of the plant that can't be worked on while the plant is online." The activity will bring an "additional 600 workers to the plant, nearly doubling the plant's staff of about 750."

## **NRG Energy To Scratch Investment In South Texas Project.**

The Times of Trenton (4/24, Duffy) reported NRG Energy Inc., citing the "shaky future of nuclear power in the wake of Japan's ongoing nuclear crisis," announced it "would write down its five-year, \$481 million investment in the expansion of its South Texas nuclear plant. 'The tragic nuclear incident in Japan has introduced multiple uncertainties around new nuclear development in the United States,' said David Crane, president and CEO of NRG." The Times adds, "Support for new nuclear projects in the US has eroded in the aftermath of the nuclear crisis in Japan, according to an Associated Press-GfK poll conducted earlier this month."

Under the headline, "NRG Energy CEO: We Failed To 'Fail Quickly & Cheaply'" Reuters (4/26) reports on Crane's estimation that NRG's investment at South Texas Project went on too long and that according to Crane, failing fast enough was "something that we have failed to do."

**NRG's Crane Still Believes In Nuclear Power.** On his "Green Wombat" blog for Forbes (4/26, 924K), Todd Woody writes on NRG Energy CEO David Crane's interest in solar investment, after he announced last week "that the New Jersey-based power producer would abandon further investment in a Texas nuclear power project," though in an interview with Woody in San Francisco, it was apparent Crane "remains a true believer in nuclear power." Crane told Woody the US should have followed France's example. "I would have liked to have seen nuclear's market share go from 20 percent to 40 percent." But he acknowledged that "is not going to happen anytime in the foreseeable future in the

wake of the Japanese nuclear crisis and the existing financial and licensing challenges facing the United States industry.”

**Bill Would Charge Indiana Ratepayers For Some Out-Of-State Relicensing Costs.** The AP (4/25) reported, “Indiana consumers could be charged for some costs that utility companies incur to extend the lives of nuclear reactors, even though there are no nuclear plants in the state, under legislation being considered by state lawmakers.” Originally, the measure approved by the Indiana House 62-34 last week, “would have given financial incentives to utilities for building new nuclear plants, though that provision was dropped in the wake of Japan’s nuclear disaster. But the bill does impact nuclear facilities that are extending their operating permits beyond the initial 40 years, The Times of Munster reported.” The AP says the Cook plant in Michigan would be covered because it provides power to Indiana customers.

**Author Tucker Still Supports Nuclear Power.** In an op-ed in the Wall Street Journal (4/23, Subscription Publication, 2.02M), author and nuclear advocate William Tucker writes that while the Fukushima Daiichi crisis has given nuclear power a black eye, other sources of electricity each have their own risks. Many have died in natural gas explosions, coal mine disasters, hydroelectric dam collapses and other calamities. Tucker asks whether wind and solar might be safe, clean alternatives. But he notes that the yield from such renewable sources, and the amount of space they would need to generate power comparable to a nuclear reactor are themselves detractors.

**Miami Herald Says Nuclear Will Never Be 100-Percent Safe.** In an editorial, the Miami Herald (4/24, 157K) says that in the wake of the Fukushima Daiichi disaster, nuclear industry officials have gone to lengths to “proclaim that the 104 US nuclear power plants are safe. One compelling piece of evidence they cite is that, globally, nuclear plants have close to 15,000 reactor-years of experience, with known severe accidents limited to five commercial power reactors,” but as impressive as that is, “skeptics point out that one nuclear accident is one too many.” As long as “there are an infinite number of things that can go wrong and only a finite number of preventative measures, nuclear power will never be 100-percent safe. But given existing technology, the increasing needs for power generation and the desire for clean sources of energy, nuclear power cannot be ruled out as a viable option.”

**Pueblo County Commissioners Reject Bid For New Nuclear Plant In Colorado.** The Colorado Springs Gazette (4/26, Rappold, 87K) reports, “Pueblo

County commissioners unanimously rejected a proposal by an attorney to build a nuclear power plant here that would have been about 60 miles from Colorado Springs.” By a vote of 3-0 the board voted to deny Don Banner’s rezoning request. Banner “had hoped their affirmation would have led to interest from a utility or energy company ready to shoulder the work of getting federal licensing and building the plant.” The Gazette adds there was “massive and vocal opposition — one commissioner said 95 percent of comments received were against the plan — that grew louder as the nuclear crisis in Japan unfolded as hearings were held last month.” Commissioners were also concerned about where the needed water would come from, “how emergency services would be impacted and...what would happen with the spent fuel rods,” which plants now are forced to store onsite.

The AP (4/26) adds the Pueblo County commissioners voted “against a special land-use permit sought by Pueblo lawyer Don Banner. He has proposed rezoning a nearly 38-square-mile parcel to create an energy park that would have included a nuclear power plant. ... Banner has said he didn’t have any partners or water rights lined up for a nuclear power plant because he first wanted to line up county approval.”

The Denver Post (4/26, Jaffe, 343K) noted that Commissioner Jeff Chostner suggested the proposal suffered from its timing. “At some place and at some time nuclear will be appropriate,” he said, but added, “I don’t think this is the place or this is the time.”

On its website, KKTV-TV Colorado Springs, Colorado (4/25, Chin) reported Banner, who “originally conceived the idea for this energy park and nuclear power plant” has “maintained this development would have brought new jobs and boosted the Southern Colorado economy. ‘I respectfully disagree with their decision but it’s theirs to make and like the rest of us we all have to live with our decisions and they’ll have to live with theirs,’ Banner said.”

KUSA-TV Denver (4/26, 12:09 a.m., EDT) broadcast, “The nuclear situation in Japan continues to capture the world’s attention and is not making it easy on those trying to build new reactors. Tonight, Pueblo County Commissioners made their decision on whether to move ahead with plans to build a nuclear plant in southern Colorado. The commissioners voted 3-0 against the rezoning request. The proposal called for 38 square miles to become the location for a new energy park. The Commissioners said the safety concerns and uncertainty about the plans details led to the decision to vote no.” KRDO-TV, Colorado Springs, Colorado (4/26, 12:00 a.m., EDT) and KJCT-TV Grand Junction, Colorado (4/26, a.m., EDT) also broadcast this story.

**Lawmakers On Yucca Tour Not Expected To Meet With Project Opponents.** The Las Vegas Review-Journal (4/26, Tetreault, 178K) reports that while

three lawmakers from the House Environment and the Economy Subcommittee, including chairman John Shimkus (R-IL), plan to meet with several pro-Yucca Mountain nuclear waste repository leaders while in Nevada Tuesday to tour the site, they may not meet with opponents of the project. Nevada Agency for Nuclear Projects acting director Joe Strolin, sent a letter to Shimkus last week, asking that two representatives of the state, longtime technical consultant Steve Frishman and Judy Treichel, executive director of the Nevada Nuclear Waste Task Force, accompany them on the tour, but as of Monday, Strolin said he had not received a response. A blog on the website for the Las Vegas Sun (4/26, Ralston, 41K) briefly reports this story.

**MIT Study Recommends Centralized Nuclear Waste Storage.** In a study to be released Tuesday, the New York Times (4/26, A16, Wald, Subscription Publication, 950K) reports, "engineers and scientists at the Massachusetts Institute of Technology suggest that 'the entire spent-fuel management system — on-site storage, consolidated long-term storage, geological disposal — is likely to be re-evaluated in a new light because of the Fukushima storage-pool experience.'" But they argue "that there is no reason to find a substitute for uranium because the existing global supply is plentiful." So "rather than processing the fuel to retrieve plutonium, the report suggests, the fuel should be 'managed' so that the option of doing so is preserved — perhaps by storing the fuel in above-ground silos for a century." The report recommends storing the waste at a centralized repository in dry cask storage.

**Three Of Seven Sites Considered For Low Level Waste Are In New Mexico.** The Albuquerque Journal (4/26, Fleck, 95K) reports that the federal government is looking for a disposal site for radioactive waste, and "three of seven sites under consideration for disposal of some of the lesser radioactive nuclear power plant waste are in New Mexico, including the possibility of adding it to the inventory of waste headed for the Waste Isolation Pilot Plant outside Carlsbad. A second site near WIPP is also on the list of possible locations, as well as Los Alamos National Laboratory." Arnie Edelman, who is leading a Department of Energy study of the issue, explained that "the waste, much of it from machinery in old nuclear power plants, is technically categorized as 'low level,' but is sufficiently dangerous that federal rules call for burying it underground."

Drawing coverage from the Albuquerque Journal's story, the AP (4/26) adds, "Don Hancock, who heads the nuclear waste safety project for the Southwest Research and Information Center in Albuquerque, criticized the government for singling out New Mexico for three of the seven sites under consideration." Said Hancock, "That's not OK, and the people of New Mexico need to tell them it's not OK."

The Tri-City (WA) Herald (4/26, Cary) reports, "The budget for Hanford's \$12.2 billion vitrification plant and tank farms could be the biggest challenge facing Scott Samuelson, the new Department of Energy manager of Hanford's Office of River Protection." His responsibility "will be to ensure that those who make decisions on how much money projects receive fully understand what the consequences are if money is less than planned, he said." But Samuelson "has delivered another large, one-of-a-kind project: The \$3.5 billion National Ignition Facility at the Lawrence Livermore National Laboratory in California," which was completed according to a revised schedule and slightly below budget.

### **Utah Ponders Whether To Order EnergySolutions To Remove Too-Hot Waste.**

The Salt Lake Tribune (4/25, Fahys, 110K) reported weeks after the Utah Division of Radiation Control received EnergySolutions \$80,000 check to cover the fine for burying 23 barrels of too-hot waste at its Tooele landfill, state regulators are unsure whether to require the company to dig up and remove the waste or not. "Rusty Lundberg, director of Utah's Division of Radiation Control, said his office is reviewing the company's arguments that removing the greater-than-Class A waste would be too costly — in terms of time, money and worker and public health." Lundberg said the division's goal is to "make sure that they are in compliance with [Utah's] Class A limits and that they stay in compliance." The question for the state "boils down to whether risk of leaving the waste buried where it is outweighs the risk of digging it up."

### **Chernobyl Lessons Still Apply To Plant Safety Culture.**

In a piece for McClatchy News (4/26), USC professor of civil/environmental and industrial and systems engineering, Najmedin Meshkati writes of lessons to be learned on the 25<sup>th</sup> anniversary of the Chernobyl nuclear power plant accident. The event "doesn't do justice to the significance and impact of this plant on the world, as I saw and felt about it in 1997." According to many "seminal studies" by the IAEA and others, "the root cause of the Chernobyl" accident was "primarily deficient safety culture, not only at the Chernobyl plant but also throughout the Soviet design, operating and regulatory oversight for nuclear power that existed at the time of accident in 1986."

**PNNL Employees Helping Secure Chernobyl.** The Tacoma News Tribune (4/26, 84K) reports, "Twenty-five years after one of four nuclear power plants at Chernobyl exploded, employees of Pacific Northwest National Laboratory are working to reduce the dangers remaining from the accident." Battelle, which operates PNNL, helped to develop a plan in 1997 to address remaining technical problems at Chernobyl, and "now it has employees assigned to the responsible

execution of the plan, which includes building a massive new structure to cover the open reactor for the next 100 years. Six PNNL employees are living in the Ukraine, bringing expertise as engineers, safety professionals and contract specialists to the project.”

**Returning Journalist To Discuss Nuclear Crisis.** The Windsor (CO) Beacon (4/26, 7K) reports, “The League of Women voters is sponsoring a firsthand report on Sunday about the ongoing nuclear crisis in Japan and the devastation following the earthquake and tsunami.” After a month-long stay in Japan, Christopher Field, who was “called to interpret for the Nuclear Regulatory Commission in Washington.” has also “worked as an on-camera journalist in Japan as well as in the US and has been able to maintain contacts with Japanese journalists and media through his frequent trips to Japan.”

**Long-Shot Odds Seen For Proposed Nuclear Plant Near Paducah.** The Louisville (KY) Courier-Journal (4/26, Bruggers) reports, that while “retired engineer Ralph Young had hoped this would be the year that Kentucky’s General Assembly would ease its restrictions on nuclear plant construction, clearing the way for a plant near his hometown of Paducah,” the measure to do that failed in committee even before the March 11 Fukushima plant disaster. “Now, given that Paducah sits in an area the US Geological Survey considers a high hazard should an earthquake occur on one of the faults in the New Madrid seismic zone, Young and other supporters are worried that the proposed nuclear plant may not happen.” The Courier-Journal notes that Young serves on an advisory board for the Paducah Gaseous Diffusion Plant, which employs about 1,200 people, but is expected to close in the coming years. Officials have “been trying to find new jobs at the site west of Paducah for a work force already comfortable with nuclear energy.”

**NHR Calls Malloy Tax More Fair.** In an editorial the New Haven Register (4/26, 69K) writes, “The legislature’s Democratic leadership took the governor’s hint about legislation that would impose a punitive tax on electricity generated with nuclear power and skyrocket customers’ utility bills.” The Register believes, “Any tax that increases the too high cost of electricity in Connecticut is a bad idea. But, at least the tax Malloy and the Democratic leadership back is fairer in spreading the tax burden.”

The Daily News Of Newburyport (4/26) writes an editorial critical of the controversial Millstone tax.

**Letter: Similar Accident To Japan’s “Inevitable” For US.** In a letter to the editor of

Massachusetts’ Daily News Of Newburyport (4/25) Bruce Skud of Newburyport, wrote, “Japan’s nuclear crisis — amidst an earthquake and tsunami — has reignited the public’s concerns about living within a 10-mile radius of Seabrook nuclear power plant and about the safety of nuclear power generally. But the Seabrook operators, the nuclear industry, and the US Nuclear Regulatory Commission continue to whistle past the graveyard.” Skud says a similar accident to the one in Japan is “inevitable” at a US plant because much equipment “has aged far beyond its design limits.”

**Thyroid Cancer Fears May Be Unfounded.** In the New York Times (4/26, D7, Subscription Publication, 950K) Personal Health column, Jane Brody writes, “I was not surprised by a stream of panicked e-mails I received after a television show in which the popular Dr. Mehmet Oz called thyroid cancer ‘the fastest-growing cancer in women’ and cited the harmful effects of radiation from sources like dental X-rays and mammograms.” But although the number of “diagnoses in women nearly doubled from 2000 to 2008,” the death rate from this disease “has not increased, and more than 97 percent of patients survive.” Dr. Otis W. Brawley from the American Cancer Society “said the stable death rate despite a rising incidence strongly suggests that most of the thyroid cancers now being diagnosed would never have become a health threat.”

**Leaked Documents Reveal New Details About Post-9/11 Plots.** The release of hundreds of classified documents on the US prison at Guantanamo Bay by WikiLeaks continues to garner significant media attention, including coverage on two network news broadcasts last night. In its lead story, the CBS Evening News (4/25, lead story, 2:00, Couric, 6.1M) reported, “We all remember where we were on September 11, 2001,” but “as it turns out, while Americans watched in horror as the Twin Towers burned, Al Qaeda’s top leaders were watching, too.” CBS (Martin) added, “Khalid Sheikh Mohammed, the plot mastermind, was in Karachi, Pakistan, watching on television with Ramzi Bin Al Shibh, the day-to-day coordinator of the operation.” According to the leaked documents, which are based on the interrogations of prisoners at Guantanamo, “say after 9/11 all the senior operatives left Pakistan for Afghanistan to meet with Osama Bin Laden.”

Mohammed, AFP (4/26) reports, “warned that Al-Qaeda has hidden a nuclear bomb in Europe which will unleash a ‘nuclear hellstorm’ if Osama bin Laden is captured, leaked files revealed Monday.” He told Guantanamo Bay interrogators Al Qaeda “would detonate the nuclear device” if Bin Laden “was captured or killed,” according to the leaked files.

The UK's Daily Telegraph (4/26, Watt) reports that "a number of the conspiracies admitted...seem improbable, but other plans were detailed and thoroughly analysed." For example, "some detainees displayed an apparently comprehensive knowledge of Western countries' defences against nuclear attack." Abu Al-Libi, the documents show, "has knowledge of al-Qaeda possibly possessing a nuclear bomb," while "other detainees talked about 'a ship purchased by al-Qaeda' which was intended to be used 'to transport weapons, explosives, and possibly uranium purchased from countries along the Red Sea and Mediterranean Sea.'"

NBC Nightly News (12/6, story 7, 0:30, Williams, 8.37M) noted briefly that WikiLeaks has released a "trove" of military documents that detail conditions inside Guantanamo, as well as that "most of the remaining prisoners, 172 individuals, are at high risk of posing a threat to the US if released. But the documents also show an even larger amount of the prisoners who were released were also designated high risk before they were otherwise freed or sent to other countries." USA Today (4/26, Dorell, 1.83M) also reports the figures.

**Napolitano Talks Cybersecurity At UC Berkeley.** Speaking at UC Berkeley yesterday, DHS Secretary Janet Napolitano said the Federal government must team up with academia and the private sector in order to protect the US against cyber attacks, the Contra Costa (CA) Times (4/26, Oakley, 175K) reports. "Priorities include protecting critical infrastructures such as nuclear power plants and stock exchanges, as well as civil liberties and privacy, Napolitano said. She added that development of an Internet kill switch during a national emergency is a policy that won't come from her office." The Times says Napolitano "shied away from" an audience question about a potential kill switch, saying she's "not sure how much potency that has legislatively, but it will be part of the dialogue" when cybersecurity legislation is discussed later this year. Napolitano also used the event to encourage students to pursue careers in cybersecurity, telling the audience that the US needs "a strong and innovative group to take on this incredible challenge that protections of cyber space demand."

## **IN THE BLOGS:**

**Blog: Environmentalists Decry Areva's Planned Method For Cleaning Up Fukushima Water.** In an "Ingenuity of the Commons" blog entry for Forbes (4/26, 924K), Jeff McMahon writes, "The process a French firm will use to clean Fukushima's radioactive water has been blamed for a leukemia cluster in France and for polluted beaches and irradiated waters from the English Channel to the Arctic Sea." Areva SA, which agreed "to

remove up to 99.99 percent of the radioactive contaminants in 67,500 tons of water flooding the crippled" Fukushima plant, plans to use "a co-precipitation method employed at its La Hague nuclear fuel reprocessing facility in Normandy." McMahon adds the "water treatment process has been deplored" by environmental groups that include Greenpeace and Physicians for Social Responsibility partly "because of the quality of cleaned water it produces."

## **INTERNATIONAL NUCLEAR NEWS:**

**Events Following Earthquake, Tsunami Recounted.** In a story over 3,000 words long, Bloomberg News (4/26, Langan) recounts the stories of several workers at the Fukushima Daiichi nuclear plant immediately following the March 11 earthquake and subsequent tsunami. "Interviews with Tokyo Electric Power Co. engineers, technicians and contract workers who were at the company's Fukushima Dai-ichi plant on March 11 or handled the disaster response show how the facility stood up to the quake, only to fail when the tsunami that followed found a way through its engineering defenses." Following the tsunami, "the only defenses left to prevent Dai-ichi's nuclear fuel rods from overheating and spewing radiation were banks of so-called 'coping' batteries designed to last no more than half a day." But "Tepco's engineers couldn't determine if the batteries were working because monitoring equipment malfunctioned, leaving them blind to what was happening inside the reactors." Once readings of how much water was in the spent fuel pools were available, they showed that water levels held steady through the night.

**TEPCO Removes Radioactive Water, Plans To Connect Power Cables.** In continuing coverage from Monday's briefing, Bloomberg News (4/26, Okada, Nakayama) reports that TEPCO "pumped highly radioactive water from trenches at its crippled nuclear plant, and said it expects to complete installing additional cables to supply backup power to the station's six reactors." TEPCO "moved 1.41 million liters (372,000 gallons) of the water from the reactor No. 2 building, about 14 percent of the total, to a storage unit by 7 a.m. local time" Monday, according to company spokesman Takashi Kurita. The company also "plans to connect power cables linking the plant's six reactors today, Teruaki Kobayashi, the company's head of nuclear maintenance, said."

**TEPCO Workers Accept Pay Cuts Out Of Sense Of Responsibility For Accident.** Bloomberg News (4/26, Inajima, Okada) reports TEPCO workers "agreed to a management proposal to cut their pay by as much as 25 percent out of a sense of responsibility for the world's worst nuclear disaster since Chernobyl," the Tokyo Electric Power

Workers Union said. Koji Sakata, secretary-general of the union, said, "Most union members didn't object to a pay cut, considering the situation at the company and the effect on society from the nuclear accident." According to a statement, the company "expects to save about 54 billion yen a year from the reductions," which include cuts of 25 percent for managers, 20 percent for workers, and 50 percent for board members.

The Wall Street Journal (4/26, Obe, Subscription Publication, 2.02M) also covers the pay cuts in a story that reports that Goshi Hosono, a member of Japan's lower house of parliament and adviser to Prime Minister Naoto Kan on the nuclear issue, said that the government would oversee much of the work to bring the nuclear plant under control. Hosono said, "Tepco, as a public utility, apparently did not have the [corporate] culture to take bold action," adding, "Such a conservative attitude is not acceptable in a crisis situation, and Tepco is no longer behaving like its slow, old self."

**Japan's Nuclear Industry Faulted For "Self-Righteousness."** In an opinion piece for Mainichi Daily News (4/26, 3.95M), journalist Kosuke Hino takes the Japanese nuclear industry, TEPCO, the Nuclear and Industrial Safety Agency (NISA) of the Ministry of Economy, Trade and Industry (METI), and the Cabinet Office's Nuclear Safety Commission (NSC) of Japan to task for their "rampant use of cliches such as 'unanticipated state of affairs' and 'unprecedented natural disaster.'" Hino says those "excuses" signal that the "so-called nuclear power experts have no intention to self-reflect or admit their shortcomings." Hino says it was "this self-righteousness -- evidenced over the years in the industry's suppression of unfavorable warnings and criticisms, as well as in their imposition of the claim that the safety of nuclear energy was self evident -- that lay down the groundwork for the accident at the Fukushima No. 1 Nuclear Power Plant."

**Farmers Come To Tokyo Seeking Compensation For Radiation Contamination.** The AP (4/26) reports, "More than 200 farmers brought two cows to Tokyo where they shouted and punched the air Tuesday in a protest to demand compensation for products contaminated by radiation spewing from Japan's crippled nuclear plant." Radiation from the Fukushima Daiichi plant "has been found in milk, water and leafy vegetables such as spinach from around the plant." Farmer Katsuo Okazaki, who came to Tokyo to protest, isn't eligible for compensation payments from TEPCO "because his farm is 60 kilometers from the plant, but he still wants compensation from the utility because he fears consumers will shun produce from his region over the long term."

**South Koreans' Donations To Japanese Earthquake Victims Declining.** The Los Angeles Times (4/26, Glionna, 657K) reports, "After a magnitude 9 earthquake and tsunami last month killed more than 20,000 people and caused

nuclear mayhem in Japan...there was a sense that a bitter nationalistic rivalry might be replaced by something the Korean peninsula has rarely felt for its former conqueror: empathy;" however, "the rapprochement...appears short-lived." Tensions resurfaced when "Japan's Ministry of Foreign Affairs released its Diplomatic Bluebook 2011 and the central government approved new school textbook content. ... Both reiterated Japan's claims to the disputed Dokdo/Takeshima islands." Since then, South Korean support for Japanese aid has dried up.

**Japan To Extend Reactor Overhaul By Two Weeks.** Reuters (4/26, Maeda) reports, Shikoku Electric Power Co., of Japan said it had decided to add two weeks to the maintenance shutdown of its 890-megawatt Unit 3 reactor at the Ikata nuclear plant. The shutdown will begin April 29, with restart scheduled for some time around July 10.

**Austrian Chancellor Seeks Nuclear-Free Europe.** The AP (4/26) reports Austria's chancellor, Werner Faymann, "called for a nuclear-free Europe on Monday, pledging to do his part to make this happen." According to AP, "Austria is an ardent opponent of nuclear power and has no operating plants of its own." The country has witnessed "its critical stance reinforced by the Japanese nuclear crisis that has raised questions about the safety of atomic energy."

**Anti-Nuclear Protesters Demonstrate Across Germany.** The New York Times/The International Herald Tribune (4/26, Dempsey) reports, "An estimated 120,000 people demonstrated across Germany on Monday, protest organizers said, demanding an end to nuclear power and increasing pressure on Chancellor Angela Merkel's government to speed up the closing of the country's 17 nuclear plants." The article says the annual demonstrations are usually "pacifist" but "this year, because of the 25th anniversary of the nuclear accident at the Chernobyl plant in Ukraine, in addition the nuclear crisis at the Fukushima nuclear plant in Japan, the rallying theme was nuclear power."

**Thousands Take To Streets In France Against Nuclear Power.** AFP (4/26, Bouvier) reports "thousands staged anti-nuclear protests around France on Monday, demanding reactors be closed on the eve of the 25th anniversary of Chernobyl and after Japan's Fukushima nuclear accident." AFP said up to 9,000 "mostly German activists took to different bridges on the Rhine between Germany and France," with "the main Easter Monday demonstration involving hundreds in a so-called 'die in' at Strasbourg." Notably, "the protest at the midway point on the Pont de l'Europe joining Strasbourg in eastern France and

Kehl in Germany," was planned to highlight that "radioactivity knows no borders," said organiser Remi Verdet."

A separate AFP (4/25) report said "around 700 anti-nuclear protesters staged a 'die in' on a bridge on the Franco-German border Monday, on the eve of the 25th anniversary of Chernobyl and after Japan's Fukushima nuclear accident."

### **Greenpeace Russia: Shutting Down All Nuclear Plants Across World Won't Pose Any Problem.**

The Voice of Russia (4/25) carried a commentary by Dr. Ivan Blokov, campaign director of Greenpeace Russia, who said: "There are no problems to shut down all nuclear power plants in the world," excepting that "the only technical problem" is that they "cannot be done immediately." Blokov said that, for instance, "for Russia it will need a decade, for Japan it will need two decades to replace nuclear energy with alternative renewable sources of energy."

### **Thailand Energy Ministry Backs IAEA Plea To Delay Nuclear Plants.**

The Bangkok Post (4/26) reports the Thailand Energy Ministry "has proposed Thailand delay plans to have its first two nuclear power plants in 2020 by three years after the International Atomic Energy Agency said the country was not ready for the projects." Thailand had planned "five nuclear power plants with a combined generating capacity of 5,000 megawatts within five years from 2020" as part of "its 20-year power development plan."

### **Images Of Town Scarred By Chernobyl Disaster Reinforce Destructive Power Of Atomic Technology.**

The New York Times/The International Herald Tribune (4/26, Smale) reports, "Twenty-five years ago, the world's worst nuclear accident literally erupted at the Chernobyl nuclear plant in Ukraine, then part of the Soviet Union." The article says "the unfolding calamity at the Fukushima Daiichi plant in Japan" has "stirred memories of Chernobyl." Smale writes that the "images of the ghost town of Pripyat, once home to 50,000 people...reinforce the lesson learned anew in Japan: Humans can fashion both wonder and horror with technology."

### **Twenty-Fifth Anniversary Of Chernobyl Nuclear Disaster Observed.**

The AP (4/26) reports "former Soviet republics prepared to mark 25 years since the Chernobyl power station exploded in the world's worst nuclear accident, endangering hundreds of thousands of lives and contaminating pristine forests and farmland." The explosion "on April 26, 1986, spewed a cloud of radioactive fallout over much of Europe and forced hundreds of thousands from their homes in the most heavily hit areas in Ukraine, Belarus and western Russia." Notably, "scientists are deeply divided on how many have died as a result of the

explosion, which released about 400 times more radiation than the US atomic bomb dropped over Hiroshima," AP says.

In another report earlier Monday, the AP (4/25) reported, "Black-clad Orthodox priests sang solemn hymns, Ukrainians lit thin wax candles and a bell tolled 25 times for the number of years that have passed since the" nuclear accident at Chernobyl "as the world began marking the anniversary Tuesday of the worst nuclear accident in history." The service coincided with "the time of the blast...that spewed a cloud of radioactive fallout over much of Europe," the AP noted.

### **Article Looks At Challenges Posed By Chernobyl Nuclear Disaster.**

NPR (4/26, Joyce) reports the nuclear disaster "at the Chernobyl nuclear power plant 25 years ago not only changed the lives of people in Ukraine, it put a radioactive stain on the continent," showing "just how far-reaching the ramifications of a serious nuclear accident could be." NPR says what concerns "some health professionals more than radiation are the psychological effects of the accident." Moreover, "the radiation that's still locked up in the environment," say for instance the "long-lasting cesium is bound up in the forests and soil around the plant," poses challenges. "The radioactive smoke might not be deadly as far as the city of Kiev, about 100 miles away. But the local effects could be very dangerous," NPR writes.

### **UN Secretary General Proposes Five-Point Strategy To Improve Nuclear Safety.**

In a opinion piece in the New York Times/The International Herald Tribune (4/26), Ban Ki-moon, the secretary general of the UN, writes: "Twenty-five years ago, the explosion at Chernobyl cast a radioactive cloud over Europe and a shadow around the world," and the "tragedy at Japan's Fukushima Daiichi nuclear power plant" has again raised "popular fears and difficult questions." To "improve nuclear safety for our future," the Secretary General has proposed "a five-point strategy," including "a top to bottom review of current safety standards, both at the national and international levels." He says matters "of nuclear power and safety are no longer purely matters of national policy, alone," but "are a matter of global public interest."

### **Jimmy Carter Seeks To Engage North Korea In Talks.**

The New York Times (4/26, McDonald, 950K) reports, "Former President Jimmy Carter was to arrive in North Korea on Tuesday for talks aimed at reducing tensions on the fractious Korean Peninsula." The talks, which are to involve North and South Korea, the United States, Russia, China and Japan on the denuclearization of North Korea, "remain in limbo." The State Department considers the trip by

the former president to be “a private journey and that he is not acting as an American envoy.”

### **Iran Discovers New Cyberattack Against Government Systems.**

The New York Times (4/26, Yong, Subscription Publication, 950K) reports Iran said Monday that it has “discovered a new hostile computer virus designed to damage government systems.” In comments published by Iran’s Mehr News Agency, Gholam-Reza Jalali, “who heads a cyberdefense agency,” said the “Stars virus had infiltrated government systems but was being decoded.” He “said no final conclusions had yet been reached about the virus’s aim.”

According to the Washington Post (4/26, Erdbrink, Warrick, 572K) reports, “The new computer worm has been dubbed ‘Stars’ by the Iranians and described as an ‘espionage virus,’ although few details were made public.” The Iranian military “also confirmed continuing problems with an earlier virus, ‘Stuxnet,’ which began wreaking havoc on Iran’s main uranium enrichment facility in 2009.”

The AP (4/26, Dareini) quotes Jalali as saying, “The Stars virus has been presented to the laboratory but is still being investigated. No definite and final conclusions have been reached.” He did not, however, “say what equipment or facilities the virus targeted, or when experts first detected it.”

Reuters (4/26, Mostafavi) reports, Jalali said the “virus is congruous and harmonious with the (computer) system and in the initial phase it does minor damage and might be mistaken for some executive files of government organisations.”

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# NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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**NRC NEWS:**

**Nuclear Panel To Discuss San Onofre Performance (NCT)**

By Paul Sisson

North County Times, April 26, 2011

The Nuclear Regulatory Commission will continue to conduct extra safety inspections at San Onofre Nuclear Generating Station because the plant has failed to make improvements in areas previously cited by the federal agency, officials said in a recent assessment letter to plant owner Southern California Edison.

The letter is part of the agency's 2010 performance review for San Onofre that will be presented to the public during a meeting at 6 p.m. Thursday at the Capistrano Unified School District Board Room in San Juan Capistrano, 33122 Valle Road.

Released last month, the letter says the NRC is generally pleased with safety operations at the seaside power plant, but that regulators still have concerns with how workers and managers at the plant perform their duties.

Some of those lingering concerns include a lack of adequate design documentation and work instructions; improper error-prevention techniques; and the Edison's efforts to make sure projects are properly overseen by management. Those same issues have been raised during the plant's last seven consecutive review sessions, the letter states.

The NRC will continue to do extra inspections at the plant on worker performance matters this year because "corrective actions to date have not resulted in sustained and measurable improvement."

In previous public meetings with its federal overseers, Edison executives have highlighted a laundry list of new initiatives to make sure that workers are following procedures to make sure that small problems do not grow.

Meanwhile, the anti-nuclear activism group San Clemente Green seems to be losing patience.

Gary Headrick, the group's president, said Monday that he and others intend to protest at Thursday's meeting. Headrick said many feel that the NRC has not done enough to punish the utility for poor performance.

"We think there should be fines or sanctions. Something that has consequences besides just the promise of more inspections," Headrick said.

He added that protesters also object to San Onofre's very existence. The recent 9.0 magnitude earthquake that damaged the Fukushima Daiichi nuclear plant in Japan on March 11 has only underlined their objections.

"We think it should be shut down right away before the earthquake everyone expects to happen here actually happens," Headrick said.

These sentiments have come up at the annual NRC meetings for years. Federal officials have said in the past that public safety is the No.1 responsibility of the agency. They have said that San Onofre has two resident inspectors with a third set of eyes brought in about two years ago when worker performance issues cropped up.

**How Safe Is San Onofre? (LAT)**

**Edison and federal regulators must stop the continuing deterioration of the safety culture at the nuclear power plant.**

By Najmedin Meshkati

Los Angeles Times, April 26, 2011

The San Onofre Nuclear Generating Station sits on a beach in a seismically active area of Southern California, just three miles south of San Clemente. These days many are rightly preoccupied with the ongoing crisis at the Fukushima Daiichi nuclear power plant in Japan and its implications for San Onofre. But there are more immediate problems at the power plant that is owned and operated by Southern California Edison.

The Nuclear Regulatory Commission will be holding a public meeting Thursday in San Juan Capistrano to review the performance and safety culture of San Onofre. Coincidentally, this is also the week that the world commemorates the 25th anniversary of the disaster at the Chernobyl nuclear power plant in the former Soviet Union. According to many credible studies, that disaster is attributed primarily to the deficient safety culture — in design, operation and oversight — that existed throughout the Soviet nuclear power system at the time of the accident.

Safety culture is typically defined as the set of characteristics and attitudes in organizations and individuals that establishes safety issues as an overriding priority. A plant that fosters a positive safety culture encourages employees to ask questions and to apply a rigorous and prudent approach to all aspects of their jobs. It would also set up open communications between line workers and midlevel and upper management.

What exactly are the problems at San Onofre?

For many years the plant has been under Nuclear Regulatory Commission scrutiny for failure to address several longstanding issues related to its safety culture. A few noteworthy recent issues include:

Feb. 1-10, 2010: The NRC conducted focus group interviews with about 400 workers to probe the safety culture at the plant, and the results indicated "a continued degradation in the safety-conscious work environment."

March 2, 2010: The NRC issued a "chilling effect letter," finding that the "NRC has received a significant increase of allegations from onsite sources at San Onofre nearly 10 times the industry median in 2009."

Sept. 1, 2010: The NRC advised San Onofre of a substantive issue that potentially affects several safety-critical areas concerning human performance — such as human error prevention techniques, decision-making and work practices — where it has found "a continuing high number of findings." This was the seventh consecutive assessment period during which the issue, which deals with major safety culture components, was raised.

March 4, 2011: The NRC reported that "corrective actions to date have not resulted in sustained and measurable improvement" in the above-mentioned human performance issues.

The above citations may be just the tip of the iceberg. According to a recently released, exhaustive study of nuclear power plant safety in the United States by the Union of Concerned Scientists, "the NRC only audits about 5% of activities at a nuclear reactor each year. Thus each safety violation they identify could represent another 19 violations in the 95% not looked at. But the NRC only requires plant owners to fix the identified violations."

I have been closely following nuclear safety issues at the San Onofre plant, and I spoke on the matter at a 2009 NRC public meeting on San Onofre. Based on the public domain reports that I have reviewed, I believe that although there are some discrete token improvements, the overall situation at the plant has been continuously deteriorating.

But the era of a piecemeal approach toward addressing safety issues at San Onofre must end. The NRC meeting this week can and should catalyze a long-lasting partnership among the public, San Onofre and the NRC to ensure the continuous safe operation of this valuable plant. Edison should be much more responsive to the public's heightened sensitivity to safety-related issues. Its board of directors should carefully read the lines, as well as between the lines, of the NRC reports and devise a definitive plan to overhaul the drifting safety culture there.

Secrecy is the worst enemy of nuclear power safety. The plant's senior managers should come to the meeting with a fresh approach and a substantive mandate to face nuclear power realities, including the added post-Fukushima expectations, and be prepared to share their plan openly and honestly and field questions from NRC and the public. As the first step and a goodwill gesture, they should provide unfettered access to all unadulterated original audits of the plant's operation conducted by the Institute of Nuclear Power Operations, as well as all collected data on its nine "performance indicators," at least for the last five years. (INPO is a nonprofit organization established by the US nuclear power industry in the wake of the Three Mile Island accident in 1979.)

Building a robust safety culture at San Onofre will require genuine and unequivocal commitment by Edison and its board. This week's meeting should not be treated as yet another public relations exercise. As stated by the late Nobel physicist Richard Feynman, in the context of another complex technological system's failure (the space shuttle Challenger explosion in 1986): "For a successful technology, reality must take precedence over public relations, for nature cannot be fooled."

Najmedin Meshkati, an engineering professor at USC, a Jefferson Science Fellow and a senior science and engineering advisor to the Office of Science and Technology Advisor to the US secretary of State (2009-10), has been conducting research

on human performance and the safety culture of the nuclear power industry. He has inspected many nuclear power plants around the world, including Chernobyl.

### **Ginna Nuclear Plant Shut Down For Refueling, Maintenance (RD&C)**

By Steve Orr

Rochester Democrat & Chronicle, April 26, 2011

The Ginna nuclear power plant in Ontario, Wayne County was shut down Saturday night for routine refueling and maintenance.

The 41-year-old plant, owned by Constellation Energy Nuclear Group, is given fresh nuclear fuel every 18 months. Old fuel rods are stored in a spent fuel pool at the plant and later moved to a dry storage building on the grounds.

Constellation also will undertake maintenance operations, including an inspection of the generator that would provide electricity to safely shut down the plant if off-site power failed. An auxiliary reactor feedwater pump will be upgraded, and bolts that help hold fuel rods in place inside the reactor vessel will be replaced or inspected, Constellation spokeswoman Maria Hudson said.

Hudson declined to say how long the outage is expected to last, though the last refueling shutdown in September and October 2009 was for 20 days.

Most of the electricity from Ginna, which can generate up to 581 megawatts, or enough to power more than 400,000 households, is sold to the plant's former owner, Rochester Gas & Electric Corp. RG&E will have to acquire replacement power from other sources.

### **Ginna Plant Off Line For Routine Refueling (WHAM)**

WHAM-TV Rochester, NY, April 26, 2011

(Randy Gorbman) Rochester, N.Y. - Officials with Constellation Energy say that the Ginna Nuclear Power Plant is down for a planned outage.

The plant was taken off line over the weekend for refueling. That is done every 18 months.

While the plant is off line, workers also perform maintenance duties.

There is no specific date when Ginna will be back on line, but last time they went off -- it took about three weeks.

### **Ginna Nuclear Power Plant Taken Offline On Saturday (WHEC)**

WHEC-TV Rochester (NY), April 25, 2011

Ginna Nuclear Power Plant taken offline on Saturday

Posted at: 04/25/2011 10:15 AM

Ginna was taken offline around 8 p.m. on Saturday for a planned refueling and maintenance outage.

Outages are scheduled every 18 months to refuel the reactor and perform maintenance activities that can only be done when the unit is shutdown.

The company can not say how long the refueling outage will last for but if you are interested in following the daily status, click here.

For more Rochester, N.Y. news go to our website [www.whec.com](http://www.whec.com).

### **Ginna Nuclear Plant Down For Maintenance (WIVB)**

By Nancy Sanders

WIVB-TV Buffalo, NY, April 25, 2011

GINNA, NY - The Ginna nuclear power plant in upstate New York was shut down Saturday night for routine maintenance.

The plant which is owned by Constellation Energy Nuclear Group is given fresh nuclear fuel every 18 months. The spent fuel rods are stored at the plant and later moved to a dry storage facility on the grounds.

The company will upgrade an auxiliary reactor feedwater pump and bolts that hold the fuel rods in place will be inspected and replaced if necessary.

The Ginna plant is 41 years old.

No word on how long the plant will be down but a previous refueling shutdown in 2009 lasted 20 days.

### **Nine Mile Point Nuclear Power Station Unit Completes Planned Outage (POWGENWLD)**

Power-Gen Worldwide, April 26, 2011

Constellation Energy Nuclear Group LLC (CENG) said Nine Mile Point Nuclear Station Unit 1 in New York returned to 100 percent power following the completion of a planned refueling and maintenance outage.

The refueling outage began March 21 and was safely completed on April 19. Nine Mile Point's Unit 2 continues to operate at full power. Combined, the two boiling water reactors can produce a total of more than 1,750 MW at full power.

During the outage, workers performed more than a thousand safety inspections and maintenance activities on a variety of plant components and systems. Many of the activities performed during the outage cannot be accomplished while the unit is operational, and all are designed to ensure the continued safe, efficient and reliable production of electricity.

Nine Mile Point's two units are on a 24-month refueling cycle.

## **Oswego County Today» Community » Emergency Notification Sirens Will Be Tested May 2 – 6 (OSWEGOCT)**

Oswego County (NY) Today, April 26, 2011

FULTON, NY – The Oswego County Emergency Management Office has announced that the system of emergency notification sirens surrounding the three nuclear power plants at Nine Mile Point are scheduled to be tested during the week of May 2 through 6 between 4 and 8 p.m.

The test is a portion of the regular testing program of the Oswego County emergency alert system.

This quarterly testing includes individual activation of each siren.

Also this week, the Emergency Management Office will be testing the sirens in conjunction with a new radio control system.

In order to test the new system fully, several activations of the full siren system may be necessary.

No response by the public is required during these tests.

Should an actual event occur during the time of the testing, the Emergency Alert System would be activated on radio and TV stations providing instructions to members of the public.

The system of sirens and tone-alert weather radios in the 10-mile emergency planning zone surrounding the nuclear power plants at Nine Mile Point is designed to alert residents in the event of an emergency.

Tone-alert weather radios are provided to residences in the 10-mile zone that are out of hearing range of the sirens.

A listing of residences eligible for tone-alert weather radios is on file at the Emergency Management Office, 200 N. Second St., Fulton.

During an emergency, the sirens would be sounded for three minutes to alert residents of the area to turn their radios or televisions to local Emergency Alert System stations for further information and instructions.

EAS stations are listed in the 2011 "Public Emergency Response Information" calendar that was mailed to residents of the Emergency Planning Zone in December.

The calendar is available online at <http://www.oswegocounty.com/emo.shtml>

EAS stations are also listed in the yellow pages of local telephone directories.

Anyone who has questions concerning the upcoming siren tests or any aspect of emergency planning may contact the Oswego County Emergency Management Office at 591-9150 or 1-800-962-2792.

## **Palo Verde Gets 20-year License Extension (AZDS)**

Arizona Daily Star, April 26, 2011

After a two-year review, the US Nuclear Regulatory Commission has extended the operating licenses of Palo Verde Nuclear Generating Station, plant operator and part-owner Arizona Public Service Co. said.

The licenses for all three Palo Verde generating units will be extended 20 years beyond their original 40-year licenses, allowing Unit 1 to operate through 2045, Unit 2 to run through 2046 and Unit 3 to operate through 2047.

Recent equipment upgrades, including replacement of key reactor components and an ongoing overhaul of the plant's cooling towers, have positioned Palo Verde "for continued safe and reliable operation," APS said. A water agreement between Palo Verde's owners and Phoenix-area cities guarantees a supply of treated effluent for cooling water to the plant through 2050, the utility said.

Palo Verde, part owned by the Salt River Project, supplies about one third of the base-load power used in the state, APS said. Base-load power is the minimum power produced to meet ongoing daily needs, not including plants that run to meet summer peak-power requirements.

The license renewal will save ratepayers about \$34 million in depreciation costs and about \$10 million in decommissioning costs when APS files its next rate case by June, the utility said.

Besides APS and SRP, Palo Verde's owners are Southern California Edison Co., El Paso Electric Co., Public Service Co. of New Mexico, Southern California Public Power Authority and the Los Angeles Department of Water & Power.

## **US Nuclear Production Rises With 27 Reactors Out Of Service (BLOOM)**

By Colin McClelland

Bloomberg News, April 26, 2011

US nuclear-power output increased as three reactors shut and four started amid seasonal refueling, the Nuclear Regulatory Commission said.

Power generation nationwide increased 260 megawatts from April 21 to 72,041 megawatts, or 71 percent of capacity, the lowest level since Oct. 22, 2006, according to an NRC report today and data compiled by Bloomberg. Twenty-seven of the nation's 104 reactors were offline.

Public Service Enterprise Group Inc. (PEG) shut the 1,174-megawatt Salem 1 reactor in New Jersey on April 21 after water intake filters became clogged, the NRC said. The unit is operating at 8 percent of capacity, down from full power. Another unit at the site, the 1,130-megawatt Salem 2, is shut.

The plant is located about 18 miles (29 kilometers) south of Wilmington, Delaware.

Constellation Nuclear Energy Group LLC, a joint venture of Constellation Energy Group Inc. with Electricite de France SA, idled the 498-megawatt Ginna reactor in New York yesterday.

Ginna is on Lake Ontario, about 17 miles northeast of Rochester. Constellation is based in Baltimore.

Duke Energy Corp. (DUK) shut the 1,129-megawatt Catawba 1 reactor in South Carolina. Catawba 2, another 1,129-megawatt unit at the plant 17 miles southwest of Charlotte, North Carolina, is operating at 100 percent of capacity.

Dominion Resources Inc. started the 799-megawatt Surry 1 reactor in Virginia and the unit is operating at 99 percent of capacity. Surry 2, another 799-megawatt reactor at the site, is closed. The plant is about 17 miles northwest of Newport News.

Southern Co. (SO) switched on the 1,109-megawatt Vogtle 1 reactor in Georgia after it automatically tripped offline April 20 while at full power. The cause is under investigation, the NRC said April 21. The unit is operating at 30 percent of capacity.

The 1,127-megawatt Vogtle 2 is operating at full capacity. The plant is 26 miles southeast of Augusta.

Exelon Corp. (EXC) started the 1,164-megawatt Byron 1 reactor in Illinois after a refueling outage, the company said in an e-mail. The unit is operating at 40 percent of capacity. Another unit at the site, the 1,136-megawatt Byron 2, is operating at full capacity. The plant is 85 miles west of Chicago.

Exelon switched on the 1,134-megawatt Limerick 2 reactor in Pennsylvania on April 23 after an outage for refueling and maintenance. The unit is operating at 34 percent of capacity.

Another reactor at the site, the 1,134-megawatt Limerick 1, is operating at full capacity. The plant is about 30 miles northwest of Philadelphia.

FirstEnergy Corp. (FE) boosted output at its 940-megawatt Beaver Valley 1 reactor in Shippingport, Pennsylvania, about 26 miles northwest of Pittsburgh, to full capacity from 82 percent on April 21. Another 940-megawatt unit at the plant, Beaver Valley 2, is operating at full power.

Progress Energy Inc. (PGN) boosted the 937-megawatt Brunswick 2 unit in North Carolina to 89 percent of capacity from 22 percent on April 21. The 938-megawatt Brunswick 1 is operating at full power at the Cape Fear site 130 miles south of Raleigh.

PG&E Corp. (PCG) increased output at its 1,149-megawatt Diablo Canyon Unit 1 reactor in California to 100 percent of capacity from 85 percent on April 21. Another reactor, 1,151-megawatt Unit 2, is operating at full power at the site, about 160 miles northwest of Los Angeles.

Some reactors close for maintenance and refueling during the spring and fall in the US, when demand for heating and cooling is lower. The outages can increase consumption of natural gas and coal to generate electricity.

The average US reactor refueling outage lasted 41 days in 2009, according to the Nuclear Energy Institute.

To contact the reporter on this story: Colin McClelland in Toronto at [cmcclelland1@bloomberg.net](mailto:cmcclelland1@bloomberg.net).

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## **Lawmaker Calls For Tough Law Against VY (BR)**

By Chris Garofolo

Brattleboro Reformer, April 25, 2011

BRATTLEBORO -- State Rep. Richard Marek will introduce a bill this week that would make it a criminal enterprise to operate a nuclear plant in Vermont without receiving the approved permit from state lawmakers and the Public Service Board.

Marek, a Newfane Democrat, said he will hold a press conference at the Statehouse on Tuesday outlining a bill to put Vermont in a position where a statute pertaining to nuclear plants would be similar to other laws addressing illegal activities.

The only such facility in the state is the Vermont Yankee nuclear power plant, which is owned by Entergy Corp. The company has recently filed suit over whether the state can legally close the plant and sought a court order that would prevent that from happening until courts have ruled on the jurisdiction challenge.

The legislation, drafted before Entergy filed a lawsuit against the state, would deem it against the state's public policy to violate Vermont law by operating a plant without the required approvals and would declare any attempt to indemnify or reimburse for any penalties incurred of the foregoing violations as a separate infraction.

While the US Nuclear Regulatory Commission granted Vermont Yankee a new 20-year operating license in March, the state contends it has the authority to close it as scheduled on March 12, 2012, after the Senate voted to block the continued operations at the plant.

Marek said the company has delayed any pending legal action up until this time and could stretch out the litigation to continue profiting at the site, ignoring any state jurisdiction.

"They are in a position to essentially operate an illegal enterprise and profit from that, so what this bill proposes is that we do the same thing there that we do with other illegal enterprises," he said. "It also says, just as we do with other illegal activities, you can't facilitate that by providing services to the plant."

The penalties for violating the proposed measure would include a fine of up to \$100,000 daily applied to both the owner of the plant (Entergy) and to board members and decision-making levels of management.

Marek's legislation would also make it illegal to furnish services amounting to more than \$10,000 annually to facilitate operation of a nuclear plant when the company knows it requires Legislature-approval to operate.

"I've been wrestling with how to address a core problem, and that is I think Vermonters respect the law and expect other to respect the law and honor it," Marek said. "We don't let people violate the law with impunity, we don't let them violate the law and then essentially give them a free ride."

Yankee spokesman Larry Smith said the company declined to comment on the Marek legislation because they have not seen it.

"There's no comment at the present time," Smith said.

But professor Patrick Parenteau, former director of the Vermont Law School Environmental Law Center and the Environmental and Natural Resources Law Clinic, called the proposed measure "suspicious" and "overkill."

"If it actually passed, the first question would be is it lawful, is it constitutional? Hard to speak without knowing the details, but it would certainly be challenged," he said. "It's all speculative, but the defense to an attempt to prosecute someone would be a violation of due process of law. And it's totally speculative to try to figure out how that would play out in court, but for sure it would be challenged by anybody who would be prosecuted."

Entergy has a right to challenge the shutdown order within the state and the company has a right to defend itself, he added. "They have an absolute right to do that, and to criminalize that strikes me as going too far."

Realistically, the legislation will not make it to the House floor this session, according to Marek, but there is time for adopting a statute laying out penalties for violating the law.

"I think adoption of this prior to the state's current permission to be running out is not retroactive ... there's nothing that says anywhere that Vermont Yankee, while its case is pending, could not suspend operation of the plant and this law wouldn't have any application to them if they did that," he said.

Kerrick Johnson, vice president for external affairs at Vermont Electric Power Company, Inc. (VELCO), said any legislation or court-related issues directed at Yankee is solely at Entergy, and if such a directive was given, the company's response would involve contacting VELCO and ISO-New England to ensure a safe and measured ramp-down of generation constant with established federal and regional protocols.

VELCO owns two switchyards near the Vernon-based nuclear site valued on the town's grand list at \$29 million.

## **Bill Would Make It A Crime To Keep Yankee Operating (RH)**

By Susan Smallheer

Rutland Herald, April 26, 2011

NEWFANE — Rep. Richard Marek says current Vermont law is inadequate to prevent Entergy Corp. from thumbing its nose at the state of Vermont next year and keep its Vermont Yankee nuclear plant running.

Marek, a Newfane Democrat, said legal research by the Legislature's staff has shown that there is only a \$100,000 fine on the books for companies that keep power plants operating without a certificate of public good.

So Marek, a former corporate attorney, has drafted legislation that he plans on introducing this week that would up the ante if Entergy decides to go rogue and operate Vermont Yankee without state approval, turning the issue into a criminal offense.

"Laws apply to everyone," he said.

Marek said he drafted the legislation well before Entergy filed suit against the state last week. The New Orleans-based energy firm claims Vermont has overstepped its authority in trying to regulate Vermont Yankee, and thus stands in the way of continued operation of the Vernon reactor. Vermont Yankee has received approval from the Nuclear Regulatory Commission to keep operating until 2032.

The bill would levy fines against companies or individuals — not including Vermont Yankee employees — who aid and abet Entergy in keeping Vermont Yankee running, with a \$10,000 annual fine, or \$1,000 per day, coupled with potential forfeiture. The bill also prohibits Entergy from indemnifying individuals or companies cooperating with them.

Marek said the bill followed laws governing securities and controlled substances.

"It is a criminal enterprise to operate a nuclear power plant without the requisite approvals," he said.

Marek said opposition to Vermont Yankee's continued operation in his district outside of Brattleboro was "broadening and deepening," and he said concern had only grown since the nuclear disaster started in Fukushima, Japan, last month.

Marek said the Legislature is only expected to remain in session for another two weeks, and his late-session introduction of such a key piece of legislation was aimed at getting early consideration next January.

Vermont Yankee's state certificate of public good, which was issued by the state back in 1972, expires on March 21, 2012, and he said his legislation could become effective upon passage, well before the March date.

"I've been thinking about this problem for a long time," said Marek.

Entergy Nuclear spokesman in Vermont, Larry Smith, said Entergy would have no comment on the legislative proposal.

Entergy late last week filed a motion for an injunction against the state to prohibit the shutdown of the reactor pending the outcome of the lawsuit, which was filed Monday.

Marek said it was not a surprise in the Statehouse when Entergy filed the lawsuit, but he said he believed the state has a strong case and would prevail.

He also doubted the company would be successful in obtaining an injunction to keep the plant operating beyond March 2012. Such an injunction is not based on potential financial harm, he said.

## **Anti-nuke Group Walks From Indian Point To VY (BR)**

By Howard Weiss

Brattleboro Reformer, April 26, 2011

BRATTLEBORO -- It has been a few years since Ray Sebold has taken part in an anti-nuclear rally.

Sebold, 59, of Montague, Mass., used to regularly attend rallies against the Seabrook nuclear power plant in the 1970s and 1980s, but it has been a while since he felt motivated to come out to express his opposition to nuclear power.

On Sunday, he met a small group of about a dozen people who were completing their 206-mile walk from the Indian Point Nuclear Power Station in Buchanan, N.Y., in the Hudson Valley, to the Vermont Yankee plant in Vernon.

"It's important to come out and show support for the closure of the Vernon plant," Sebold said Sunday afternoon as he walked his bike along Route 142. "It's important for people to voice their opinions on how they want the world to be."

On April 10, about 24 people started the walk, led by Japanese Buddhist nun Jun San Yasuda.

Yasuda, a member of the Grafton (N.Y.) Peace Pagoda, said in a press release that she organized the walk to support those who were affected by the Fukushima Nuclear Power Plant in Japan.

"On this walk, we will pray for those affected in Japan and envision a world without nuclear energy or bombs," she said. "We walk together in love and solidarity."

The group that walked all the way from New York met up with local supporters Sunday morning on Route 9, two miles west of downtown Brattleboro.

They walked downtown and then set out for the final six miles to the Vernon plant.

About 70 people joined them for the walk along the Connecticut River and then for a prayer vigil at the gates of Vermont Yankee.

Entergy Nuclear, which owns the plants in Buchanan and Vernon, filed a suit last week against the state of Vermont to keep operating Vermont Yankee after its current license expires in 2012.

The company also has asked a judge to allow the company to operate the plant and to prevent the state from shutting it down while the lawsuit proceeds.

With the company's legal actions last week, and the ongoing nuclear crisis in Japan, the walk Sunday brought out former protesters like Sebold, along with newer activists and veterans who have been fighting nuclear power for more than 30 years.

Ryan Harvey, 29, lives in Dorchester, N.H., but was visiting his family in the area for Easter.

He walked the final six miles from Brattleboro to Vernon to support the action.

"It's fitting that we hold a peaceful and nonviolent action on Easter," he said. "We can affect change in a nonviolent way and make our voices heard being diplomatic and peaceful."

Cate Woolner, 60, of Northfield, Mass., has been fighting nuclear power for more than 35 years, at the Seabrook plant in New Hampshire and in Vernon.

She said after all this time, she is seeing a change that she hopes will translate into a stronger move away from nuclear power.

A focus on green energy and conservation, the effects of the Fukushima disaster, and now Entergy's move to fight its license termination in the courts, have all led more people to question the safety of nuclear power.

"I think there is an urgency now," she said, as the group wound its way down Route 142 and approached the plant. "People who used to have questions are now realizing that we can live without nuclear power. People are no longer comfortable with all the risks. The tide has turned."

## **Pioneer Valley Women Among Those Arrested In Anti-nuke Protest At Vermont Yankee (SPREP)**

By Patrick Johnson

Springfield (MA) Republican, April 26, 2011

VERNON, Vermont – Seven long-time Pioneer Valley activists were among 11 women arrested Friday afternoon after chaining themselves to the main gate of the Vermont Yankee nuclear power plant in an attempt to shut the facility down.

The protest, coinciding with the observance of Earth Day, sought to have the controversial nuclear plant closed immediately.

The federal Nuclear Power Regulatory Commission last month granted the 40-year-old plant and its parent company, Entergy Corp. of New Orleans, a 20-year extension on its license to operate.

Without the extension, the plant would have been slated to shut down in 11 months.

Local arrests were Frances Crowe, 92, and Paki Wieland, 67, both of Northampton, Marcia Gagliardi, 63, and Hattie Nestel, 72, both of Athol, Jean Grossholtz, 82, of South Hadley, Ellen Graves, 70, of West Springfield, and Betsy Corner, 63 of Colrain.

Crowe, Wieland, Graves, Nestel, and Grossholtz are veterans of a variety of protests and demonstrations in the Valley and beyond over the years for issues including opposition to the wars in Iraq and Afghanistan and calling for the closing the detention facility in Guantanamo Bay.

Others arrested were Vermont residents Julie Levy, 61, of Weathersfield, Robin Lloyd, 72, of Burlington, and Nina Swaim, 73, of Sharon, and Jennifer Wright, 64, of Unity, N.H.

They were taken into custody by Vermont state police and Vernon police and taken to the Vernon police station. Each released pending a June 20 appearance at Windham District Court in Brattleboro.

The group issued statement calling for the immediate and permanent closing of the plant.

"We are appalled at the irresponsible action of the Nuclear Regulatory Commission in granting Entergy permission to operate this dangerous facility for more than another twenty years," the statement read. "Because the federal government and Entergy will not honor the public good by shutting down Vermont Yankee, we must take this action and shut it down now."

## **Public Meeting On Cooper Plant (OMAHA)**

By Nancy Gaarder

Omaha World-Herald, April 26, 2011

People living around Nebraska's largest nuclear power plant will have a chance next month to directly question regulators about the reactor's safety.

The Nuclear Regulatory Commission has scheduled a May 5 public meeting in Brownville to review Cooper Nuclear Station's 2010 performance.

Such reviews occur every spring in communities across the country, but few members of the public usually attend.

This year, according to the NRC, the nuclear crisis in Japan has been prompting more people to attend and ask questions about American reactors.

"We're pleased we're getting more people coming out; we don't often get a big attendance," said Victor Dricks, a regional spokesman for the NRC.

Cooper, near Brownville, is a significant source of Nebraska's electrical supply and a major employer in southeast Nebraska.

Cooper is operating within the necessary safety margins, the NRC's highest standard.

However, the NRC has advised the Nebraska Public Power District of concerns about some of the decision-making at the plant. According to the NRC, there have been several instances in which decisions didn't reflect conservative enough assumptions.

As an example, the NRC cited NPPD's periodic storage of a pontoon barge in a discharge canal.

The NRC questioned NPPD's confidence that the barge had been secured sufficiently so that tornadic-strength winds wouldn't shove the barge onto discharge pipes in the canal. The NRC pointed out that the canal had been specifically oriented to the Missouri River so that runaway barges couldn't float into it and damage the pipes.

The barge now is being stored downstream from the canal.

Jeanne Schieffer, NPPD spokeswoman, acknowledged the NRC's concerns.

"Like all nuclear power plants, Cooper Nuclear Station always seeks to improve its performance," she said. "We can never be satisfied with our achievements and are committed to eliminating our deficiencies."

The Japanese crisis has caused some nuclear watchdog groups to question the operation of Cooper and 20 other US reactors similar in design to those crippled by the Japanese earthquake and tsunami in March.

Beyond Nuclear, an organization critical of nuclear power, petitioned the Nuclear Regulatory Commission last week to suspend the licenses of the 21 reactors. The plants' system for suppressing radiation has been criticized for decades and, as a result, the US reactors using it have made significant safety retrofits.

Scott Burnell, NRC spokesman, said the agency is reviewing Beyond Nuclear's request.

Burnell also said the NRC is studying all US reactors to see whether the Japan crisis raises questions that could require changes in the United States.

Mark Becker, another NPPD spokesman, said the utility thinks Cooper operates safely for the protection of the public, workers and environment. He pointed out that the NRC recently re-licensed Cooper for an additional 20 years.

The scheduled NRC review focuses on 2010, so it does not specifically cover a recent incident at the Cooper plant. The NRC has said three workers were exposed to higher-than-normal levels of radiation when they attempted to work with the wrong end of a radioactive tube.

SIDEBAR: IF YOU GO

The NRC public meeting on Cooper Nuclear Station's 2010 performance will be held at 4 p.m. May 5 in the Brownville Concert Hall, Atlantic Avenue and Second Street, Brownville, Neb.

## **Exelon: Limerick Plant Back At Full Power (PATCH)**

**Unit 2 at the power plant had been offline during an extended refueling outage that also saw the installation of three new transformers**

By David Powell

Limerick Patch, April 25, 2011

Unit 2 at Exelon Nuclear's Limerick Generating Station returned to service today after an extended refueling outage that lasted almost a full month.

While the unit was shut down, employees and almost 1,900 supplemental workers replaced one-third of the reactor's fuel and performed extensive inspections, tests, maintenance and modifications on a variety of components and equipment, the company said in a statement released this morning.

"The refueling outage included 13,000 activities that were performed to prepare the unit for safe and reliable operations through the next 24-month operating cycle," said Bill Maguire, Limerick site vice president. "One of the most significant projects completed was the replacement of the unit's three main power transformers to ensure continued reliable operations for many years to come."

The \$120 million transformer replacement project brought about 200 additional workers to the site than a typical refueling outage. The three new transformers are designed to operate for 20-30 years. The company is preparing to apply to the Nuclear Regulatory Commission (NRC) for an extension of its operating license that would theoretically keep the plant in operation well into the 2040s.

The company said the influx of workers from outside the area "gives local businesses an extra boost as workers dine in the area and need local accommodations."

## **Unit 1 Back In Service At Byron Nuclear Plant (WREXTV)**

WREX-TV Rockford, IL, April 25, 2011

BYRON (WREX) -

The refueling and upgrades to Unit 1 at Exelon Nuclear's Byron Generating Station have been completed.

"Our workforce safely completed a large amount of work that will ensure the safe, reliable production of environmentally-friendly electricity for the next operating cycle," said site vice president Tim Tulon. "I applaud the Exelon team and the contract crew for their quality performance and commitment to safety."

Unit 1 went back online Sunday after it was shut down for several weeks for its scheduled refueling, extensive inspections, testing and other maintenance.

"We are glad we made improvements to an already safe and reliable unit. And we are happy the influx of extra outage workers brought a temporary boost in employment and more business to local retailers," Tulon said. "I thank the local communities for their patience as we know that it can disrupt the normal flow of traffic on the roads and in local businesses."

Unit 2 operated at 100 percent power during the Unit 1 outage.

## **Business & Financial News, Breaking US & International News (REU)**

By Koustav Samanta

Reuters, April 26, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Exelon Plans III. Spent-fuel Facility (EPPM)**

By Hannah Northey

E&ENews PM, April 26, 2011

Exelon Corp., the country's largest nuclear plant operator, announced plans today to build a \$30 million storage system for the dry cask storage of spent nuclear fuel from its Clinton Power Station in Illinois.

The above-ground facility, expected to cost up to \$10 million annually to operate, will be ready for the first shipment of fuel by 2015 and will be located about 6 miles east of Clinton, in DeWitt County, about 60 miles northeast of Springfield.

Spent fuel from the Clinton plant is currently being stored in a single wet pool adjacent to the 24-year-old, 1,065-megawatt reactor.

The dry storage facility is needed because the pool is slated to reach capacity by 2016, the company said.

Exelon operates 17 nuclear reactors and stores spent fuel in wet pools or in dry storage systems, said Marshall Murphy, an Exelon spokesman.

Exelon is one of many nuclear plant operators to recoup money from the federal government after the Energy Department failed to take and store waste from nuclear plants in the late 1990s (Greenwire, March 31).

The government's liability is expected to grow to about \$11 billion by 2020, according to a report from the University of Illinois.

Exelon reached a settlement with the government in 2004, Murphy said, and has to date received more than \$460 million in annual reimbursements. The reimbursements are based on how much money Exelon spends for building new dry cask storage systems, Murphy said.

## **Prairie Island Nuclear Plant Will Start Refueling Soon (REDWING)**

Red Wing (MN) Republican Eagle, April 26, 2011

Prairie Island nuclear plant is gearing up for another refueling outage. Plant officials have said the outage is set to begin sometime between now and the end of the month. Xcel Energy will send out an announcement when the plant goes offline.

Mary Sandok, spokeswoman for Xcel, said the outage is "routine."

"We have to do these (refueling) outages every 18 months," she said.

During the outage, one of the plant's two reactors will be shut down. About a third of the 121 fuel assemblies - the parts that hold the actual fuel rods - in the reactor are replaced.

In addition to the refueling, Xcel also takes the opportunity to do maintenance work and minor modifications on other parts of the plant that can't be worked on while the plant is online.

This will bring an additional 600 workers to the plant, nearly doubling the plant's staff of about 750.

"When we have an outage, it's a lot busier than when its operating," Sandok said.

Though nuclear specialists do the actual refueling work, other additional workers are not necessarily in the nuclear field, plant Vice President Mark Schimmel said.

Instead, they come from across the building trade and include welders, pipe-fitters and electricians, he said. Some of these workers come from across the globe to work at the plant during the outage. Others are Red Wing residents.

Even though the plant itself will be a hub of activity during the refueling, Xcel customers won't notice a difference in their power, Sandok said.

"It's not going to be affecting anybody other than the people who are working there. (Customers) would not even know that we have the plant down other than we tell them we do," she said. "Their lights won't even flicker."

The outage will last between four and five weeks. This year's outage will be very similar in length and scope to past outages, Sandok said. In the coming years - pending the company's license renewal with the Nuclear Regulatory Commission - outages may be longer and more extended.

A second announcement will be sent out when the plant is back online.

Tags: prairie island, news, minnesota, energy, environment, fccnetwork

## **Plans To Build More Nuclear Reactors Fizzle (TTNJ)**

By Erin Duffy

Trenton Times, April 25, 2011

A West Windsor-based energy provider has pulled the plug on plans to build two new nuclear reactors in Texas.

Citing the shaky future of nuclear power in the wake of Japan's ongoing nuclear crisis, the CEO of NRG Energy Inc. said the company would write down its five-year, \$481 million investment in the expansion of its South Texas nuclear plant.

"The tragic nuclear incident in Japan has introduced multiple uncertainties around new nuclear development in the United States," said David Crane, president and CEO of NRG. That makes it unlikely the company can build two new reactors on a reasonable timetable, he said.

Support for new nuclear projects in the US has eroded in the aftermath of the nuclear crisis in Japan, according to an Associated Press-GfK poll conducted earlier this month. One of NRG's partners was to be TEPCO, the Japanese utility that owns the Fukushima Daiichi reactor complex crippled by last month's 9.0 earthquake and tsunami.

In a release, Crane called the now-defunct project "the best new nuclear development project in the country, bar none."

But given the vast amounts of money NRG has already pumped into the project and the renewed scrutiny of nuclear expansion, "it is impossible for us to justify to our shareholders any further financial participation in the development of the (South Texas) project," he continued.

Headquartered in West Windsor, the company employs more than 350 workers there, with additional offices and power plants across the country and overseas. Its plants supply 25,000 megawatts of generation capacity, enough energy to supply nearly 20 million homes. NRG hoped to build two new reactors at its South Texas Project nuclear station, an operating two-reactor power plant 90 miles southwest of Houston. The project is in line for a federal loan guarantee, but low electricity prices had clouded prospects for the plan even before the incident in Japan.

The company's nuclear subsidiary, Nuclear Innovation North America (NINA) began scaling back work on the project last month, suspending all pre-construction activities and downsizing its work force.

A joint venture with Toshiba American Nuclear Energy Corp., NINA's focus will now shift to obtaining regulatory approval for the reactors and the federal loan guarantee.

In news reports, Crane said even if the nuclear project was somehow revived, NRG would not provide additional funding.

In the first quarter of this year, NRG is expected to write down a pre-tax \$481 million, which includes \$331 million funded by the company and \$150 million provided by Toshiba.

## **NRG Energy CEO: We Failed To 'Fail Quickly & Cheaply' (REU)**

Reuters, April 26, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **NRG's David Crane: No New Nukes But The Solar Business Looks Hot (FORBES)**

By Todd Woody

Forbes, April 26, 2011

David Crane, chief executive of NRG Energy, made news last week when he announced that the New Jersey-based power producer would abandon further investment in a Texas nuclear power project.

But when I sat down with Crane at the Green:Net conference in San Francisco on Thursday, it was clear he remains a true believer in nuclear power.

"I thought we should have trended toward France," Crane told me. "I would have liked to have seen nuclear's market share go from 20 percent to 40 percent."

That, he acknowledged, is not going to happen anytime in the foreseeable future in the wake of the Japanese nuclear crisis and the existing financial and licensing challenges facing the United States industry.

"The fact that nuclear at best is at best an extremely uphill putt on the most difficult green at Augusta, that's really unfortunate," he added. "I just don't see that there's the will to change that."

NRG, meanwhile, has been ramping up its investments in solar and wind power as well as rolling out an electric car-charging network in the petro capital of Houston, of all places.

And Crane strongly hinted that NRG will jump into the residential solar business, a market currently dominated by startups such as SolarCity and Sungevity.

"We think over the next three to five years the solar business will migrate heavily from a utility-sized solar business to a more of a distributed solar model driven by consumer demand not by government largesse," he said. "And we expect to be out in the forefront of that."

He noted that NRG electricity retailers Reliant and Green Mountain Energy would be natural channels for a residential solar business.

That doesn't mean NRG has shied away from making big investments in Big Solar. The company has committed up to \$300 million for BrightSource Energy's 370-megawatt Ivanpah solar thermal power plant, which is under construction in the Southern California desert thanks to a \$1.6 billion federal loan guarantee. (BrightSource on Friday filed for a \$250 million initial public offering). And NRG has invested in large-scale photovoltaic farms in California and Arizona, both of which have also obtained US Department Energy loan guarantees.

Underscoring the importance of such federal assistance, a partnership NRG struck with eSolar to build a series of solar thermal power plants fell apart when the Pasadena, Calif., startup failed to obtain government loan guarantees, Crane said. NRG has since replaced eSolar's power tower technology for those projects with photovoltaic panels like those found on residential rooftops.

Solar thermal projects deploy fields of mirrors called heliostats that focus the sun on liquid-filled boilers to create steam that drives an electricity-generating industrial turbine. They typically are built in deserts and other areas with intense sunshine.

"Wall Street is much more comfortable financing PV than solar thermal," Crane said. "If you look at the solar radiation map of the United States, solar thermal looks like it has very limited market potential. So from my perspective, while we're happy to own solar thermal within that footprint, the success of solar thermal as an investment proposition depends on the ability to sell internationally."

And the electric charging network in Houston? That's more about keeping customers from defecting to rival electricity retailers in Texas' competitive and deregulated market, Crane acknowledged.

Called eVgo, the network offer three-year contracts with monthly subscription packages that give drivers a home charging station and access to a citywide grid of charging stations.

"We just wanted to make money in a more straightforward way by getting people signed up for fueling packages," Crane said. "What's really attractive to us as a retailer is that if you can tie up a customer on a multi-year contract with a three-year fueling package for the electric vehicle or a 15-to-20-year lease for a solar array on their roof, that customer in all likelihood is going to just stick with you for that time."

In the long run, he sees millions of electric car batteries as storage for renewable energy and a way to balance demands on the power grid.

"I think that's where it all comes together," said Crane. "Renewable power and electric vehicles all interconnected seamlessly by a smart grid."

All of which points to a different future for a power provider whose fleet is dominated by fossil fuels.

"There is reason to assume that as a post-industrial society that might be getting more serious than it has in the past about conservation and efficiency with widespread support for more renewables, if a company like ours were to find itself as the fossil fuel power generation company, we would be in a business that is in terminal decline."

## **Bill Would Help Extend Life Of Nuclear Reactors (AP)**

Associated Press, April 26, 2011

Indiana consumers could be charged for some costs that utility companies incur to extend the lives of nuclear reactors, even though there are no nuclear plants in the state, under legislation being considered by state lawmakers.

The bill, which the House approved 62-34 on Thursday, initially would have given financial incentives to utilities for building new nuclear plants, though that provision was dropped in the wake of Japan's nuclear disaster. But the bill does impact nuclear facilities that are extending their operating permits beyond the initial 40 years, The Times of Munster reported.

That would include the Cook Nuclear Plant in Bridgman, Mich., about 35 miles northwest of South Bend, because it is owned by Indiana Michigan Power Co. of Fort Wayne and provides power to Indiana customers.

Indiana Michigan Power recently received a license extension from the Nuclear Regulatory Commission for the Cook plant's two reactors, extending their lives to 2034 and 2037.

"They have no idea exactly what it's going to cost, how they will operate or respond," said Kerwin Olson, program director for the Citizens Action Coalition in Indianapolis. "What this bill does is says any and all costs of extending Cook beyond 40 years can be passed on to consumers."

David Mayne, Indiana Michigan Power spokesman, said Cook has a history of safety.

"Both units at Cook are operating safely and reliably today and our commitment to safe operations remains steadfast," he said.

Two efforts in the 1980s to build nuclear power plants in Indiana were scrapped because of opposition and cost concerns. Although Indiana doesn't have any nuclear plants, surrounding states do: Illinois has 11 nuclear plants, Michigan has four and Ohio has two.

The legislation, Senate Bill 251, now goes back to the Senate, which earlier passed a version of the bill.

## **Why I Still Support Nuclear Power, Even After Fukushima (WSJ)**

**Coal plants must be fed by a 100-car freight train arriving every 30 hours.**

By William Tucker

Wall Street Journal, April 23, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Nuclear Power's Future (MH)**

**OUR OPINION: Anxious public needs safety reassurance**

Miami Herald, April 25, 2011

Although experts still do not understand clearly what went wrong, the disaster at the Fukushima Daiichi nuclear installation has sparked understandable fears about nuclear safety and a debate that will have significant consequences for the future of South Florida and its energy needs.

Nuclear industry officials have been at pains to proclaim that the 104 US nuclear power plants are safe. One compelling piece of evidence they cite is that, globally, nuclear plants have close to 15,000 reactor-years of experience, with known severe accidents limited to five commercial power reactors — three of them in Fukushima and only one, at Three Mile Island, in the United States.

As impressive as that seems, skeptics point out that one nuclear accident is one too many. Indeed, the event at Three Mile Island was so traumatic that it froze the industry in its tracks for three decades, going on four.

Now, as a result of Fukushima, the Tennessee Valley Authority says it is considering improvements for the six nuclear reactors it operates because of "potential vulnerabilities from a chain of events." Meanwhile, power producer NRG, which was planning the largest nuclear project in the country, announced it was giving up plans for two giant reactors in South Texas and writing off its \$331 million investment.

The future of the nuclear-power industry is of crucial importance to South Florida because energy provider FPL says it needs to add two reactors at Turkey Point in South Miami-Dade to cover projected electrical power requirements for a growing population.

Last week, FPL executives offered assurances to a delegation of four local members of Congress that it was prepared for any conceivable eventuality and that comparisons with Fukushima were off the mark. Turkey Point has a different design, was built by a different company (Westinghouse, not GE), and is powered by different fuel (uranium, not plutonium).

Unlike the Japanese plant, Turkey Point is not located in an earthquake zone, and getting hit by a tsunami is far-fetched, if not impossible, given the barrier formed by the Bahamas chain. The plant has already survived a direct hit from a Category 5 hurricane (Andrew, 1992) and the accompanying storm surge. And FPL plans to build a "dry" storage facility for spent fuel rods — an improvement TVA is just now contemplating — to reduce the risk of a leak.

As long as there are an infinite number of things that can go wrong and only a finite number of preventative measures, nuclear power will never be 100-percent safe. But given existing technology, the increasing needs for power generation and the desire for clean sources of energy, nuclear power cannot be ruled out as a viable option. The industry's safety record and its obvious self-interest in avoiding accidents speak for themselves.

But before going forward, two actions are critical.

- First, FPL must undertake a campaign to inform the public about nuclear power and its safety measures. The public is right to be worried, and without its support nuclear power has no future.
- Second, as Mayor Philip Stoddard of South Miami wrote in a letter to The Miami Herald published on Sunday, "Miami-Dade County is grossly unprepared to deal with a significant radiation release."

Can't happen here? Probably right, but who wants to take a chance? South Florida is so congested, and avenues of evacuation so limited, that the public deserves reassurance on this front, as well. FPL, together with county officials and emergency planners, have a duty to bring the public up to date about plans for the possibility of a nuclear accident.

This week marks the 25th anniversary of the nuclear disaster at Chernobyl, the worst ever. The area near the Ukrainian site is still a no-man's land, and the final accounting of damage remains unknown. It's a good time to redouble efforts to ensure that there are no more Chernobyls — and to be prepared if there are.

## **Pueblo Commissioners Nix Idea Of Nuclear Plant (COLSPGAZ)**

By R. Scott Rappold

Colorado Springs Gazette, April 26, 2011

PUEBLO – Pueblo County commissioners unanimously rejected a proposal by an attorney to build a nuclear power plant here that would have been about 60 miles from Colorado Springs.

The board voted 3-0 to deny Don Banner's rezoning request. He did not have a company lined up, but had hoped their affirmation would have led to interest from a utility or energy company ready to shoulder the work of getting federal licensing and building the plant.

But there was massive and vocal opposition — one commissioner said 95 percent of comments received were against the plan — that grew louder as the nuclear crisis in Japan unfolded as hearings were held last month. Hundreds attended those hearings, and more than a thousand more submitted written comments.

"At some place, at some time, I think nuclear is an appropriate option. But I don't think it's this place and I don't think it's this time," said Commissioner Jeff Chostner.

Commissioners questioned where the mass quantity of water would come from, how a plant would fit into the surrounding rural area, how emergency services would be impacted and, the subject that has plagued the nuclear industry for decades, what would happen with the spent fuel rods, now stored indefinitely in pools?

"What do we do with the spent fuel rods? Right now we just store them forever. The government has talked about eventually they might do something, but I don't think we can wait until they decide," said Commissioner John Cordova.

After the vote, Banner shook the commissioners' hands and said he accepted the decision.

He will not appeal.

"It's the decision they made. I'm willing to live with it and move on from there," he said. He said he has been approached by another Colorado community, which he did not name, about building a plant, but has not decided if he will move forward.

The significant opposition, he said, may have been because people got "stirred up" as a result of events in Japan, and what he saw as alarmist media coverage. He remains convinced nuclear power is safe.

Anita Minton, wearing a sash saying "down the yellow cake road," is not.

"The last thing I want is a nuclear plant, because of the billions and billions of gallons of water it would take," said a jubilant Minton. "I was hoping for this but holding my breath."

Ross Vincent, chair of the Sangre de Cristo Group of the Sierra Club, came to the meeting with two news releases. He was happy to give reporters the one that applauded the decision.

"I'm really pleased with the commissioners' decision. I'm really proud of the people in the county who spoke up and let them know how much we care about the future of the community," he said.

He agreed Japan's problems may have caused more people in southern Colorado to pay attention to Banner's proposal, but he said people were against it from the beginning.

"I know there were a lot of people, in particular, leadership-type people, who had begun to organize before the crisis in Japan," he said.

## **Pueblo Co. Rejects Rezoning For Proposed Nuclear Power Plant In Southern Colorado :: The Republic (AP)**

Associated Press, April 26, 2011

PUEBLO, Colo. — The Pueblo County commissioners have rejected a request to rezone land in the eastern part of the county for a nuclear power plant.

The Chieftain reports the commissioners voted 3-0 Monday against a special land-use permit sought by Pueblo lawyer Don Banner. He has proposed rezoning a nearly 38-square-mile parcel to create an energy park that would have included a nuclear power plant.

The commissioners cited concerns about where the water for the plant would come from.

Banner has said he didn't have any partners or water rights lined up for a nuclear power plant because he first wanted to line up county approval.

Environmental and community groups say the commissioners were right to vote against "expensive, dirty nuclear energy in our backyard."

## **Pueblo County Commission Rejects Land Proposal For Nuclear Power Plant (DENP)**

By Mark Jaffe

Denver Post, April 26, 2011

Full-text stories from this source currently cannot be included in this document. You may, however, click the link above to access the story.

## **Commissioners: No Nuke Plant In Pueblo County (KKTV)**

By Alyssa Chin

KKTV-TV Colorado Springs, CO, April 25, 2011

Pueblo county commissioners have unanimously voted down a proposal to allow a nuclear power plant and energy park.

Monday evening they decided against re-zoning the land where the plant would have been built-- thousands of acres between Avondale and Fowler.

"For me the paramount decision for me was water and protecting agriculture, it was a hard decision to make," Pueblo county commissioner Anthony Nunez said.

Donald Banner originally conceived the idea for this energy park and nuclear power plant. He's maintained this development would have brought new jobs and boosted the Southern Colorado economy.

"I respectfully disagree with their decision but it's theirs to make and like the rest of us we all have to live with our decisions and they'll have to live with theirs," Banner said.

"I don't think those are the jobs that really people want and in danger the community within," Nunez said.

In recent public meetings, hundreds of opponents have spoken out, worried about the dangers of such a plant, as well questioning as the real benefit.

"I'm glad they voted no, I'm a little concerned about the water of course was a major issue," opponent to the power plant, David Barber said.

Along with water rights, the commissioners also cited safety concerns and uncertainty about the plan's details in making their decision to vote against the rezoning.

Banner says another Colorado community has approached him to look into the possibility of building them an energy park, but he wouldn't say which community.

He hasn't yet decided if he wants to tackle a project like this again.

## **Pahrump Stop Possible On Lawmaker Tour Of Yucca (LVSRJ)**

By Steve Tetreault

Las Vegas Review-Journal, April 26, 2011

Full-text stories from this source currently cannot be included in this document. You may, however, click the link above to access the story.

## **State Agency To Dump Supporters Touring Yucca This Week: Take Along Two Of Ours For Balance (LVS)**

By Jon Ralston

Las Vegas Sun, April 26, 2011

So says acting nuclear agency boss Joseph Strolin in a letter to Rep. John Shimkus, a Yucca Mountain backer leading others on a tour of the dump site Tuesday. He says that Steve Frishman and Judy Treichel, two dump foes (he doesn't call them that), should go along.

See letter at right.

## **Report Urges Storing Spent Nuclear Fuel, Not Reprocessing It (NYT)**

By Matthew L. Wald

New York Times, April 26, 2011

Experts on nuclear power predict that Japan's Fukushima crisis will lead to a major rethinking of how spent nuclear fuel is handled in the United States but have cast doubt on a proposed solution: reprocessing the fuel to recover plutonium and other materials for reuse.

The challenge at the Fukushima Daiichi plant in Japan involves not only damage to three reactors but also the loss of cooling water in at least one pool of spent radioactive fuel, which prompted some American experts to recommend an evacuation to a radius of 50 miles. And that pool was not loaded nearly as heavily as pools at similar reactors in the United States.

In a study to be released on Tuesday, engineers and scientists at the Massachusetts Institute of Technology therefore suggest that "the entire spent-fuel management system — on-site storage, consolidated long-term storage, geological disposal — is likely to be re-evaluated in a new light because of the Fukushima storage-pool experience."

The accident in Japan has already generated calls for sending the fuel to factories where it would be mechanically chopped up and chemically dissolved to recover the plutonium that is made in routine reactor operations, as it frequently is in Europe and Japan. The plutonium could then be used as a substitute for uranium fuel at nuclear plants.

But in the M.I.T. report, experts argue that there is no reason to find a substitute for uranium because the existing global supply is plentiful. In fact, there is enough uranium available to fuel 10 times as many reactors as exist today, even if each of the new ones ran for 100 years, the study says.

Rather than processing the fuel to retrieve plutonium, the report suggests, the fuel should be "managed" so that the option of doing so is preserved — perhaps by storing the fuel in above-ground silos for a century. It recommends moving it to a centralized repository, starting with fuel from nuclear reactors that have been retired and torn down.

A summary of the report released last fall also made that point, but the conclusion is likely to gain far more attention in coming months as federal regulators and Congress awaken to the potential for an accident involving spent fuel.

Congress chose Yucca Mountain, a site in the Nevada desert, as the top candidate for a nuclear waste burial site in 1987, but President Obama shut down an Energy Department program to develop the repository and appointed a commission to study alternatives, including reprocessing. The panel is expected to issue a preliminary report this spring.

Also standing in the way of Yucca is the Senate majority leader, Harry Reid, Democrat of Nevada, who has effectively blocked money for the program.

The M.I.T. study also raises the idea of storing more waste in small steel and concrete silos, known as dry casks, in a central area with low population density. All the spent fuel produced so far would fill an area under 300 acres, experts say.

Another alternative for nuclear waste disposal is to build a new class of reactors powerful enough to break up the elements that are hardest to dispose of: materials that are created in reactors and remain significantly radioactive for tens of thousands of years. But that would require development of new technologies at a substantial cost and, like reprocessing, would carry a risk of releasing radioactive contaminants from fuel that is now mostly packaged in compact and airtight forms.

The new reactors and conventional reprocessing would each create a waste stream for which a repository would be needed anyway, the scientists add. The executive director of the M.I.T. study, Charles W. Forsberg, said the Fukushima accident would therefore "place more emphasis on getting a geological repository program up and running."

All the same, engineers involved in the Yucca Mountain project say that even if Congress could be persuaded to authorize money for a permanent repository, it would be a few years before the government could decide whether the site was suitable and many more years before it could absorb a major fraction of the waste now sitting at reactor sites.

## **N.M. Considered For Waste (ALBQJ)**

By John Fleck

Albuquerque Journal, April 26, 2011

The federal government, in search of a place to dispose of its radioactive waste, is once again considering New Mexico.

Three of seven sites under consideration for disposal of some of the lesser radioactive nuclear power plant waste are in New Mexico, including the possibility of adding it to the inventory of waste headed for the Waste Isolation Pilot Plant outside Carlsbad.

A second site near WIPP is also on the list of possible locations, as well as Los Alamos National Laboratory.

The waste, much of it from machinery in old nuclear power plants, is technically categorized as "low level," but is sufficiently dangerous that federal rules call for burying it underground, explained Arnie Edelman, who is heading up a Department of Energy study of the issue.

It is less radioactive than the dangerous power plant fuel rods themselves, but more radioactive than much of the waste now being disposed of at WIPP, which is the final resting place for nuclear weapons manufacturing waste contaminated with radioactive plutonium.

Edelman and his colleagues have scheduled public hearings this week across the state to discuss the issue.

Don Hancock, head of the Nuclear Waste Safety Project at the Southwest Research and Information Center in Albuquerque, said singling out New Mexico as the possible host for three of the seven sites under consideration is a problem.

"That's not OK, and the people of New Mexico need to tell them it's not OK," Hancock said.

While most low-level radioactive waste can be disposed of in relatively simple landfills under federal law, the waste under study is sufficiently dangerous that it must be either put into deep holes bored into the ground, or into a deep underground disposal site like WIPP, according to a draft analysis by Edelman and his colleagues.

The idea, according to federal regulations, is to prevent humans from inadvertently coming into contact with the waste for at least 500 years.

The waste, known formally under the law as "Greater than Class C Waste," represents one of a number of the nuclear age's loose ends, waste that has no legal disposal pathway.

Congress in 1985 gave the federal government the legal responsibility for disposing of this type of waste, according to Edelman, and reiterated the requirement in legislation passed in 2005.

Much of the waste in question will come from decommissioned nuclear power plants, Edelman said, primarily in the form of metal exposed to high levels of radiation during reactor operations.

WIPP, located in a 2,150-foot-deep salt mine in southeast New Mexico, is one potentially attractive option because it is the only operating underground radioactive waste site in the United States and is the only such deep underground disposal site considered in the current draft study.

But WIPP is not legally permitted to accept Greater Than Class C waste, something that would require an act of Congress to change, Edelman said.

WIPP and the vicinity around it has also come up recently in discussions of how to deal with high-level waste, such as the extremely radioactive used fuel from nuclear power plants.

Other options for the Greater Than Class C waste include drilling deep bore holes into the ground, including the possibility of doing it at Los Alamos, or at another site near WIPP.

The study under way, an environmental impact statement, is only a first step, Edelman said. It will be at least another year before the federal government picks a preferred option for disposing of the waste.

Radioactive waste disposal hearings

- Carlsbad, Tuesday, Pecos River Village Conference Center, 5:30-9:30 p.m.
- Albuquerque, Wednesday, Marriott Pyramid North, 5151 San Francisco NE, 5:30-9:30 p.m.
- Pojoaque, Thursday, Cities of Gold Hotel Conference Center, 5:30-9:30 p.m.

## **Radioactive Waste In N.M.? (ALAMOG)**

Associated Press, April 26, 2011

ALBUQUERQUE - The federal government is looking at three sites in New Mexico to dispose of radioactive waste that currently has no place to go.

The Albuquerque Journal reported in a copyright story Monday that three of the seven total sites under consideration are in New Mexico, including the Department of Energy's Waste Isolation Pilot Plant near Carlsbad.

A second site near WIPP and Los Alamos National Laboratory also are on the list.

Much of the waste, from machinery in old nuclear power plants, is technically categorized as low level.

Most low-level radioactive waste can be disposed of in relatively simple landfills under federal law. But this particular type of waste is sufficiently dangerous that it must be put into deep holes bored into the ground or into a deep underground disposal site like WIPP, according to a draft analysis by Arnie Edelman and colleagues. Edelman heads an Energy Department study on the issue.

The waste is less radioactive than the power plant fuel rods but more radioactive than much of the waste now being buried at WIPP, which stores plutonium-contaminated waste from nuclear weapons manufacturing.

Don Hancock, who heads the nuclear waste safety project for the Southwest Research and Information Center in Albuquerque, criticized the government for singling out New Mexico for three of the seven sites under consideration.

"That's not OK, and the people of New Mexico need to tell them it's not OK," Hancock said.

The waste is formally known as "Greater than Class C Waste," and Congress has given the federal government the legal responsibility for disposing of it.

WIPP is not legally permitted to accept Greater Than Class C waste, and Congress would have to act to change that, Edelman said.

Much of the waste in question will come from decommissioned nuclear power plants, primarily metal exposed to high levels of radiation during reactor operations, Edelman said.

WIPP, excavated 2,150 feet underground in a salt formation in southeastern New Mexico, is potentially attractive because it's the only operating underground radioactive waste site in the United States.

Other options include drilling deep bore holes into the ground, and the government is studying doing that at Los Alamos or another site near WIPP.

The environmental impact statement now under way is only a first step, Edelman said. It will be at least another year before the federal government picks a preferred option.

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## **New Hanford Manager Always Thinking About Budget (TACOMA)**

By Annette Cary

Tacoma News Tribune, April 26, 2011

The budget for Hanford's \$12.2 billion vitrification plant and tank farms could be the biggest challenge facing Scott Samuelson, the new Department of Energy manager of Hanford's Office of River Protection.

Samuelson starts work May 8, but was in the Tri-Cities last week preparing for his new assignment.

One of the lessons he brings from his last job is how important it is to "fight for budget all the time," he said. Maintaining the budget for the Office of River Protection is a key concern, he said.

"There are some hard commitments we have to meet," he said.

He comes to Hanford as DOE is looking at deviating from its previous plan of requesting a flat \$690 million for construction of the vitrification plant each year to move more money forward to peak construction years and reduce funding in later years. In fiscal 2013, Hanford officials would like \$970 million for work at the vitrification plant

In addition, Hanford officials also would like to increase the 2013 budget for the tank farm to continue to make infrastructure improvements needed to provide services for the plant, including delivering the waste for treatment and storing the treated waste.

Samuelson's responsibility will be to ensure that those who make decisions on how much money projects receive fully understand what the consequences are if money is less than planned, he said.

"The funding profiles are large," at a time when there is pressure for austerity in federal budgets, he said. "It's going to be hard."

He has delivered another large, one-of-a-kind project: The \$3.5 billion National Ignition Facility at the Lawrence Livermore National Laboratory in California. It is the world's largest and most energetic laser, planned to achieve fusion ignition in the laboratory and obtain more energy from the target than is provided by the laser.

The project baseline -- its long-term cost and schedule plan -- was revamped about nine years ago. Samuelson, the federal project director, held to the new baseline, bringing the project in on the revised schedule and slightly below the budget. He was named the DOE Federal Project Director of 2009 for his success.

Outside reviews of the National Ignition Facility were increased as the baseline was revised, including a look at the project by Dale Knutson, who now serves as federal project director of the Hanford vitrification plant.

"Learning to embrace that sort of input is not easy," Samuelson said. "It feels a lot like people are getting in your business, and it's not."

He said he believes that "fresh ears and fresh eyes" brought value to the National Ignition Facility, and he will promote the same approach at his job at Hanford, he said.

He is oriented toward understanding a project mission and finding a way to get it done, he said. At Hanford, he will be looking at where Office of River Protection projects need to be in five years.

When he was named to lead the Hanford Office of River Protection earlier this month, Ines Triay, DOE's assistant secretary of energy for environmental management, praised his leadership and ability to deliver large projects, such as the National Ignition Facility. He also has extensive experience in project, financial and contract management, she said.

Despite the Hanford job being a good fit for his strengths and experience, it was a difficult decision to make the move to the Tri-Cities, he said. Among his concerns was the turnover in leadership of the Office of River Protection.

But he has a history of sticking with projects, after starting work for the federal government 27 years ago in what he thought would be a short-term job.

"I hope to be here a while," he said. "I get caught up in things. I like to get things done."

## **Would Nuclear Waste Removal Do More Harm Than Good? (SLTRIB)**

By Judy Fahys

Salt Lake Tribune, April 25, 2011

EnergySolutions Inc. paid its state fine earlier this month for burying 23 barrels of too-hot waste at its Tooele landfill.

But, weeks after the Utah Division of Radiation Control received the \$80,000 check to cover the fine, a touchy question remains.

Should state regulators require the nuclear waste company to dig up the waste?

Rusty Lundberg, director of Utah's Division of Radiation Control, said his office is reviewing the company's arguments that removing the greater-than-Class A waste would be too costly — in terms of time, money and worker and public health.

The division's goal, Lundberg said, is "to make sure that they are in compliance with [Utah's] Class A limits and that they stay in compliance."

Last fall, during an internal audit, EnergySolutions discovered that waste from 15 shipments over the past decade had been buried in its mile-square, low-level radioactive waste disposal site despite having higher concentrations of radioactivity than permitted under the site's license and Utah law.

The waste had come from cleanups at US Department of Energy and National Aeronautics and Space Administration sites, and their burial prompted the \$80,000 fine against Salt Lake City-based EnergySolutions and fines totaling more than \$17,000 against the contractors that shipped it to Utah.

The national system for low-level radioactive waste — separate from the program that deals with high-level nuclear waste from reactors and bomb-making — specifies that Class A waste must lose most of its radiological hazard after 100 years. Class B and C waste, which loses most of its hazard in 300 and 500 years, respectively, was banned in Utah in 2005.

So, for the state, the question boils down to whether risk of leaving the waste buried where it is outweighs the risk of digging it up. Another risk: If it decides the waste should be left where it is in violation of Utah law, the state could open itself to the charge that its radioactive waste limits are flexible.

EnergySolutions notes in its April 7 report to Lundberg that its site was robust enough to contain the sort of waste contained in the 23 greater-than-Class-A barrels. It would be safer to leave the waste in place than it would to remove it, the company said in a 60-page evaluation of the alternatives The Salt Lake Tribune obtained under the Government Records Access and Management Act.

"Comparison of the impacts to worker doses and general public exposures from these two alternatives suggests that attempts to recover the errant waste be avoided," the report's executive summary concludes.

"The additional worker doses and general population exposures from waste recovery far exceed the negligible projected doses from increases to the future groundwater concentrations (which are estimated as zero, since the groundwater is not potable or usable)."

The summary concludes that removing the 23 barrels "conveys no corresponding benefit in terms of reducing general public and environmental impacts" and "does not compromise [the landfill's] ability to meet its performance objectives."

Meanwhile, it could cost as much as \$2 million to dig up the waste. And the job could take as long as two years, the report said.

Lundberg said his agency has just begun analyzing the EnergySolutions report. He also noted that the state is trying to negotiate a "supplemental environmental project" with the company as part of the resolution of the case.

Meanwhile, four of the five contractors that were fined for sending the too-hot waste to Utah have resolved their violation notices with the state, said Lundberg.

## **Chernobyl Offers Lessons For Nuclear Power Industry Around The World (AUSTIN)**

By Najmedin Meshkati, McClatchy-Tribune News Service

Austin American Statesman, April 26, 2011

The world marks the 25th anniversary of the Chernobyl nuclear power plant catastrophic accident in Ukraine today. However, this event doesn't do justice to the significance and impact of this plant on the world, as I saw and felt about it in 1997.

When I got the first sight of the sarcophagus of the Chernobyl nuclear power station while being driven in the exclusion zone toward the plant in a bright day in May 1997, I felt that Chernobyl was domineering, amazing, captivating, stunning and mesmerizing. Like a mysterious temple of eternal doom which "radiates" supernatural power, its eerie presence commanded respect, and its ominous sarcophagus demands solemnity. Spending a few days in the control room of, then operating, Reactor No. 3, which was identical to the exploded No. 4 and mingling with its operators, was another quintessential experience.

The long-distance travelling fallout and wide-reaching aftermath of this accident has been characterized as "a nuclear accident anywhere is a nuclear accident anywhere."

I think there is no other site, or any other structure on earth, that has had such a devastating effect on the lives of millions of people and on the environment. Going through the Exclusion Zone, seeing the sarcophagus from a very close distance, visiting the (deserted, ghost) town of Pripyat, talking with "liquidators" and discussing nuclear safety issues with the general director and his deputy in charge of the sarcophagus, reconfirmed my conviction, more than ever, that our interdisciplinary effort research on the risk mitigation of technological systems has the potential to offer a lot to humanity.

According to many seminal studies by the International Atomic Energy Agency and other sources, the root cause of the Chernobyl nuclear power plant accident was attributed to a primarily deficient safety culture, not only at the Chernobyl plant but also throughout the Soviet design, operating and regulatory oversight for nuclear power that existed at the time of accident in 1986.

The safety culture is typically defined as the assembly of characteristics and attitudes in organizations and individuals that establishes that, as an overriding priority, safety issues receive the attention warranted by their significance. Creating and nurturing a positive safety culture basically means to instill thinking and attitudes in organizations and individual employees that ensure safety issues are treated as high priorities.

A plant fostering a safety culture would encourage employees to cultivate a questioning attitude and a rigorous and prudent approach to all aspects of their job -- and would set up necessary open communications between line workers and mid and upper management.

And of course, in the wake of the earthquake in Japan, we should be concerned with the risks of a major earthquake and prepare to fend off hazards of its ensuing tsunami on nuclear power plants anywhere. However, based on my 25 years of research on nuclear safety in the United States and in Japan, I believe that the earthquake and tsunami natural hazards only acted as a triggering mechanism, and it was the ensuing anthropogenic disaster that causes the Fukushima Daiichi nuclear crisis.

The root causes of this man-made disaster can be found in a lax or not existing independent nuclear regulatory oversight system in Japan as well as in an ineffective or woefully weak safety culture of the utility -- the Tokyo Electric Power Company. The natural disasters that can trigger secondary events with safety implications are probabilistic events, which occur rarely and too far in between. On the other hand, the safety culture-related problems and their adverse effect that compromise plants' safety barriers are 24/7 deterministic phenomena that exist and are present 365 days a year.

Despite the Chernobyl accident and the crisis at the Fukushima nuclear plant in Japan, I believe that nuclear power, as far as two critical objectives of energy security and supply diversity are concerned in the United States, will play a major role in the future. According to many recent credible reports, because of the concerns about carbon dioxide emissions causing global warming as well as uncertainty about, and the high cost of, imported oil, nuclear energy is being considered a viable option.

However, we need a paradigm shift in dealing with nuclear power plant safety. The era of continuing a piecemeal approach toward addressing safety issues at our plants is over. As Yukiya Amano, director general of the International Atomic Energy Agency said April 4, "The crisis at Fukushima Daiichi has enormous implications for nuclear power and confronts all of us with a major challenge (and) we cannot take a 'business as usual' approach."

We should learn from Chernobyl and Fukushima and be prepared to face the nuclear power realities, including the added post-Fukushima expectations from the public. We shouldn't give up, as we can do better than Chernobyl or Fukushima for our 104 nuclear power plants in the United States.

As the American philosopher William James once said, "Great emergencies and crises show us how much greater our vital resources are than we had supposed."

Meshkati is a professor of civil/environmental and industrial and systems engineering at the University of Southern California; meshkatiusc.edu.

## **PNNL Workers Helping Secure Chernobyl (TACOMA)**

By ANNETTE CARY

Tacoma News Tribune, April 26, 2011

Twenty-five years after one of four nuclear power plants at Chernobyl exploded, employees of Pacific Northwest National Laboratory are working to reduce the dangers remaining from the accident.

Battelle, which operates the Department of Energy national lab in Richland, helped develop the 1997 Shelter Implementation Plan, a step-by-step approach to solve the technical problems left by the meltdown of the reactor core on April 26, 1986, and convert Chernobyl into a safe and secure site.

Now it has employees assigned to the responsible execution of the plan, which includes building a massive new structure to cover the open reactor for the next 100 years. Six PNNL employees are living in the Ukraine, bringing expertise as engineers, safety professionals and contract specialists to the project.

"We stand on the shoulders of giants," said Eric Schmieman, a PNNL senior technical adviser at Chernobyl. The people who came before them on the Chernobyl project include many who gave their lives, including during the emergency response to the disaster.

Within months of the reactor core meltdown, workers had risked their lives to cover the open reactor with a sarcophagus, or shelter. But that was a short-term fix.

The sarcophagus is leaky and with its walls in danger of collapse, a major project already has been completed to transfer the weight of its roof to a new external support structure.

Now construction is close to starting on the New Safe Confinement, a structure that will cover the destroyed reactor and sarcophagus. It is intended to prevent the further release of radioactive contamination, better protect the damaged reactor from the elements that add to its deterioration and help with its cleanup.

It's a civil engineering challenge that Schmieman compares to the Egyptians building the pyramids.

"Working conditions are very difficult," he said in a telephone interview. He is the signature authority for all design and technical decisions for the construction phase.

The damaged reactor remains too radioactive to safely be covered directly.

Instead, construction will start soon 650 yards away to build a 32,000-ton arched structure that will be slid into position to cover the damaged reactor in summer 2015 or sooner. The arch will stand about 360 feet tall -- taller than the Statue of Liberty -- and will be about 840 feet wide and 530 feet long. Inside will be robotic cranes to help dismantle the destroyed reactor, limiting worker exposure.

Radioactive contamination remains a worry and workers try to avoid digging. The foundation for the confinement structure is being built by injecting grout into the ground, Schmieman said.

Battelle has provided safety leadership, working with Ukrainian colleagues to bring the best international safety practices to the project, including respiratory protection, occupational medical screening and radiation detection and measurement programs. Ukrainian workers had been relying on masks similar to those surgeons tied over their faces in the United States half a century ago.

Western practices for fall protection also have been instituted, replacing safety belts that were required in the Ukraine but not allowed in the US at tall heights with safer full-body harnesses.

Developing a safety culture has been no simple feat, but the project now has achieved almost 4 million work hours without a lost-time accident, Schmieman said.

As challenging as the project is, it's been not just professionally but also personally rewarding, Schmieman said.

"Work here is very important from a global perspective," he said. "It's rare you get an opportunity to act globally."

Read more: [http://www.thenewtribune.com/2011/04/25/1639095/pnnl-workers-helping-secure-  
chernobyl.html#ixzz1Kcde0Y18](http://www.thenewtribune.com/2011/04/25/1639095/pnnl-workers-helping-secure-chernobyl.html#ixzz1Kcde0Y18)

## **A Firsthand Report On The Disaster In Japan (WINDBEA)**

Windsor (CO) Beacon, April 26, 2011

The League of Women voters is sponsoring a firsthand report on Sunday about the ongoing nuclear crisis in Japan and the devastation following the earthquake and tsunami.

Christopher Field, who will be returning after a month-long stay in Japan, studied modern Japanese history and language at Harvard. He was called to interpret for the Nuclear Regulatory Commission in Washington. He has also worked as an on-camera journalist in Japan as well as in the US and has been able to maintain contacts with Japanese journalists and media through his frequent trips to Japan.

The talk will be at 1:30 p.m. at the Harmony Public Library, 44616 S. Shields St., Fort Collins.

The program is free and open to the public.

## **Earthquake Risk Clouds Paducah's Nuclear Future (LCJ)**

**Japan crisis shakes up plans**

By James Bruggers

Louisville Courier-Journal, April 26, 2011

Retired engineer Ralph Young had hoped this would be the year that Kentucky's General Assembly would ease its restrictions on nuclear plant construction, clearing the way for a plant near his hometown of Paducah.

But a bill to do just that died in committee — and that was in the days before the massive March 11 earthquake in Japan caused a tsunami that washed into a nuclear plant there, setting off serious radiation leaks that sent a trace amount of radiation around the world.

Now, given that Paducah sits in an area the US Geological Survey considers a high hazard should an earthquake occur on one of the faults in the New Madrid seismic zone, Young and other supporters are worried that the proposed nuclear plant may not happen.

“People see the news and they get spooked,” said Young, who serves on an advisory board for the Paducah Gaseous Diffusion Plant, which enriches uranium for nuclear fuel. The enrichment plant, which employs about 1,200 people, is expected to close in the coming years, and officials have been trying to find new jobs at the site west of Paducah for a work force already comfortable with nuclear energy.

Sen. Bob Leeper, I-Paducah, has pledged that next year he will again push a bill to kill a 27-year-old stipulation that before any nuclear plant is built, there must be a permanent disposal facility to handle its radioactive waste.

On one level, the debate is an academic argument, since no company has proposed building a nuclear power plant in Paducah or anywhere in Kentucky.

But some advocates say the crisis in Japan has become a new excuse for those who want to block any efforts to move from coal as the state's main energy source. And Young said he's skeptical about the bill's chances: “A lot of people here are saying there is no way ... we will get that passed. ... It's put the brakes on all that talk.”

Among those who see little need for nuclear power in the state is Rocky Adkins, D-Sandy Hook, the majority floor leader in the Kentucky House, where Leeper's bill has died three years in a row after passing in the Senate. “Kentucky has some of the lowest-cost energy in the nation,” he said of the state's reliance on coal.

Adkins said House Democrats have long been concerned about the cost of nuclear energy, as well as how to safely manage waste that can be dangerous for centuries. “Now those concerns have been heightened even more since the nuclear power crisis in Japan. A lot of members have voiced that concern with me since that happened.”

Some residents feel the same.

For example, Linda Long, a longtime Paducah-area resident who lives near the enrichment plant, said she does not want a nuclear plant brought there.

“We got enough things that are dangerous and objectionable around here,” she said.

Rep. Mike Harmon, R-Danville, vice chairman of the House Tourism and Energy Committee, where Leeper's bill died, said the Japan crisis “does give you pause in regard to nuclear energy.”

But he noted that while “Kentucky is a coal state,” eventually, “we will have to move to something different,” and he hopes that lawmakers will at least be willing to discuss nuclear energy.

Leeper said the Japan crisis could actually help as more information comes out, such as details that will likely confirm it was the tsunami — not the quake — that caused the radiation releases. And, he quipped, there's no chance for a tsunami on the Ohio River.

The Kentucky Coal Association was neutral on the bill, said its president, Bill Bissett.

An uncertain future

Kentucky leaders have been considering the change in nuclear power policy for several years.

Gov. Steve Beshear's 2008 energy plan envisioned the state possibly meeting 30 percent of its electricity demand in 2030 from nuclear energy. Coal now supplies more than 90 percent of the electricity.

The governor has recently been very vocal in his support of coal. But a statement provided by Karen Wilson, a spokeswoman for the Kentucky Energy and Environment Cabinet, said Beshear continues to “support and encourage open, frank discussion on the pros and cons of nuclear energy.”

The push for nuclear power in Paducah comes as work possibly winds down at the Paducah Gaseous Diffusion Plant.

The United States Enrichment Corp. leases the plant from the US Department of Energy on 3,400 acres. But it is nearly 60 years old, and its contract to buy electricity from the Tennessee Valley Authority expires next year. The company, which estimates a \$1.5 billion annual economic impact in the Paducah area, is looking to build a modern enrichment plant in Ohio.

Energy Department officials are working with University of Kentucky researchers and local residents to figure out a future for the site. Options discussed range from letting the property return to nature, to putting a nuclear power plant there. A \$14 billion cleanup of the fuel plant site is already under way and is expected to run through 2040.

The site's proximity to the New Madrid seismic zone, an area that covers parts of seven states including Kentucky, has long been a sticking point in discussions about a nuclear power plant there.

The US Geological Survey doesn't envision a New Madrid earthquake as large as Japan's magnitude 9 quake, said Robert A. Williams, the central and eastern regional hazard assessment coordinator for the USGS. But geologists have documented

evidence of several large quakes there over 4,500 years, including a series of three quakes — magnitudes 7.7, 7.5 and 7.7 — that occurred 200 years ago.

State officials contest the hazard ranking for Western Kentucky, saying that major quakes don't occur very frequently and that USGS methods exaggerate the threat.

The USGS seismic hazard mapping for the New Madrid zone “puts a bull's eye that causes people from doing investment there,” said James Cobb, the Kentucky state geologist and director of the Kentucky Geological Survey.

Nuclear power in Western Kentucky “shouldn't be ruled out without more study,” he said.

But Williams said the hazard mapping includes a rigorous review process. The maps aren't intended to prohibit development, but rather are advisory.

He also said the Japan quake “was bigger than what the Japanese thought would happen,” he said.

Taking the public pulse

In Paducah, research before the Japan quake showed a nuclear power plant as among the most favored options for the enrichment plant site, said Lindell Ormsbee, director of the Kentucky Research Consortium for Energy and Environment, which has been conducting the Paducah Vision project for the energy department.

But he also said the UK team found strong opposition to a nuclear power plant.

“A better solution for the community might be one that sort of minimized the polarization for the community,” Ormsbee said, adding that might involve light industry.

Because the UK research was done before the Japan quake, researchers will be returning to see if attitudes have changed.

Paducah Mayor William F. Paxton III said that although the Japan quake gave him some pause, community leaders have wanted to bring nuclear industry jobs to replace those that likely will go away.

“We have worked and lived with the enrichment plant since 1952 and it's been a wonderful economic engine for us, with lots of educated and talented people,” he said. “Everybody I talk to says this country needs all forms of power — coal, oil, nuclear and wind.”

## **EDITORIAL: Malloy Agrees: Nuke Tax A Bad Idea (NHR)**

New Haven Register, April 26, 2011

The legislature's Democratic leadership took the governor's hint about legislation that would impose a punitive tax on electricity generated with nuclear power and skyrocket customers' utility bills.

“That's not my tax. That's not a tax I have publicly supported, nor is it a tax that I think is going to come out of the legislature,” Gov. Dannel P. Malloy said in one of several recent interviews.

Last Thursday, the General Assembly's finance committee approved a budget bill that dropped the tax.

Members of the energy committee and other backers of the tax seemed to think the tax's cost would not be passed on to customers. Dominion, which operates the two reactors at the Millstone power station in Waterford, said otherwise.

Dominion warned that the tax, costing Millstone as much as \$335 million a year, would certainly be passed on to customers, if it did not force the plant to close. Millstone supplies half the state's electricity.

The proposal was at odds with Malloy's claim that “Connecticut is open for business.” Connecticut has among the highest electricity rates in the nation and the most costly energy in New England. Businesses have fled the state, citing the high cost of electricity.

Malloy had proposed an energy tax — 0.2 cents per kilowatt-hour on all energy producers, not just nuclear, coal or oil sources. The finance committee approved a tax of 0.25 cents a kilowatt-hour that will yield \$72 million.

Any tax that increases the too high cost of electricity in Connecticut is a bad idea. But, at least the tax Malloy and the Democratic leadership back is fairer in spreading the tax burden. Compared with what the lawmakers first cooked up, it looks positively brilliant.

## **A Tax Grab From South Of The Border (DNNEW)**

Daily News Of Newburyport (MA), April 26, 2011

We're used to New Hampshire residents tweaking Bay Staters' noses over the fact we pay an income and sales tax and they don't. But now our neighbor to the south, Connecticut, is asking at least some Massachusetts consumers to pay a tax from which its own residents would be exempt.

According to the Massachusetts Municipal Wholesale Electric Co., whose members include the utilities in Peabody, Danvers, Georgetown, Ipswich, Marblehead and Middleton, the Connecticut General Assembly is considering a new tax on the power generated at the Millstone nuclear power plant. They say the revenue is needed to close a gaping hole in the state

budget. MMWEC owns 4.8 percent of Millstone Unit 3, and officials estimate the tax would cost consumers in its member communities an additional \$9.3 million a year.

Connecticut's privately owned utilities have said the tax would be absorbed within the current rate structure and thus have no impact on consumers there.

"Such a tax is at the very least unfair," MMWEC spokesman David Tuohey declared in a release issued last week. "Massachusetts public entities are not responsible for Connecticut's budget problems and they should not be responsible for paying to correct those problems."

He added that his agency "is very concerned about the impacts (of the tax) on our Massachusetts consumers." While the municipal utilities are not obligated to purchase power from Millstone, without it they would have to buy it elsewhere, perhaps at an even higher cost.

Bad enough property owners in these MMWEC communities are being asked to pick up the slack from their own state's inability to keep up its local aid payments; now they're expected to help the Nutmeg State deal with its fiscal woes as well.

## **Time To Phase Out Nuclear Power Plants (DNNEW)**

By Bruce Skud

Daily News Of Newburyport (MA), April 26, 2011

To the editor:

Japan's nuclear crisis -- amidst an earthquake and tsunami -- has reignited the public's concerns about living within a 10-mile radius of Seabrook nuclear power plant and about the safety of nuclear power generally. But the Seabrook operators, the nuclear industry, and the US Nuclear Regulatory Commission continue to whistle past the graveyard.

Nuclear power plant operators are seeking extensions of their operating licenses from the NRC far beyond their plant's life cycle design. It is inevitable that a US nuclear power plant will have an incident directly as a result of equipment that has aged far beyond its design limits. Under a pro-industry NRC ruling, Seabrook is seeking an extension of its licence far in advance of when its licence is actually up. Let's err on the side of caution and wait.

Seabrook won the battle of getting its evacuation plan approved, although few of us are convinced that during summer traffic congestion or during a winter like the one we just had, that the seacoast could realistically be evacuated. If there is radioactive fallout from a nuclear plant, the industry has assured itself that it will make a minuscule contribution to compensating homeowners by getting federal legislation that limits liability to a paltry amount.

As the Japanese crisis has horrifically reminded us, nuclear plants have high-level spent nuclear fuel on the premises. The storage was intended to be temporary; it has become effectively permanent. The US has been searching for a solution for storing spent fuel for 50 years, but has not found one. After spending hundreds of billions of dollars, the federal government canceled its plan to build a permanent storage facility at Yucca Mountain in Nevada because the people of Nevada understandably did not want one -- and we sure don't want one in New England either. Even if Yucca had been completed, there would be thousands of shipments of spent nuclear waste through towns and cities -- posing a monumental threat to our national security.

The US should phase out nuclear power by banning licence renewal and new nuclear power plants. We appreciate that the president has ordered a top-to-bottom review of nuclear power in light of the Fukushima Daiichi disaster, but are skeptical of any review conducted by the NRC. The NRC was responsible -- along with industry -- for sitting nuclear power plants on earthquake zones in California, close to major population centers such as Indian Point near New York City and in coastal areas such as Seabrook. What were they thinking?

Bruce Skud

Newburyport

## **Thyroid Fears Aside, That X-Ray's Worth It (NYT)**

By Jane E. Brody

New York Times, April 26, 2011

It doesn't take much to scare people when it comes to cancer, especially when the cause, unlike smoking, seems beyond one's control.

So I was not surprised by a stream of panicked e-mails I received after a television show in which the popular Dr. Mehmet Oz called thyroid cancer "the fastest-growing cancer in women" and cited the harmful effects of radiation from sources like dental X-rays and mammograms.

Dr. Oz warned that people who have more than five X-rays a year have a fourfold greater risk of developing this cancer, and recommended the use of a lead thyroid shield when getting dental X-rays or mammograms. One of his guests on the

program, Dr. Carolyn Runowicz, a gynecological cancer specialist, said she would not get dental X-rays if the only reason was to check her teeth.

Thyroid cancer is much on people's minds, particularly because of the nuclear reactor accident in Japan. After all, it has only two known causes: a rare genetic condition and exposure to large doses of radiation, especially during childhood.

The effects of radiation are cumulative, so in theory frequent exposure to even low doses could add up to a cancer risk. So what are the facts about radiation and the thyroid, and how concerned should you be about an annual mammogram or dental X-rays every few years?

Here are a few things to remember:

¶ Thyroid cancer is relatively rare, accounting for about 3 percent of all cancers in women, 1 percent in men and 1.4 percent in children.

¶ Diagnoses of thyroid cancer have increased sharply in recent decades. Between 1980 and 2007, the incidence rose to 17 per 100,000 from 6 per 100,000 each year, and to 5.8 per 100,000 from 2.5 per 100,000 men each year. The number of diagnoses in women nearly doubled from 2000 to 2008.

¶ Yet the death rate from this disease has not increased, and more than 97 percent of patients survive.

Dr. Otis W. Brawley, chief medical officer of the American Cancer Society, said the stable death rate despite a rising incidence strongly suggests that most of the thyroid cancers now being diagnosed would never have become a health threat.

"Our technology has gotten so good that we are finding cancers today that even 15 years ago would not have been diagnosed," Dr. Brawley said in an interview. "We're finding and treating cancers that would never have killed anyone."

Advances in Diagnostics

In a study describing a 140 percent increase in thyroid cancer diagnoses from 1973 to 2002, published in *The Journal of the American Medical Association* in 2006, researchers at the Veterans Affairs medical center in White River Junction, Vt., also concluded that the rise was the result of "increased diagnostic scrutiny."

They noted that if there were a true increase in thyroid cancer, the rise would be reflected in patients at every stage of the disease. But in their study, 87 percent of the increase was attributable to diagnoses of small papillary thyroid cancers, many of which would never have caused any problem.

The fact that thyroid cancer increased in all age groups from 2000 to 2008, Dr. Brawley said, "is more consistent with the introduction of new diagnostic technology than with any cause like mammography." If mammography were a factor in the rise of thyroid cancer, he added, you'd expect to see a greater rise in women older than 50 than in women ages 20 to 40.

Dr. Leonard Wartofsky, a thyroid cancer specialist at Washington Hospital Center in the District of Columbia, said in an interview, "The doses associated with mammography have been well studied and well calibrated. As long as it is done with modern equipment, women should not be concerned. That degree of radiation is not consequential."

The higher rates of thyroid cancer found in women could also reflect the fact that many are checked annually by gynecologists, who routinely examine the thyroid region for possible enlargement, Dr. Brawley suggested.

With regard to dental X-rays, he noted that the amount of radiation exposure associated with them has decreased considerably in the last 20 years, which is inconsistent with a rise in thyroid cancer diagnoses.

Radiation Risks

To be sure, exposure to high doses of radiation, especially in childhood, raises the risk of cancer, and thyroid cancer in particular. Well before this risk was recognized, radiation was widely used to treat benign conditions like enlarged tonsils and adenoids, acne and ringworm of the scalp.

Thyroid cancers afflicted many who were exposed as children, or even prenatally, to large amounts of radiation when Americans dropped atomic bombs in Japan in 1945 and when the Chernobyl accident occurred in 1986.

While very large doses of radiation destroy the thyroid, moderately high doses — like those that are used to treat Hodgkin's disease or tumors of the head and neck — can cause genetic mutations that develop into cancer.

But what of lower doses? Studies of the relationship between frequent dental X-rays and thyroid cancer have been conflicting, and in some the methodology has been suspect. (Some reports, including a frightening one from Kuwait, relied on people's ability to remember the X-rays they received.)

But the best study of diagnostic X-ray exams, conducted in Sweden, where precise medical records are kept, found no connection to thyroid cancer.

Other factors linked to an increased risk of thyroid cancer include consumption of nitrates in public water supplies (from fertilizer runoff) and certain vegetables, and goiter caused by insufficient iodine in the diet.

Playing It Safe

There's no harm in asking a mammographer to use a lead thyroid collar, and a lead apron should cover the front of the neck during dental X-rays. Still, some internal radiation scatter will occur, Dr. Brawley said.

Dr. Wartofsky suggested that women worried about the radiation from a mammogram could have an M.R.I. or ultrasound exam instead. But check first on insurance coverage for these alternatives.

For dental checkups, find a dentist who uses digital X-rays, which deliver much less radiation. "We've said for years that the amount of radiation from dental X-rays is not enough to cause cancer," Dr. Wartofsky said.

And don't let irrational fear get the better of you: It is simply not possible to detect all dental decay without X-rays, and missing hidden decay could result in the need for a root canal or extraction of the tooth.

## **"Nuclear Hellstorm" If Bin Laden Caught: 9/11 Mastermind (AFP)**

AFP, April 26, 2011

LONDON (AFP) – The mastermind of the 9/11 attacks warned that Al-Qaeda has hidden a nuclear bomb in Europe which will unleash a "nuclear hellstorm" if Osama bin Laden is captured, leaked files revealed Monday.

The terror group also planned to make a 9/11 style attack on London's Heathrow airport by crashing a hijacked airliner into one of the terminals, the files showed.

Khalid Sheikh Mohammed told Guantanamo Bay interrogators the terror group would detonate the nuclear device if the Al-Qaeda chief was captured or killed, according to the classified files released by the WikiLeaks website.

Sheikh Mohammed, the self-professed mastermind of the September 11, 2001 attacks on the United States, has been held at Guantanamo since 2006 and is to be tried in a military court at the US naval base on Cuba over the attacks.

His nuclear threat was revealed in Britain's Daily Telegraph newspaper, one of several media outlets which have published the classified assessments of detainees at Guantanamo.

The German weekly Der Spiegel, also citing WikiLeaks, said that Sheikh Mohammed had told his interrogators he had set up two cells for the purpose of attacking Heathrow in 2002.

The aim was to seize control of an airliner shortly after take-off from Heathrow, one of the world's busiest airports, turn it around and crash it into one of the four terminals.

Sheikh Mohammed said one cell had been formed with the aim of taking flying lessons in Kenya, while the other had been tasked with recruiting participants.

He said the plot had been discussed several times at the highest level of Al-Qaeda. One component had involved the infiltration of ground staff at the airport, according to Der Spiegel.

Another attack given the green light in late 2001 would have targeted "the tallest buildings in California" with hijacked airliners, Der Spiegel reported.

The attackers would have gained access to the airliner cockpits by setting off small bombs hidden in their shoes, it said.

Sheikh Mohammed, captured in 2003 in Pakistan, also claims to have personally beheaded US journalist Daniel Pearl in 2002 with his "blessed right hand" and to have helped in the 1993 World Trade Center bombing that killed six people.

Der Spiegel noted that his "confessions" should have been treated with caution as they could have been extracted through torture. Sheikh Mohammed is known to have undergone the method known as "waterboarding."

Former US president George W. Bush claimed in his memoirs published last year that using the interrogation technique -- which simulates drowning -- helped prevent planned attacks on Heathrow and London's Canary Wharf business district.

He also told the London Times newspaper in November that it was "damn right" that he had authorised use of the method on Sheikh Mohammed.

## **Wikileaks: Al-Qaeda Plotted Chemical And Nuclear Attack On The West (TEL)**

By Holly Watt

Daily Telegraph (UK), April 26, 2011

One of the terrorist group's most senior figures warned that al-Qaeda had obtained and hidden a nuclear bomb in Europe that would be detonated if Osama bin Laden was killed or captured.

Khalid Sheikh Mohammed, the al-Qaeda mastermind currently facing trial in America over the 9/11 atrocities, was involved in a range of plans including attacks on US nuclear plants and a "nuclear hellstorm" plot in America.

A number of the conspiracies admitted by detainees during interrogation in Cuba seem improbable, but other plans were detailed and thoroughly analysed.

Some detainees displayed an apparently comprehensive knowledge of Western countries' defences against nuclear attack.

According to the US files, a Libyan detainee, Abu Al-Libi, "has knowledge of al-Qaeda possibly possessing a nuclear bomb". Al-Libi, the operational chief of al-Qaeda and a close associate of Osama bin Laden before his detention, allegedly knew the location of a nuclear bomb in Europe that would be detonated if bin Laden were killed or captured. Sharif al-Masri, an

Egyptian captured in 2004, allegedly claimed that Al-Libi had said the nuclear bomb's operatives "would be Europeans of Arab or Asian descent". The notes show that US interrogators spent large amounts of time trying to establish whether al-Qaeda had access to nuclear material.

Salman Yehah Kasa Hassan, a Yemeni operative, allegedly said that "an associate of his brother was apprehended attempting to sell uranium for \$500,000". However, after the Yemeni authorities confiscated the uranium, "it was rumoured to have disappeared in a transaction with [Osama bin Laden]".

Mohammad Zahir, a "weapons dealer" from Afghanistan, was arrested in 2003 allegedly carrying a memo referring to "two or three cans of uranium", "intended for the production of an 'atom bomb'".

Another detainee "discussed the issue of buried uranium in Kandahar".

Other detainees talked about "a ship purchased by al-Qaeda" which was intended to be used "to transport weapons, explosives, and possibly uranium purchased from countries along the Red Sea and Mediterranean Sea".

Of particular concern to the US was a network of nuclear scientists and military officers called "Ummah Tameer Nau", which was set up "to assist in spreading the modern achievements of science and technology among Muslims".

Al-Qaeda apparently also regularly explored the use of chemicals in attacks, believing that getting these into the US would be easier than nuclear material. The use of biological agents, including anthrax, was also considered. One detainee allegedly claimed that Ammar al-Baluchi, the nephew of Khalid Sheikh Mohammed, discussed "how to smuggle explosives and chemicals into England".

According to the US documents, another key al-Qaeda operative discussed a "dirty bomb" with other plotters, which "would combine a regular explosive with uranium or other radiological material".

The nuclear material "would be disbursed throughout a limited region due to the blast, exposing all within the area to the radiated material". The terrorists' aim was to cause "latent illness for most, as well as widespread panic far exceeding the affected area". Name: Khalid Sheikh Mohammed

## **More Than A Third Of Former Guantanamo Detainees Were Labeled "High-risk" (USAT)**

By Oren Dorell, Usa Today

USA Today, April 26, 2011

More than a third of Guantanamo detainees released since 2002 from the US military prison camp in Cuba were considered "high-risk," according to 779 individual military assessments obtained by the secrets-spilling organization WikiLeaks and released by several news outlets.

"The more we learn, the more that number grows," says Kyndra Rotunda, a former legal adviser to the camp commander, investigators and prosecutors at Guantanamo Bay detention center.

"A few years ago it was 10%. Then they said 25%. Now it's a third," she said.

The documents were obtained by WikiLeaks and provided by an unidentified source to The New York Times, which shared it with several other news organizations, including National Public Radio.

They include detailed accounts of how each detainee was taken into custody, intelligence he provided and his conduct during detention.

Of 600 detainees known to have been transferred out of Guantanamo, at least 160 were listed as high-risk and "likely to pose a threat" if released, including about a dozen who returned to terrorist activities or an association with al-Qaeda, according to NPR.

The assessments also detail threats made against guards and interrogators working at Guantanamo.

Yemeni Ahmed al-Hikimi, a 38- or 39-year-old who was among 30 al-Qaeda fighters caught fleeing the US invasion of Afghanistan, had 134 reports of assault in Guantanamo. In an April 16, 2008, incident, "he urinated on the guard force," according to his detainee assessment.

Yasser Talal Al Zahrani, 26, a Saudi, told a guard he would use a knife to cut his stomach open, cut his face off and then drink his blood, smiling as he said it.

Such threats are the reason "we were trying to be very careful to protect the identity of interrogators," Rotunda says.

What the documents really show is "a government attempting to justify its mistakes and detaining, interrogating and abusing men," according to Vince Warren, executive director of the Center for Constitutional Rights, based in New York City.

Christopher Boucek, an associate at the Carnegie Middle East Program, said the cache of documents shows that the best indicator of whether detainees would be released is whether their home country has a program in place to accept them.

"If you come from a country that does not have a program to accept you when you return, like Yemen, you're not going to be sent back," Boucek said. The treatment programs weren't perfect because "a lot of the Saudis went back to reoffend again," he said.

"When stuff like this comes out, it makes it more difficult for third countries to take in some of these people if they're believed to have been involved in terrorist activity," Boucek said.

## **Napolitano Recruits At UC Berkeley For Cyber Techs (MERCN)**

By Doug Oakley

Contra Costa Times, April 26, 2011

The US government must collaborate with academia and business to protect the country against cyber attacks, Secretary of Homeland Security Janet Napolitano told UC Berkeley students Monday.

Priorities include protecting critical infrastructures such as nuclear power plants and stock exchanges, as well as civil liberties and privacy, Napolitano said. She added that development of an Internet kill switch during a national emergency is a policy that won't come from her office.

Napolitano has been talking up university students since January about the need for new people in the government's quest for cyber security and has visited schools like MIT and George Washington University.

About 150 students attended Napolitano's hourlong talk at UC Berkeley's Sibley Auditorium on Monday afternoon. Earlier in the day, she met with Los Angeles law enforcement officials.

Napolitano said her cyber security department tripled in size from 2009 to 2010. She quoted a private company as saying cyber attacks increased by 93 percent from 2009 to 2010.

"So we still need more people," Napolitano said. "I'm talking to the students here. We need a strong and innovative group to take on this incredible challenge that protections of cyber space demand. We want to be as creative and innovative as possible."

Business needs to "redouble its efforts in the quality of products" it offers to fend off hacking, spamming, spoofing and the like, she said.

"We need technologists who understand policymaking," Napolitano said. "We need technologically savvy people to come work with us. This is an area where we have our greatest challenge and need. We're dealing with multiple risks at the same time."

Napolitano said the US government and industry need to move toward an automated response to cyber attacks that will reduce the time needed to react to a crisis. Part of that is a "strategy for trusted identities in cyber space."

Instead of having user names and passwords that are different for each secure website, Napolitano said a better approach might be to use a single credential for all websites. "Dozens of companies could offer this," she said.

All the new protections the government is working on also must include need for privacy and civil liberties, she said.

"We have always viewed our government as having limitations where privacy is concerned," Napolitano said. "One of the reasons we have lawyers sitting next to our technology staff at the (National Security Agency) is because we understand and embrace the notion that there are real values at issue here."

Napolitano shied away from a question from the audience about whether the government could design an Internet kill switch to cease communications in times of national emergency, "I think there is a very good chance Congress will take up cyber legislation this year," Napolitano said. "The idea of an absolute Internet kill switch, I'm not sure how much potency that has legislatively, but it will be part of the dialogue. Stay tuned."

## **IN THE BLOGS:**

### **French System For Cleaning Fukushima Water Blamed For Leukemia, Polluted Beaches In Europe (FORBES)**

By Jeff McMahon

Forbes, April 26, 2011

A diver sampling the cleaned water from the Areva nuclear processing plant outflow in the English Channel. Photo courtesy of Greenpeace / Gavin Newman

The process a French firm will use to clean Fukushima's radioactive water has been blamed for a leukemia cluster in France and for polluted beaches and irradiated waters from the English Channel to the Arctic Sea.

Areva SA has promised to remove up to 99.99 percent of the radioactive contaminants in 67,500 tons of water flooding the crippled Fukushima-Dai-ichi nuclear plant. It will use a co-precipitation method employed at its La Hague nuclear fuel reprocessing facility in Normandy.

That process has been documented in detail by a French nuclear expert and by the US government, which has shunned France's fuel reprocessing method because of "a nonproliferation concern and environmental concerns," in the words of Nuclear Regulatory Commission Chairman Gregory Jaczko.

The water treatment process has been deplored by environmental groups including Greenpeace and Physicians for Social Responsibility in part because of the quality of cleaned water it produces:

France reprocesses reactor fuel at the vast La Hague facility on the Normandy coast. The so-called low-level liquid wastes from reprocessing are discharged into the English Channel and into the air. However, these "low-level" wastes still contain highly radioactive and often long-lived isotopes. Dumping these same wastes into the sea in containers would violate the 1970 London Dumping Convention."

via Physicians for Social Responsibility (pdf)

Areva treats contaminated water from reactor cooling systems by injecting chemicals that bind to radioactive isotopes and settle out.

Areva has not revealed which chemicals it will use at Fukushima, but a 1995 report commissioned by the US Department of Energy (pdf) details the process it uses at La Hague. According to DOE, Areva uses:

nickel and potassium ferrocyanide to capture cesium

barium sulfate to capture strontium

cobalt sulfide for ruthenium

titanium sulfate for antimony and other emitters of alpha radiation

Areva also uses hydroxides of sodium, manganese, titanium, and iron, according to other sources. The chemicals and radionuclides are removed from the water in a highly radioactive chemical sludge.

The sludge is mixed or encased with bitumen—a petroleum product similar to asphalt—to make the resulting product waterproof and corrosion resistant. That mixture is poured into drums, which are sealed and buried, according to DOE. Mary Bird Davis, an author and expert on the French nuclear industry, says that Areva has reduced its use of bitumen and since 2008 preserves most of the sludge suspended in glass that it seals in drums and buries.

The cleaned water, meanwhile, is discharged into the English Channel:

After treatment, liquid effluents are filtered and monitored and released into the English Channel by means of a pipe, the end of which is located in the Raz Blanchard current. The pipe travels under ground on land for 2500 meters and in the sea for 5000 additional meters.

via Mary Bird Davis, Nuclear France

That's where Areva runs afoul of Greenpeace and PSR: "The liquid discharges from La Hague have resulted in contamination of area beaches and of seas as far as away as the Arctic Circle and are considered among the ten main anthropogenic sources of radioactive pollution of the world's oceans."

Health researchers have documented higher rates of leukemia near La Hague, and Greenpeace has turned the controversy into a video game called Block That Pipe:

Guide your Greenpeace submersible to block the discharge pipe of the La Hague nuclear reprocessing plant. But watch out! There's radioactive waste and other dangers everywhere!"

via Play La Hague: Block that pipe! | Greenpeace International.

In Japan, Areva has not mentioned ocean discharge—a disposal method already employed by the Tokyo Electric Power Company to get rid of thousands of gallons of what it described as "the least contaminated water."

Fukushima 1 Nuclear Power Plant. Image via Wikipedia

Areva has said the cleaned water could be recycled as coolant for the reactor cores as crews work to shut them down, a process that will take months and could take years. But there is far more water flooding the Fukushima plant than is needed to cool it.

The Fukushima plant was flooded when TEPCO was forced to pump seawater into the reactors to keep the cores from melting down.

In announcing the clean-up operation Thursday, Areva said other "processes could be used in parallel with the co-precipitation." In France, the most common parallel process is evaporation: contaminated water is heated, evaporated, and the contaminants become highly concentrated.

Because some contaminants are gaseous—such as isotopes of iodine—the escaping vapor must be filtered. Davis sees risks in that approach:

Each time that wastes are treated by heat, whether to reduce the volume or for another reason, there is a risk that radionuclides and/or other toxic materials accompanying the radionuclides, will become volatile and escape into the environment. Filtration systems are never 100% effective.

Areva president Anne Lauvergeon said water treatment at Fukushima could begin in late May. Areva is setting up the water treatment plant with Veolia Water, a British water treatment firm. It will treat 50 tons of water per hour. Related Post: [How to Remove Iodine-131 and Cesium-137 From Drinking Water](#)

## **INTERNATIONAL NUCLEAR NEWS:**

### **Japan's Terrifying Day Saw Unprecedented Exposed Fuel Rods (BLOOM)**

Bloomberg News, April 26, 2011

Makoto Nagai was sitting in his third-floor office at 2:46 p.m. on March 11 when the earthquake alarm buzzed. An orange LCD screen flashed 100 and 4, telling him the number of seconds before a category 4 quake would hit the city of Sendai on Japan's northeast coast.

The intensity warning quickly jumped to 6, said Nagai, 55, head of the emergency response team in Sendai, located 129 kilometers (80 miles) west of the epicenter of what became the strongest quake in Japan's recorded history.

"I stood up, and my coffee cup bounced sideways off my desk," he said. "We were in an earthquake-resistant building yet an internal wall and bookshelves collapsed. Then people started to scream."

As the magnitude-9 earthquake erupted, Kazuma Yokota, a 39-year-old inspector from Japan's Nuclear Industrial and Safety Agency, crawled under his desk in fear the ceiling was about to collapse. Then he watched seismic shocks rip L-shaped cabinet brackets out of the wall in his office at the Fukushima Dai-ichi nuclear power station, 100 kilometers south of Sendai.

Under the ocean floor that day, now referred to in Japan as "san ten ichi ichi" or 3/11, two 50-mile-thick slabs of the earth's crust heaved in a grinding 80-million-year-old conflict between tectonic plates. The quake unleashed energy 24,000 times stronger than the atomic bomb dropped on Nagasaki in 1945, wrenching part of the coastline 3.6 meters closer to the US

Interviews with Tokyo Electric Power Co. engineers, technicians and contract workers who were at the company's Fukushima Dai-ichi plant on March 11 or handled the disaster response show how the facility stood up to the quake, only to fail when the tsunami that followed found a way through its engineering defenses.

About 15 minutes after the quake, a relieved Yokota was walking toward the west gate of the plant. He was among thousands of men and women in hard hats, orange, blue and white boiler suits, shoes crunching on broken glass streaming up a hill to emergency evacuation points spread over the site's 864 acres, equivalent to 490 soccer fields.

Maintenance technician Kazuhiko Matsumoto, 43, was among them. He was near the seafront in the turbine building of the idle No. 6 reactor wrapping up work on air ducts when the shock waves arrived. He clung to the wall to keep from falling as the room blacked out except for green emergency exit signs. As back-up lighting came on, a loudspeaker blared evacuation orders.

"People were pushing," he said, "Someone was shouting, 'get out, quick, get out.'"

Koichi Imamura, a 42-year-old maintenance worker at the facility for more than 20 years, was in a changing room next to reactor 5, also shut for maintenance. He was in overalls after taking off protective clothing and a radiation dosimeter when he was knocked on all fours as lockers fell over, he said.

"People were yelling and I was just thinking I've got to get out of here."

The Fukushima Dai-ichi station had 6,415 people on site that day. More than 5,500, like Matsumoto and Imamura, were subcontractors who reported to their clusters of offices in the plant for a head count.

As Tokyo Electric compiled the numbers, officials found that 6,413 staffers were safe and accounted for. Two Tokyo Electric employees were missing.

At this point, the crisis appeared contained. While roads inside the site had buckled and windows were shattered, the six reactor buildings, reinforced concrete and steel boxes as high as 56 meters, had withstood the earthquake.

The temblor had triggered the automatic shutdown of the Dai-ichi's three operating reactors as designed. The engineering defense had worked.

"We thought we'd have to monitor the situation but that was about all," said Yokota, who headed a team of seven from the nuclear safety agency based at the plant. That day he was at a quarterly review of operations with officials from Tokyo Electric, known as Tepco.

What Yokota didn't know was that the quake knocked out a transformer station about 10 kilometers away, severing the utility's connection to the electricity grid and the power needed to keep reactor cooling systems operating. It would be another hour before events conspired to make the name Fukushima synonymous with the biggest nuclear disaster since Chernobyl.

After the head counts, thousands of subcontractors left to check if families were safe, including Matsumoto and Imamura.

Matsumoto's drive didn't last long; he was forced to abandon his car because the roads were cracked and jammed with traffic. He walked 10 kilometers to his in-laws' house to meet up with his wife and two sons, aged nine and three.

Imamura drove to his home in the town of Okuma 5 kilometers away, also convinced the engineering had averted a nuclear accident.

"Reactors four, five and six weren't even running and the other ones shut down when the quake hit," he said.

Yokota and two of his team also went to Okuma, where the agency kept an emergency command office.

The three men reached the center in 15 minutes and found the office wrecked, power down and no working communications, the first indication to Yokota that emergency procedures were unraveling.

"We couldn't contact anybody for one or two hours," he said. "I thought, this means trouble."

Back at the Fukushima site, the head of the Dai-Ichi operation Masao Yoshida and two deputies, Masatoshi Fukura and Atsufumi Yoshizawa, set up a disaster control center in an earthquake-proofed bunker. Yoshida, 56, had taken up the position in June, his fourth stint at the 40-year-old atomic power station.

Linked by a hot line to Tepco headquarters in central Tokyo, the three-story, white bunker had extra-thick walls and two filtration systems designed to keep out radiation. It was to become their new home.

Yoshida knew Dai-Ichi "inside out" and was ready to take charge, said Yokota, who later joined him in the bunker.

"It's our mission to keep the power plant stable, putting safety as the top priority," Yoshida said in a Jan. 4 New Year video greeting posted on Tepco's website. Wearing glasses and dressed in blue overalls, he is flanked by two "kadamatsu" bamboo decorations that symbolize good fortune for the coming year.

Yoshida had been vice chairman of the Japan Society of Maintenology, a group that studies how to safely extend the lifespan of nuclear power facilities.

"Yoshida isn't afraid to deliver bad news," said Kenzo Miya, 70, an honorary professor at the University of Tokyo who chairs the society.

The Dai-Ichi chief's priority was to manage the power failure after the earthquake cut the utility's connection to the electricity grid.

Yoshida could get replacement electricity from 13 back-up diesel generators to run emergency water pumps for cooling reactors. Each generator is the size of a train locomotive and capable of delivering 6,000 kilowatt hours of power, enough to run 14,400 Japanese homes for that period. Again, the engineering was working.

"When the generators are running, the noise is so loud you can't go near them without earplugs," said Yasuo Arai, who trained as an engineer and now works at community relations for Tepco.

"Most are located in generator rooms in basement 1 of the turbine buildings," Arai said, pointing to a diagram in a Tepco brochure of the Dai-Ichi plant. The turbine buildings holding eight of the generators are about 140 meters from the seafront, another two generators were on the ground floor behind reactor 4, which was offline for maintenance. Three others were in and around reactor 6, which was also offline.

As Yoshida's Tepco engineers fanned out to control rooms to check for earthquake damage and monitor procedures as the reactors shut down, 25 kilometers up the coast in Minami Soma, Mayor Katsunobu Sakurai was realizing the earthquake was only part of the unfolding disaster.

Sakurai had raced to the fifth-floor rooftop of the government office, one of the highest in the city of 70,000 people. He looked toward the sea and saw what looked like a wall of sand pummeling and splintering through rows of houses and bellowing clouds of smoke and dust.

"In those first moments we couldn't comprehend what we were seeing," Sakurai, 55, said. The tsunami he was witnessing surged 2.4 kilometers inland, swallowing everyone in its path. Almost 1,500 town residents were killed or are listed as missing, out of a national toll exceeding 26,000.

The seabed off Japan had buckled along a 300-kilometer stretch of fault line. The upheaval hurled about 67 cubic kilometers of ocean at Japan's coast, or enough to flood all of Manhattan a mile deep, according to estimates by Roger Bilham, a seismologist at the University of Colorado.

Within an hour the tsunami would smash into 860 kilometers of Japan's coastline at heights the US National Oceanic and Atmospheric Administration estimated as high as 24 meters.

Akira Tamura, a 35-year-old control room manager at Dai-Ichi's No. 2 reactor, was home on March 11 in Minami Soma on a day off. He was surfing Internet news sites dressed in sweat pants and a T-shirt, when the quake reached his area.

"Roof tiles went flying and crashing in the street," he said.

After checking on elderly neighbors, Tamura jumped in the car and picked up his wife at the flower shop where she worked. He was forced to change route because main roads were flooded. His apartment was on higher ground out of the tsunami's reach.

At Tamura's Dai-Ichi workplace, the tsunami crashed over a 2.5-kilometer breakwater of 60,000 concrete blocks and 25-ton tetra pods as well as a 5.6-meter-high wall in the seabed in front of the site.

The plant, built on a layer of rock 10 meters above sea level, was pummeled by a wave as high as 15 meters that flooded parts of the facility in six meters of seawater before flowing back to the ocean, according to Tepco estimates.

Interviews with workers at Dai-ichi that day indicate that as most staff had left and many of the Tepco technicians were inside buildings checking on reactors, few saw the waves arrive.

Witnesses say from higher ground behind the plant, the view was blocked by buildings. A Tepco engineer, who'd worked for the company for 30 years, was in reactors 5 and 6 after the earthquake and said he didn't realize the tsunami had hit.

What the earthquake had failed to do, the tsunami now achieved: It overwhelmed the engineering defenses at Dai-ichi.

Seawater flooded the basements of turbine buildings and other sites, disabling 12 of the 13 back-up generators and destroying electrical switching units. Salt water shorted electric circuitry, depriving the reactors of power for cooling and triggering a nuclear disaster that Tepco was forced to combat with fire hoses and makeshift pumps.

"The level of flooding differed by building, but it was as high as 1.5 meters in one turbine room," said Hikaru Kuroda, chief of Tepco's nuclear facility management group.

At about 3:41 p.m., almost an hour after the quake, Dai-ichi lost alternating-current power at the three operational reactors as the generators failed. Tepco immediately informed the government it had experienced "station blackout" as required by nuclear emergency regulations.

Eighteen days later Prime Minister Naoto Kan slammed the sea defenses as inadequate. "It's undeniable their assumptions about tsunamis were greatly mistaken," he told lawmakers.

The unfolding crisis and the radiation leaks that followed shook a nation that sends 300,000 school children each year to visit the Hiroshima memorial for victims of the first atomic bombing and those killed by radiation poisoning.

The only defenses left to prevent Dai-ichi's nuclear fuel rods from overheating and spewing radiation were banks of so-called "coping" batteries designed to last no more than half a day. Once those were deployed to power emergency cooling, a nuclear plant would be, in the parlance of the industry, "12- hours coping."

"What that means is the clock has started ticking on restoring power before the batteries run out," said Edward Morse, a professor of nuclear engineering at the University of California at Berkeley. Batteries buy several hours to "work miracles," he said. Once the batteries start failing, if the cavalry isn't there to bail you out, then you know you are really in trouble, he said.

Without cooling, nuclear reactors are like giant kettles left to boil. Water covering the fuel rods inside begins to turn to steam, exposing the rods that melt and emit radiation upon contact with air.

Tepco's engineers couldn't determine if the batteries were working because monitoring equipment malfunctioned, leaving them blind to what was happening inside the reactors.

"We lost the ability to assess the performance of the emergency core cooling system because meters designed to check the water flow rates in the No. 1 and No. 2 reactors failed," Kuroda said. "We still don't know why they died, that will be part of the accident investigation."

At 4:36 p.m., less than two hours after the quake, Tepco was forced to acknowledge it had lost control of the reactors. Nine minutes later, the company notified the government.

At 7:03 p.m., Kan declared a nuclear emergency, prompting an evacuation of residents living around the Fukushima facility that would extend to a 20-kilometer radius within 24 hours.

Tepco engineers were unable for the next two hours to get readings for how much water was covering the fuel rods in the No. 1 and No. 2 reactors, according to a data sheet obtained by Bloomberg News. Once readings were available, they showed that water levels held steady through the night, an indication the batteries were working.

At the No. 1 reactor, water levels began dropping in the early morning of March 12. At 8:36 a.m., the reading showed zero centimeters as the fuel rods began to emerge and come into contact with the air. Within four hours, 1.7 meters of fuel rods were exposed.

By this time, Tepco had begun to vent radioactive steam into the atmosphere to reduce pressure in the reactor.

"They were choosing the lesser of two evils," said Yokota. "If pressure built up too much inside, it would explode and could have thrown a lot more radioactive material into the environment."

Professor Morse at Berkeley agreed, saying releasing the pressure by venting steam is "in the playbook," referring to procedures for dealing with nuclear accidents.

That afternoon, about 24 hours after the quake, a hydrogen explosion inside the No. 1 reactor building caused radiation levels to rise. The explosion caused "blow out" panels in the concrete building around the reactor to do what they're designed to do -- blow out under pressure.

A second threat emerged from spent-fuel pools, about 40- feet deep and located at the top of the reactors. The spent fuel rods also need to be cooled and covered with water to prevent them melting and emitting radiation.

After two further blasts in the next 62 hours, it was a March 15 fire around the spent fuel pool in reactor 4 that told Berkeley's Morse that Tepco engineers were entering territory outside the nuclear playbook.

With reactor 4 shut down for maintenance, more than 1,300 spent fuel rods were stored at the top of the reactor building where an unexplained explosion had destroyed the roof.

"Before the spent fuel pool ignited, I could put my thumbs under my suspenders and say, 'yeah that's a small-break LOCA,'" Morse said, using the industry jargon for "loss of cooling accidents" similar to what occurred at Three Mile Island, Pennsylvania, in 1979.

"That turned out to be the most terrifying event throughout the whole ordeal," Morse said. "Now they have no containment structure whatsoever, they don't even have a roof. I thought that could have been a game changer."

Tepco now had three reactors without cooling systems and a fourth with a fire spewing radiation into the air.

The danger now was an increase in radiation from the spent fuel pool would force workers to withdraw from trying to get the three reactors under control, threatening multiple reactor meltdowns.

With no means to circulate cooling fluid inside the reactors, the company drafted in fire engines, Chinook helicopters, concrete-pouring trucks and crowd-control water cannons to inject, spray and dump thousands of tons of water onto the spent-fuel pools and into the reactor vessels.

"In the worse-case scenario, if we imagine there's no water in the spent fuel pool and there is a source of fire that's strong enough to melt the rods, a gaseous release of radioactive nuclides takes place," said Gennady Pshakin, a nuclear physicist based in Obninsk, site of Russia's first nuclear power plant. "Naturally, the fresher the fuel, the higher the radiation volume, especially of iodine and cesium."

The radioactive gases contain heavy elements so while winds could blow them some 20 kilometers, they wouldn't reach Tokyo, Pshakin said.

On two occasions radiation levels at Dai-Ichi reached 1 sievert an hour. Thirty minutes of exposure to that dose would trigger nausea. Contamination for four hours might lead to death within four months, according to the US Environmental Protection Agency.

Five kilometers away at the nuclear safety agency's offsite center, Yokota said radiation levels set off a constant warning ping at detectors in the office, so he put on his DuPont Co. Tyvek protective suit and a face mask.

On March 15, Yokota, who sports a wispy mustache and thin, graying sideburns, moved the office to Fukushima city, the prefectural capital about 60 kilometers from the plant, because of radiation spikes.

He shuttled between the offsite and the Dai-Ichi bunker. When the No. 3 reactor housing exploded on the morning of March 14, levels inside the bunker jumped as much as 12-fold, he said, checking dates and times in a pocket diary.

"I was so tired I didn't have trouble sleeping. We ate crackers and cheese for breakfast, for dinner we had canned rations. I lost weight. My belt is one hole tighter."

Tamura, the reactor control room manager from Minami Soma, attempted to return to Dai-Ichi two days after the quake, only to find the roads blocked. It was March 18 before the 16-year Tepco veteran, who attended a company-run vocational high school and played for the rugby team, was able to enter the reactor site.

He worked on helping repair electrical equipment and restore cooling systems. Much of his time was spent trying to get diesel for emergency generators, he said.

"When I told my family that I'm going to Dai-Ichi my wife begged me to stop. She was dead set against it," Tamura said in a March 24 interview at the port of Onahama about 55 kilometers south of the plant. He was speaking during his first break in a week outside the Kaiwo Maru, a four-masted sailing ship used to accommodate exhausted workers.

At first there were no blankets at Dai-Ichi so Tamura grabbed what sleep he could on the floor. On board the Kaiwo Maru, he took a bath and ate his first hot meal in a week, teriyaki chicken.

"I wanted to have seconds but after eating so little all this time I just couldn't," he said.

The stopgap methods to cool the reactors and spent-fuel rods were having little effect, he said, with the use of salt water adding a further complication from corrosion.

"Even as firefighters pumped water into the reactors, the levels wouldn't rise, and you can't determine the reason without getting inside," Tamura said.

"Now, I just want to see my wife. At work, you leave all personal belonging outside, so I don't even have a picture to look at," he said before leaving for another shift.

"I kept remembering her face while I worked. She loves flowers. I like seeing my wife working with flowers, because she looks happy."

On March 29, Tepco was able to restore lighting in the control room of the No. 4 reactor as engineers slowly made progress in fighting the crisis.

The next day in the adjoining turbine building, the bodies of the two missing Tepco workers, Kazuhiko Kokubo, 24, and Yoshiaki Terashima, 21, were found in the basement.

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## **Tepco Pumps Tainted Water From Reactor Trenches, Adds Backup Power Cables (BLOOM)**

By Yuji Okada And Michio Nakayama

Bloomberg News, April 26, 2011

Tokyo Electric Power Co. pumped highly radioactive water from trenches at its crippled nuclear plant, and said it expects to complete installing additional cables to supply backup power to the station's six reactors.

The company known as Tepco moved 1.41 million liters (372,000 gallons) of the water from the reactor No. 2 building, about 14 percent of the total, to a storage unit by 7 a.m. local time today, spokesman Takashi Kurita said at a media briefing in Tokyo. About 10 million liters is expected to be transferred over 26 days, the company said on April 19.

Tepco is battling radiation leaks from its Fukushima Dai-ichi plant after a magnitude-9 earthquake on March 11 unleashed a tsunami that flooded the station, triggering the worst nuclear disaster since Chernobyl in 1986. The water that was poured to cool the reactors must be removed to repair the pumps and backup generators knocked out by the tsunami.

"While not stable yet, things are generally moving in the right direction," Penn Bowers, a Tokyo-based analyst for CLSA Asia-Pacific Markets, said by telephone today. "I'm not sure we're going to see any major corner being turned at this point. There's going to be a slow grind, probably for months."

Tepco plans to connect power cables linking the plant's six reactors today, Teruaki Kobayashi, the company's head of nuclear maintenance, said at today's briefing. The reactors are currently connected in pairs to external power sources.

The company's shares rose 8.4 percent to 438 yen in Tokyo, their first gain in eight days. The stock has declined almost 80 percent since the quake and tsunami, which left about 26,000 people dead or missing.

Tepco President Masataka Shimizu told Japanese lawmakers he hasn't decided when to resign to take responsibility for the crisis. Shimizu was asked by lawmaker Teruhiko Mashiko when he will submit his resignation while appearing today before a budget committee of the Japanese parliament.

Board members will have their pay cut by 50 percent after the accident, the Nikkei newspaper reported today, without saying where it got the information.

The company has been criticized by the government for responding too slowly to the crisis that unfolded at the Fukushima plant after the tsunami washed ashore.

Tepco poured millions of liters of water to cool the reactors and spent fuel after the accident, causing flooding in the basements and trenches near the buildings that house them. Some highly contaminated water leaked into the sea and the utility has dumped less-toxic fluids into the ocean.

"We will continue pouring water until stable cooling conditions for the reactors have been achieved," Shimizu told lawmakers in parliament today.

About 50 million liters of other contaminated water is estimated to be lying around reactors No. 1, 2 and 3, the company said on April 5.

About 520,000 liters of water with a level of radioactivity that was 20,000 times the legal limit leaked into the ocean between April 1 and 6, Junichi Matsumoto, a Tepco general manager, said last week.

The central government last week started enforcing a no-entry zone within 20 kilometers (12 miles) of the Fukushima plant as a public health measure after residents returned to the area to check their homes.

The station, where three of the reactors are damaged, is located about 220 kilometers north of Tokyo.

An earlier directive asking about 80,000 residents living within the 20-kilometer radius to evacuate wasn't legally binding. One person per household will be allowed to return to their homes for two-hour periods to retrieve possessions.

Japan's government on April 12 raised the severity rating of the Fukushima crisis to the highest on an international scale, the same level as the Chernobyl disaster 25 years ago. Tepco officials have said the station, which has withstood hundreds of aftershocks, may release more radiation than Chernobyl before the crisis is contained.

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## **Tepco Workers Accept Pay Cuts In Response To Fukushima Disaster (BLOOM)**

By Tsuyoshi Inajima And Yuji Okada

Bloomberg News, April 26, 2011

Tokyo Electric Power Co. workers agreed to a management proposal to cut their pay by as much as 25 percent out of a sense of responsibility for the world's worst nuclear disaster since Chernobyl, their union said.

"Most union members didn't object to a pay cut, considering the situation at the company and the effect on society from the nuclear accident," Koji Sakata, secretary-general of the Tokyo Electric Power Workers Union, said by telephone today.

The utility known as Tepco is battling radiation leaks at the Fukushima Dai-ichi power plant north of Tokyo after a March 11 earthquake and tsunami knocked out its cooling systems, causing the biggest atomic accident in 25 years. More than 50,000 households were forced to evacuate and Bank of America Corp.'s Merrill Lynch estimates Tepco may face compensation claims of as much as 11 trillion yen (\$135 billion).

"Tepco is facing a situation that no other Japanese company has before," said Keiichiro Hamaguchi, research director at the Japan Institute for Labor Policy and Training. "In tough financial situations, Japanese companies hold labor-management talks on wages. Companies normally prioritize protecting jobs."

Tepco shares fell 2.7 percent to 426 yen today in Tokyo. The shares are down 80 percent since the quake and tsunami struck, leaving about 26,000 people dead or missing.

Board members including Chairman Tsunehisa Katsumata and President Masataka Shimizu will take a salary cut of 50 percent, the company said in a statement yesterday.

Tepco, Japan's largest power company, expects to save about 54 billion yen a year from the reductions, according to the statement.

Managers will have their salaries reduced by 25 percent and workers by 20 percent. Tepco won't hire new graduates in the next financial year, according to the statement.

Executives will have their pay cut from this month, Tepco spokeswoman Ai Tanaka said by telephone today. Salaries of general employees and managers will be cut from July and bonuses from June, Tanaka said.

Katsumata and Shimizu have said they will resign at an appropriate time. Shimizu told lawmakers again today no decision has been made on a resignation date. He was speaking at a lower house session where Prime Minister Naoto Kan said it's time to consider setting up a committee to investigate the Fukushima crisis.

Tepco was again criticized by the government for acting too slowly in the early days of the crisis.

"The corporate culture of the company made it difficult for them to make bold decisions," Goshi Hosono, an advisor to Kan, said yesterday, referring to hesitation by Tepco over flooding reactors with seawater and venting steam to relieve pressure on overheating cores.

Hosono was speaking at the first joint press conference held by Tepco and the Nuclear and Industrial Safety Agency. About 250 journalists attended the briefing, which lasted almost four hours. Hosono answered most of the questions.

Farmers protested outside Tepco headquarters today, demanding compensation for losses and an early return to their land. They parked two trucks carrying cows outside the company's offices in central Tokyo and carried boxes of vegetables included cabbage and spinach.

About 300 farmers from Fukushima and other prefectures attended the protest and sent a delegation into the offices to meet Tepco officials.

The company said on April 20 it will start compensating residents evacuated from areas around its crippled nuclear power station. The government has said it will support Tepco's aid efforts.

The utility will begin distributing claim forms and payments will be made as soon as possible, spokesman Tetsuya Terasawa said at a briefing in Tokyo. Initial compensation totaling about 50 billion yen was promised by Tepco last week.

Twenty-five years ago today the No. 4 reactor of Chernobyl exploded, sending a radiation plume across Europe from what is now Ukraine. The meltdown killed at least 31 plant workers and firefighters in three months and forced the evacuation of a quarter of a million people in what was then the Soviet Union.

Ukraine last week failed to raise the \$1 billion needed to seal Chernobyl's reactor with more permanent methods, as budget concerns and the accident at Fukushima caused some governments to balk at further spending.

Fukushima "has created fear of radiation exposure and radioactive contamination not just in Japan, but throughout the world," the Tokyo-based Citizens' Nuclear Information Center said in an e-mailed statement to mark the Chernobyl anniversary. "We refuse to allow the earth to be further subjected to radioactive contamination and radiation exposure."

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## **Tokyo Increases Role In Crisis (WSJ)**

## **Utility Cuts Executives' Pay as Government Says It Will Guide Plant's Recovery**

By Mitsuru Obe

Wall Street Journal, April 26, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **How Did Japan's Nuclear Industry Become So Arrogant? (Mainichi)**

### **Perspectives**

Mainichi Daily News, April 26, 2011

What has stood out at the countless press conferences by Tokyo Electric Power Company (TEPCO), the Nuclear and Industrial Safety Agency (NISA) of the Ministry of Economy, Trade and Industry (METI), and the Cabinet Office's Nuclear Safety Commission (NSC) of Japan that I've attended in covering the crisis at the Fukushima nuclear plant, is the rampant use of clichés such as "unanticipated state of affairs" and "unprecedented natural disaster."

The excuses made by the organizations involved go to show that so-called nuclear power experts have no intention to self-reflect or admit their shortcomings. It was this self-righteousness -- evidenced over the years in the industry's suppression of unfavorable warnings and criticisms, as well as in their imposition of the claim that the safety of nuclear energy was self-evident - that lay down the groundwork for the accident at the Fukushima No. 1 Nuclear Power Plant.

At press conferences, TEPCO officials repeatedly express their "deep apologies" for the trouble caused to the Japanese people. However, as soon as reporters' questions turn to the actual safety of nuclear power stations -- about which they had long boasted a multilayered safety system referred to as "defense in depth" -- they begin to act coolly. Their speech may feign civility, but they never admit to any wrongdoing and merely keep insisting the righteousness of their own claims. When particularly unflattering questions are posed to them, some TEPCO executives glower at the reporters who dared to ask and give only a brusque response.

Video footage of these press conferences, accessible via television broadcasts and the Internet, combined with disappointment with the government for its mishandling of the disaster, has fed the public's skepticism about the reliability and honesty of industry and political leaders.

Between 2002 and 2005, I was posted to the Fukui Prefecture city of Tsuruga, which hosts 15 nuclear reactors along Wakasa Bay. The area is dubbed Genpatsu Ginza (Nuclear Ginza) -- after the upscale Tokyo shopping district that is home to many shops and department stores -- for the its abundance of nuclear power plants, and a lot of the bureau's important reporting has concerned the nuclear power plants.

The many nuclear power engineers and researchers I met while based in Tsuruga did not leave a good impression on me. They generally did not provide sufficient answers to questions that could put them and nuclear energy in a negative light, and were arrogant enough to turn a deaf ear to any criticism that may be aimed at them.

When the Kanazawa branch of the Nagoya High Court handed down a ruling in January 2003 nullifying permission that had previously been given for the construction of the prototype Monju fast breeder reactor (FBR), electrical power companies and researchers involved in the power industry were up in arms. At a debate about the court ruling, a university professor who was a proponent of nuclear energy employed his knowledge of specialized terminology to talk down an opposition-party Diet member. Later on, I witnessed the professor and some cronies smirk in the corner of the room as they muttered, "Take that, you amateurs."

Several years ago, a regional television broadcaster that featured a researcher critical of nuclear energy in a documentary drew strong protest from a local utility firm, which argued that the show was based on a misunderstanding of nuclear energy. Although the program did not directly criticize the utility firm, the broadcaster was unable to ignore the claims of the company, one of its major sponsors. It was made to promise to dispatch reporters to nuclear power plants on a regular basis.

An executive at the power company whom I interviewed about the case said, "An understanding of how safe nuclear power stations are was lacking. What we wanted was repentance (from the broadcaster)." TEPCO officials that I've recently been observing at press conferences remind me of that pompous power company executive.

So how did the industry become what it is now?

Tetsunari Iida, a former nuclear engineer who currently heads the Institute for Sustainable Energy Policies, says that the industry is dominated by a closely-knit nuclear establishment. Those who graduate from universities and graduate from schools with degrees in nuclear power engineering go on to work at power companies, energy-related manufacturers, or municipalities that host nuclear power stations. Everything comes down to personal networks, and who the graduating students go on to work for is largely influenced by the connections and interests of the students' professors. Regardless of whether the employers are public or private organizations, the newly inducted engineers are raised to become full-fledged members of the nuclear establishment.

Accidents involving nuclear power plants are widely covered by the press, and are subject to intense criticism from citizens' groups. Because the nuclear establishment takes on a victim mentality when subjected to such pressure, it one-sidedly labels criticism from opponents as "opinions of mere laypersons," further reinforcing its self-righteous opinion of itself as the experts.

Nuclear safety regulation in Japan is ostensibly covered under a "double-check" system, but in practice, the system has not functioned sufficiently. Since both those in a position to be checked and those in a position to do the checking come from the same establishment, they are motivated to take action that will protect their common interests. As for NISA, there's a fundamental structural problem in that it is but an arm of METI, the government ministry in charge of promoting nuclear power generation.

A comparison of the agencies overseeing nuclear energy in Japan and the US, respectively, is also telling. While the US agency is called the Nuclear Regulatory Commission (NRC), its Japanese counterpart is called the Nuclear and Industrial Safety Agency (NISA). The conclusion we can reach from this is that by focusing so much on promoting the "safety" of nuclear energy, "regulation" and "supervision" have been left on the back burner.

The ongoing disaster in Fukushima has finally built momentum behind a discussion to split NISA from METI. There is no question that such a measure is necessary, but mere reshuffling cannot change the fundamental nature of those involved.

We are guilty of having relegated -- up until now -- the issue of nuclear energy as a world away, and a field best left to "experts" in the nuclear establishment. But the still unfolding crisis has made us painfully aware how closely linked nuclear energy is to our lives, from concerns over radiation exposure to power shortages. We no longer have the choice to remain apathetic. (By Kosuke Hino, Osaka City News Department)

## **Farmers Protest Against Japanese Nuke Plant Owner (AP)**

By (AP)

Associated Press, April 26, 2011

TOKYO (AP) — More than 200 farmers brought two cows to Tokyo where they shouted and punched the air Tuesday in a protest to demand compensation for products contaminated by radiation spewing from Japan's crippled nuclear plant.

The farmers from northeastern Japan wore green bandanas and held signs saying "Nuclear disaster is human disaster" and "Stop nuclear energy" outside the headquarters of Tokyo Electric Power Co., the operator of the plant damaged in the March 11 tsunami.

Radiation leaking from Fukushima Dai-ichi plant — about 140 miles (220 kilometers) north of Tokyo — has been found in milk, water and leafy vegetables such as spinach from around the plant.

"I could not sit still in Fukushima. I want TEPCO to understand our frustration, anxiety and worries over our future," said 72-year-old Katsuo Okazaki, who grows peaches and apples. "My patience has run out. The nuclear crisis is totally destroying our farming business," he said.

The utility says it will take six to nine months to bring the plant into cold shutdown, a crucial step for allowing the roughly 80,000 people evacuated from a 12-mile (20-kilometer) area around the plant to return home.

TEPCO will start depositing initial compensation payments of 1 million yen (\$12,000) per household on Tuesday into bank accounts of people forced to evacuate due to leaking radiation, Trade Minister Banri Kaieda said.

Okazaki isn't eligible because his farm is 60 kilometers from the plant, but he still wants compensation from the utility because he fears consumers will shun produce from his region over the long term. He says vegetable growers already have lost a great deal of money because of the nuclear accident.

"I am constantly worried about this, and feel like my strength is being sapped away," he said.

Farmers took turns shouting their frustrations into a microphone, their words carried over a loudspeaker mounted atop a van, as lunch-hour passers-by in the busy office district stopped and gawked at the animals.

"TEPCO, give us back our cows and pigs and chickens," one farmer shouted.

With its liability likely to stretch into the billions, TEPCO announced Monday it would slash executive compensation by 50 percent, cut managers' salaries by 25 percent and low-level employees would get a 20 percent pay cut. It also planned to freeze hiring for next year. The amount saved would total 54 billion yen (\$660 million) for the year, the company said.

Marking the 25th anniversary of the Chernobyl nuclear accident, a group of 87 Japanese anti-nuclear groups issued a joint statement criticizing TEPCO's failure to prepare adequately for a large tsunami as "immoral and criminal."

Warnings about "the danger of a huge earthquake and tsunami ... were not taken seriously," said the statement released by the Citizens' Nuclear Information Center. "We have continued to oppose nuclear power and nuclear facilities, calling for phase out of nuclear energy."

## **South Koreans Rethink Japan Earthquake Aid (LAT)**

**South Koreans put aside their bitterness and generously donated to the earthquake and tsunami victims. But after Japan made a couple of moves that angered the Koreans, the goodwill began evaporating.**

By John M. Glionna, Los Angeles Times, 2:16 Pm Pdt, April 25, 2011

Los Angeles Times, April 26, 2011

For two decades, the weekly protest has come as sure as the changing seasons: a handful of graying Korean women picketing Tokyo's embassy here, demanding an apology and compensation for being forced into sexual slavery during Japan's World War II-era occupation.

But soon after a magnitude 9 earthquake and tsunami last month killed more than 20,000 people and caused nuclear mayhem in Japan, something changed here. The so-called comfort women felt moved to hold another kind of rally: a vigil for Japanese victims.

"We hate the sin but not the people," said Lee Yong-su, 85. "We hope Japan will stand on its feet soon."

Suddenly, there was a sense that a bitter nationalistic rivalry might be replaced by something the Korean peninsula has rarely felt for its former conqueror: empathy.

South Korea was the first country to send a rescue team to the disaster area. The Korean Red Cross has raised \$40 million, one of the largest nongovernment contributions to Japan after the quake. The Chosun Ilbo newspaper, which has often been critical of Japan and its policies, raised \$10 million. Even the comfort women chipped in \$15,000.

Many compared the moment to the brief window after the 9/11 attacks when many hoped that Democrats and Republicans might finally put aside their differences.

That, of course, didn't happen. And in the case of South Korea and Japan, the rapprochement also appears short-lived.

The two countries seem to have fallen back into old habits — like a couple in an abusive relationship where one has lorded over the other. They've gone to counseling, tried all the couples therapies. And just when one spouse is about to forgive the other, another unforgivable event comes to pass. Once again, signals are misread, and the relationship is back at a dysfunctional impasse.

For South Korea, there is just too much past bitterness to move past.

For more than three decades, Japan imposed a harsh colonial rule here that many South Koreans cannot forget. Making matters worse, the two countries are locked in a territorial dispute over two islands — known as Dokdo in South Korea and Takeshima in Japan — that lie amid fishing grounds frequented by both nations and are believed to contain natural gas reserves.

Yet ties recently appeared to be improving. Trade has boomed. Movies, music and other forms of pop culture that were once restricted have flowed more freely between the two sides.

Last summer, Japan's prime minister, Naoto Kan, had offered an apology for Japan's brutal colonial rule, and promised to return books and art to South Korea. The two nations have also discussed signing a defense pact in the midst of rising threats from North Korea.

So when the March 11 earthquake struck, Koreans reached out.

Then came a pair of thunderbolts out of Tokyo: On April 1, Japan's Ministry of Foreign Affairs released its Diplomatic Bluebook 2011 detailing developments in Japan's foreign relations — a release that came just two days after the central government approved new school textbook content. Both reiterated Japan's claims to the disputed Dokdo/Takeshima islands.

South Koreans were stunned at the bad timing. Rather than a conciliatory gesture, or an effort at a new dialogue, the abusive spouse of long-held memory seemed back to its old ways.

In Japan, where the South Korean disaster donations received plenty of attention, there was scant news coverage on the negative effects the government's latest statements on the islands could have on relations with Seoul.

Many Japanese continue to focus on South Korea's gestures of goodwill.

"I'm sure in South Korea there are people who are against giving money to Japan because of the disputes over history. But when you get to the individual level, it's a totally different story," said Katsuyuki Haruki, the chief executive of a Tokyo construction consultancy that does business in South Korea.

South Korea's volatile blogger nation also expressed its anger.

"Having sympathy for the victims is fine, but I think Koreans overreacted when it came to donations," posted one blogger. "We tried too hard to donate more and more so that Japanese people will remember Korea as a country they should be grateful to."

South Korean officials say they will not allow the territorial dispute to damp aid to Japan. But anger persists here. Donations for Japan's cause have dropped off. One Seoul neighborhood even voted to redirect \$11,000 they had raised for Japanese victims toward the Dokdo cause.

Even the comfort women have picked up their banners again.

"After all Korea had done to help, I feel quite betrayed to see the Japanese government's firm stance on the Dokdo issue," said Kang Il-chul, 82, a sexual slavery victim. "Enough is enough."

john.glionna@latimes.com

Jung-yoon Choi of The Times' Seoul bureau and special correspondent Kenji Hall in Tokyo contributed to this story.

## **Japan's Shikoku Elec Extends Reactor Overhaul 2 Weeks (REU)**

By Risa Maeda

Reuters, April 26, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Austrian Chancellor Calls For Nuclear-free Future (AP)**

Associated Press, April 26, 2011

VIENNA – Austria's chancellor called for a nuclear-free Europe on Monday, pledging to do his part to make this happen.

Austria is an ardent opponent of nuclear power and has no operating plants of its own. It has seen its critical stance reinforced by the Japanese nuclear crisis that has raised questions about the safety of atomic energy.

"We're strong enough if we take a stand together," Chancellor Werner Faymann told a cheering crowd in downtown Vienna, the Austrian capital. "The nuclear power lobby has more money than we do, it has more financial resources than we do, but we want to create a humane future without nuclear energy in Europe!"

"I promise I will do my part," he said.

Faymann was among several speakers at an event marking the 25th anniversary of Chernobyl, the world's worst nuclear accident.

Also Monday, Austrian Environment Minister Nikolaus Berlakovich said safety tests for European nuclear power plants must be mandatory and take into account the possibility of plane crashes or terror attacks.

Read All Comments

European Union nations agreed last month to submit their plants to so-called stress tests and promised to heed the lessons from the tsunami-related accident at Japan's crippled Fukushima Dai-ichi complex.

In a statement, Berlakovich said draft criteria for the tests don't go far enough and that they "must incorporate human influences such as plane crashes or terror attacks."

It should be clear that all countries and all nuclear power plants must participate in the testing process, he added.

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## **Demonstrators In Germany Demand End Of Nuclear Power (NYT)**

By Judy Dempsey

New York Times, April 26, 2011

BERLIN — An estimated 120,000 people demonstrated across Germany on Monday, protest organizers said, demanding an end to nuclear power and increasing pressure on Chancellor Angela Merkel's government to speed up the closing of the country's 17 nuclear plants.

Demonstrations that take place each year over the Easter holidays have tended in the past to be pacifist, for instance, calling for the end of the war in Afghanistan. But this year, because of the 25th anniversary of the nuclear accident at the Chernobyl plant in Ukraine, in addition the nuclear crisis at the Fukushima nuclear plant in Japan, the rallying theme was nuclear power.

Some of the biggest protests took place in the western state of Lower Saxony, where, according to the organizer's spokesman, Peter Dickel, more than 20,000 demonstrators gathered near the Grohnde nuclear plant.

In the northern state of Schleswig-Holstein, 17,000 protested at the Krümmel nuclear plant, Mr. Dickel said.

In Bavaria, which has three nuclear plants, more than 15,000 people gathered near the Grafenrheinfeld power plant and thousands of others marched toward the Isar 1 and Isar 2 plants. "We are many, we will be more and we will not keep quiet until the last nuclear power plant is shut," said Martin Heilig, an organizer of the demonstrations there.

Last month Mrs. Merkel imposed a moratorium on new nuclear plant construction. Seven of the oldest plants were temporarily closed, and the remaining 10 are undergoing security checks. She made it clear that she was going to reconsider her

decision, made last year, to extend the life of the nuclear plants by an average of 12 years. "Japan had changed everything," she said.

Mrs. Merkel has already set up two committees, one to consider how nuclear energy could be phased out earlier than the mid 2030s and the other to see what impact the end of nuclear power would have on energy prices. They are expected to complete their work by June.

Despite her U-turn on energy policy, the Greens party was swept into power in the state of Baden-Württemberg last month. It is the first time the Greens will head a state government. On Monday, Winfried Kretschmann, premier designate of the Green-led government in Baden-Württemberg, was putting the finishing touches to his coalition with the Social Democrats — thus ending 58 years of conservative government.

Stricter E.U. tests sought

Austria's environment minister said safety tests for European nuclear plants must be mandatory and take into account the possibility of terror attacks, The Associated Press reported on Monday from Vienna.

European Union nations agreed last month to submit their plants to tests, but Nikolaus Berlakovich said Monday draft criteria for the tests do not go far enough and "must incorporate human influences such as plane crashes or terror attacks."

## **Thousands In France Mark Chernobyl With Protests (AFP)**

By Arnaud Bouvier

AFP, April 26, 2011

STRASBOURG, France — Thousands staged anti-nuclear protests around France on Monday, demanding reactors be closed on the eve of the 25th anniversary of Chernobyl and after Japan's Fukushima nuclear accident.

Between 6,000 and 9,000 mostly German activists took to different bridges on the Rhine between Germany and France, AFP journalists reported, with the main Easter Monday demonstration involving hundreds in a so-called "die in" at Strasbourg.

The protest at the midway point on the Pont de l'Europe joining Strasbourg in eastern France and Kehl in Germany aimed to show that "radioactivity knows no borders," said organiser Remi Verdet.

"We're here to remind people that zero risk does not exist," he said.

The protests marking the worst ever nuclear accident at Chernobyl in the Ukraine on April 26, 1986 and Fukushima were also aimed at getting France, proportionally the world's biggest user of nuclear power, to shut ageing plants.

Protesters carrying Japanese and Ukrainian flags dropped to the tarmac as sirens wailed for the "die in", before they threw flowers into the Rhine in memory of those killed by nuclear accidents.

A powerful March 11 earthquake followed by a giant tsunami cut the electricity to Fukushima's nuclear reactors, shutting down the cooling system and leading to the world's worst nuclear crisis since Chernobyl.

Protesters' demands were focused on getting France to shut its oldest nuclear power station at Fessenheim.

In service since 1977, the Fessenheim plant lies in a densely-populated part of France, less than two kilometres from Germany and around 40 kilometres (25 miles) from Switzerland.

French television presenter and green activist Nicolas Hulot, who announced earlier this month that he hopes to run as an environmentalist candidate in the 2012 presidential election, is due to attend the Pont de l'Europe protest.

"Fukushima is what finally convinced me that nuclear power can no longer be the answer to the planet's energy future," Hulot told journalists ahead of the protest.

"I was one of those who had a certain trust in the arguments of pro-nuclear engineers. Their arguments are today losing their edge in the face of the facts."

Some protesters heckled Hulot for his recent anti-nuclear "conversion."

Around 2,000 people, including many Germans and Luxembourgish, also protested at the Cattenom atomic plant, France's second most powerful, in the Mosel region to the northwest of Strasbourg, officials said.

Protesters in southwestern France staged another demonstration in the form of a mass picnic in front of the Blayais nuclear reactor, north of Bordeaux, also in memory of Chernobyl.

"We can't stop tsunamis but we can stop nuclear power stations," read one banner.

Organisers said around 1,000 people took part, while police put the number at 600.

"June 12 will be the 30th anniversary of reactor number one entering service, its originally planned lifetime by (electricity group) EDF," said protest organiser Stephane Lhomme.

"This and all plants that are over 30 years old must be closed," he said.

In France's northwestern region of Brittany, around 800 people staged a good-humoured march in front of the Brennilis experimental heavy-water atomic plant that was built in the 1960s.

It was taken offline in 1985 but its dismantling has proven more complex than thought and is still not completed over 25 years later.

France's Nuclear Safety Authority (ASN) has said that French nuclear security has not yet taken into account the kind of accumulation of natural catastrophes that led to Japan's disaster.

The French government has told the ASN to carry out a security audit at France's 58 active atomic reactors. The results of the audit are expected by the end of the year.

French authorities at the time of the Chernobyl disaster were criticised for a lack of transparency, with many interpreting officials' declarations as saying that radioactive pollution had not crossed the border from Germany into France.

## **Anti-nuclear 'Die In' On Franco-German Border (AFP)**

AFP, April 26, 2011

STRASBOURG, France (AFP) – Around 700 anti-nuclear protesters staged a "die in" on a bridge on the Franco-German border Monday, on the eve of the 25th anniversary of Chernobyl and after Japan's Fukushima nuclear accident.

The Easter Monday demo was one of several to be staged on bridges over the Rhine around Strasbourg to mark the world's worst nuclear accident at Chernobyl in the Ukraine on April 26, 1986 as well as the Fukushima crisis.

The main protest at the midway point on the Pont de l'Europe joining Strasbourg in eastern France and Kehl in Germany was to show that "radioactivity knows no borders," said organiser Remi Verdet.

"We're here to remind people that zero risk does not exist," he said.

Protesters carrying Japanese and Ukrainian flags dropped to the tarmac as sirens wailed for the "die in", before they threw flowers into the Rhine in memory of those killed by nuclear accidents.

A powerful March 11 earthquake followed by a giant tsunami cut the electricity to Fukushima's nuclear reactors, shutting down the cooling system and leading to the world's worst nuclear crisis since Chernobyl.

Protesters are also demanding the closure of France's oldest nuclear power station at Fessenheim.

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## **No Problem To Shut Down All The Nuclear Power Plants : Voice Of Russia (Voice Of Russia)**

By Ivan Blokov

The Voice of Russia, April 26, 2011

There are no problems to shut down all nuclear power plants in the world. The only technical problem that exists is that it cannot be done immediately, it will take time, for example for Russia it will need a decade, for Japan it will need two decades to replace nuclear energy with alternative renewable sources of energy.

It was calculated by the German Space Agency for major parts of big countries - how long it will take to shut down the nuclear energy for the biggest countries in the world and how to do it in an economically viable way, and it is possible for any country in the world, one of the examples is the United States, which are not constructing any new nuclear power plants during last 2 decades, and Germany which is planning to shut down all nuclear plants and totally switch to renewables.

## **Ministry Backs Call To Defer Nuclear Plants (Bangkok)**

Bangkok Post, April 26, 2011

Ministry backs call to defer nuclear plants

Post Publishing PCL.

The Energy Ministry has proposed Thailand delay plans to have its first two nuclear power plants in 2020 by three years after the International Atomic Energy Agency said the country was not ready for the projects.

Energy Policy and Planning Office (EPPO) secretary-general Boonsong Kerdklang said yesterday that his agency would advise the National Energy Committee at a meeting to be held tomorrow to postpone the construction of two planned 1,000-megawatt nuclear power plants.

Under its 20-year power development plan, Thailand would have five nuclear power plants with a combined generating capacity of 5,000 megawatts within five years from 2020.

Provinces that are being considered as potential sites for nuclear power plants are Trat, Chumphon, Nakhon Sawan, Surat Thani, Ubon Ratchathani, Khon Kaen, Kalasin and Prachuap Khiri Khan.

The first two nuclear plants were scheduled to be operational in 2020 and 2021.

Mr Boonsong said the EPPO decided the nuclear projects should be postponed after receiving advice from the International Atomic Energy Agency (IAEA) that Thailand was not ready to build nuclear power plants.

The IAEA assessed the criteria for Thailand's readiness for nuclear power development. It said the country still lacked public acceptance and proper laws to support the programme.

The Thai people also needed more time to accept nuclear technology in the wake of the disaster at the earthquake-and tsunami- hit Fukushima Daiichi nuclear complex in Japan, he said.

Mr Boonsong said three 800-megawatts gas-fired power plants would be built to offset electricity from the delayed nuclear plants.

The national oil company, PTT Plc, would have to seek more gas from the Gulf of Thailand, Burma and other overseas sources, to feed the new gas-fired power plants, the EPPO secretary-general said.

Coal-fired power may not be taken into account due to strong protests from environmental activists, he said.

Santi Chokchaichamnankit, of the Nuclear Watch Project, said the nuclear power plant projects should not only be delayed, but removed from the national power development plan.

"This is not about Thailand's readiness to build nuclear power plants. We oppose the projects because there are lots of reliable studies showing that nuclear power is not a safe and environmentally-friendly technology," Mr Santi said. He called on the government to stop spending vast amounts to promote nuclear power plants by giving one-sided information to the public.

The Nuclear Power Programme Development Office was established in 2006 to oversee nuclear power plant projects.

The office has spent about 1.98 billion baht from 2007 to 2010 to conduct studies and campaign for nuclear power plant projects.

Mr Santi said the postponement of the nuclear power plant projects would only allow pro-nuclear agencies to spend more money to campaign for public support of the projects.

Meanwhile, the Network of People Against Nuclear Power Plants has said it will rally at the Vietnamese embassy in Bangkok today to protest against the Vietnamese government's planned construction of eight nuclear power plants in the country.

They are concerned the plants would have a negative impact and send harmful radiation to neighbouring countries, including Thailand.

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About the author Writer: Yuthana Praiwan and Kultida Samabuddhi

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## **Ghost Town Bears Witness To Lasting Nuclear Scourge (NYT)**

By Alison Smale

New York Times, April 26, 2011

Twenty-five years ago, the world's worst nuclear accident literally erupted at the Chernobyl nuclear plant in Ukraine, then part of the Soviet Union.

Yet when a heedless experiment with fuel rods caused the No. 4 reactor at Chernobyl to blow, there was no public echo. No cellphones or social networks relayed the news, as they would today.

It took the official news agency TASS three days to acknowledge, in terse sentences, that there had been an accident.

In the end, the impact of Chernobyl proved too great even for the Soviet state apparatus. Mikhail S. Gorbachev, then the leader, was trying to open up his country and eventually used the enormity of the accident to get the Soviet media to tell a bit more of the dreadful truth.

For six weeks now, the unfolding calamity at the Fukushima Daiichi plant in Japan, stricken in a record earthquake and tsunami, has stirred memories of Chernobyl. In particular, the stream of changing information, soaring or plunging radiation levels and doubts about the openness of the Japanese operator and government recall the questions posed in 1986 by that unseen plume of radiation that eventually traveled westward around the world.

These images of the ghost town of Pripyat, once home to 50,000 people, of the still-guarded zone around the Chernobyl plant, of desperate or reckless locals who sneak in to plunder its abandoned homes, of a man helping his grandchild, congenitally sick because of radiation, reinforce the lesson learned anew in Japan: Humans can fashion both wonder and horror with technology.

Japan is wealthier and more cohesive than the Soviet Union was then, or Ukraine is now. But, as Japanese scarred by the atomic attacks on Hiroshima and Nagasaki know, money and comfort do not dispel the lingering effects of nuclear disaster.

Only after the radiation spewing from Chernobyl set off alarms at the Forsmark nuclear plant in Sweden, 1,200 kilometers, or about 750 miles, to the northwest, did Soviet officials even acknowledge an accident. Today, the Ukrainian authorities are vocal in pleading, at an international meeting in Kiev last week, for hundreds of millions of dollars for the next stage of the unceasing containment of Chernobyl: a new sarcophagus to reinforce the now cracked one built by tens of thousands of workers in 1986.

Outside, twisted dolls on broken kindergarten cots remind us there was life here — once.

## **Chernobyl Anniversary To Be Honored (WSJ/AP)**

Associated Press, April 26, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Bell Tolls 25 Times For Chernobyl Victims As World Begins Marking Anniversary (WP/AP)**

Associated Press, April 26, 2011

KIEV, Ukraine — Black-clad Orthodox priests sang solemn hymns, Ukrainians lit thin wax candles and a bell tolled 25 times for the number of years that have passed since the Chernobyl disaster as the world began marking the anniversary Tuesday of the worst nuclear accident in history.

Russian Orthodox Patriarch Kirill led the nighttime service near a monument to firefighters and cleanup workers who died soon after the accident from acute radiation poisoning.

"The world had not known a catastrophe in peaceful times that could be compared to what happened in Chernobyl," said Kirill, who was accompanied by Ukraine's Prime Minister Mykola Azarov and other officials.

"It's hard to say how this catastrophe would have ended if it hadn't been for the people, including those whose names we have just remembered in prayer," he said in an emotional tribute to the workers sent to the Chernobyl plant immediately after one of its reactors exploded to try to contain the contamination.

Tuesday's service began at 1:23 a.m. (2123 GMT), the time of the blast on April 26, 1986, that spewed a cloud of radioactive fallout over much of Europe and forced hundreds of thousands from their homes in the most heavily hit areas in Ukraine, Belarus and western Russia.

The explosion released about 400 times more radiation than the US atomic bomb dropped over Hiroshima. Hundreds of thousands were sickened and once-pristine forests and farmland still remain contaminated. The U.N.'s World Health Organization said at a conference in Kiev last week that among the 600,000 people most heavily exposed to the radiation, 4,000 more cancer deaths than average are expected to be eventually found.

Several hundred Ukrainians, mostly widows of plant workers and those sent in to deal with the disaster, came to Tuesday's service to pay their respects to their loved ones and colleagues. Teary-eyed, they lit candles, stood in silence and crossed themselves to the sound of Orthodox chants.

"Our lives turned around 360 degrees," said Larisa Demchenko, 64. She and her husband both worked at the plant, and he died nine years ago from cancer linked to Chernobyl radiation.

"It was a wonderful town, a wonderful job, wonderful people. It was our youth. Then it all collapsed," she said. "If only you knew how much our hearts ache for our children, how many sick grandchildren there are, how many couples without kids.

"We come here to look each other in the face. If it hadn't been for the people buried here, Kiev would no longer exist," Demchenko said.

Russia, Ukraine and Belarus have cut the benefits packages for sickened cleanup workers in recent years, and many workers complained directly to Russian President Dmitry Medvedev as he handed them awards for their work at a ceremony Monday in Moscow.

Officials in Bryansk, the Russian region most contaminated by the disaster, have failed to make necessary repairs at the local cancer hospital, worker Leonid Kletsov told the president.

"It's the only place of rest for us," he said. "Officials promised to renovate it, but these promises are still promises."

Medvedev was to join Ukraine's President Viktor Yanukovich for memorial ceremonies in Chernobyl later Tuesday.

A service similar to the one in Kiev was held at the same time early Tuesday in Slavutich, a town about 40 kilometers (25 miles) from Chernobyl that was built for people evacuated from homes close to the plant.

Vladimir Stanelevich, a 61-year-old former cleanup worker, said he came to remember the people who gave their lives to protect others.

"You understand, there (in Japan) it was let's say a natural catastrophe, and here it was a technological one. It's a big difference."

Chernobyl has come into renewed focus since an earthquake and tsunami triggered a nuclear disaster in Japan last month, with the country still struggling to bring the radiation-spewing Fukushima Dai-ichi nuclear plant under control.

Japanese newspapers on Monday highlighted the significance of Chernobyl. The Asahi interviewed a former Chernobyl worker under the headline: "Fukushima, don't tread the same route."

In Germany, thousands of people demonstrated on Monday near several nuclear power plants, demanding a speedy end to the use of atomic energy. Japan's crisis has prompted Germany to freeze plans to extend the life of its plants, order a temporary shutdown of its seven oldest reactors and seek a quicker transition to renewable energy.

In Austria, Chancellor Werner Faymann used an event in Vienna marking the 25th anniversary of Chernobyl to call for a nuclear-free Europe.

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## **Challenges Loom Large, 25 Years After Chernobyl (NPR)**

NPR, April 26, 2011

The accident at the Chernobyl nuclear power plant 25 years ago not only changed the lives of people in Ukraine, it put a radioactive stain on the continent. It also showed just how far-reaching the ramifications of a serious nuclear accident could be.

On those late April days in 1986, plumes of radioactive smoke spread for thousands of square miles across Ukraine, the former Soviet Union, Europe and Scandinavia. Beyond 20 miles or so from the reactor, the doses didn't pose an immediate health threat. But scientists are still searching for answers on what the long-term effects of low-level exposure to radiation may be.

Anatoliy Rasskazov/AP

The destroyed Chernobyl nuclear power plant, shown just hours after the April 26, 1986 explosion.

Measuring The After Effects

Numerous calculations say the accident has and will cause thousands of cancer deaths, mostly among people who lived or worked nearby. But Fred Mettler, a radiologist with a United Nations radiation study group, says so many people get cancer, it's difficult to tease out which cancers are due to Chernobyl.

"You would have 20 million people over that time dying of cancer generally, and now you are trying to find 4,000 extra cases or 10,000 extra cases — and that signal is pretty much too small to actually be able to see," says Mettler.

To really isolate cancers caused by radiation, Mettler says scientists need to know patient histories: Did they smoke, drink heavily or have cancer in the family?

"Unfortunately, most of these countries are not sharing their data on health effects back and forth," he says.

Mettler says the easiest Chernobyl cancers to detect are thyroid cancers. Normally instances of thyroid cancer are rare and are known to be caused by radioactive iodine; there was plenty of that material floating around after the accident. Mettler says

about 7,000 people got thyroid cancer from the radiation. The vast majority of these have been cured, but there will be more cases. How many more is a mystery.

"We know [instances of thyroid cancer] went up among those exposed as children," Mettler says. "We don't know whether that risk will go down over time or keep going up or level off. That's probably the biggest thing that will be studied and focused on."

Mettler and other scientists say the residents who moved back, as well as the hundreds of thousands of so-called "liquidators" who cleaned-up the site are a potential gold mine of information. They represent the only large population of people exposed to low-levels of radiation since the Japanese survivors at Nagasaki and Hiroshima. But finding them, their medical records or the money to do the research is a long-shot.

#### Living With The Fear Of Radiation

What worries some health professionals more than radiation are the psychological effects of the accident. James Smith, a physicist at the University of Southampton who has studied Chernobyl for two decades, says several studies found high rates of suicide, depression and mental health problems in the region after Chernobyl.

"Having to live with radiation — knowing that you've been exposed — gives an additional psychological stress because the information hasn't always been reliable," Smith says. "So people don't always know what the risk to their health really is."

Chernobyl remains an open sore for Ukraine and its people, says Smith. The government is trying to raise hundreds of millions of dollars to construct a huge building that will cover the crumbling concrete sarcophagus that now keeps the highly radioactive plant isolated.

And then there's the radiation that's still locked up in the environment; it's largely out-of-sight but potentially dangerous. For example, long-lasting cesium is bound up in the forests and soil around the plant.

"The forests have been crowded and untended, and they could very well go up in a catastrophic fire similar to our western fires," says Chad Oliver, a forestry professor at Yale University who has visited the forest. "The problem with a catastrophic fire is that they even create their own weather patterns, so you get some very tremendous dispersion of smoke."

The radioactive smoke might not be deadly as far as the city of Kiev, about 100 miles away. But the local effects could be very dangerous.

"The worst concern is the fire-fighters going in there would be inhaling quite concentrated radioactive smoke," Oliver says.

He says fire-fighting equipment at the site is antiquated and roads are poor, but Ukraine has been getting help from the US Forest Service. Teams from the Service are advising Ukraine on how to lower the hazards posed by overgrown or downed trees, as well as studying wind and weather patterns in case another conflagration hits Chernobyl.

## A Visit To Chernobyl (NYT)

By Ban Ki-moon

New York Times, April 26, 2011

Twenty-five years ago, the explosion at Chernobyl cast a radioactive cloud over Europe and a shadow around the world. Today, the tragedy at Japan's Fukushima Daiichi nuclear power plant continues to unfold, raising popular fears and difficult questions.

Visiting Chernobyl a few days ago, I saw the reactor, still deadly but encased in concrete. The adjoining town of Pripyat was dead and silent — houses empty and falling into ruin, mute evidence of lives left behind, an entire world abandoned and lost to those who loved it.

More than 300,000 people were displaced in the Chernobyl disaster; roughly six million were affected. A swathe of geography half the size of Italy or my own country, the Republic of Korea, was contaminated.

It is one thing to read about Chernobyl from afar. It is another to see for it. For me, the experience was profoundly moving, and the images will stay with me for many years. I was reminded of a Ukrainian proverb: "There is no such thing as someone else's sorrow." The same is true of nuclear disasters. There is no such thing as some other country's catastrophe.

As we are painfully learning once again, nuclear accidents respect no borders. They pose a direct threat to human health and the environment. They cause economic disruptions affecting everything from agricultural production to trade and global services.

This is a moment for deep reflection, a time for a real global debate. To many, nuclear energy looks to be a clean and logical choice in an era of increasing resource scarcity. Yet the record requires us to ask: have we correctly calculated its risks and costs? Are we doing all we can to keep the world's people safe?

Because the consequences are catastrophic, safety must be paramount. Because the impact is transnational, these issues must be debated globally.

That is why, visiting Ukraine for the 25th anniversary of the disaster, I put forward a five-point strategy to improve nuclear safety for our future:

- First, it is time for a top to bottom review of current safety standards, both at the national and international levels.

- Second, we need to strengthen the work of the International Atomic Energy Agency on nuclear safety.

- Third, we must put a sharper focus on the new nexus between natural disasters and nuclear safety. Climate change means more incidents of freak and increasingly severe weather. With the number of nuclear facilities set to increase substantially over the coming decades, our vulnerability will grow.

- Fourth, we must undertake a new cost-benefit analysis of nuclear energy, factoring in the costs of disaster preparedness and prevention as well as cleanup when things go wrong.

- Fifth and finally, we need to build a stronger connection between nuclear safety and nuclear security. At a time when terrorists seek nuclear materials, we can say with confidence that a nuclear plant that is safer for its community is also more secure for the world.

My visit to Chernobyl was not the first time I have traveled to a nuclear site. A year ago, I went to Semipalatinsk in Kazakhstan, ground zero for nuclear testing in the former Soviet Union. Last summer in Japan, I met with the Hibakusha, survivors of the atomic blasts at Nagasaki and Hiroshima.

I went to these places to highlight the importance of disarmament. For decades, negotiators have sought agreement on limiting (and perhaps ultimately eliminating) nuclear weapons. And this past year, we have seen very encouraging progress.

With the memory of Chernobyl and, now, the disaster in Fukushima, we must widen our lens. Henceforth, we must treat the issue of nuclear safety as seriously as we do nuclear weapons.

The world has witnessed an unnerving history of near-accidents. It is time to face facts squarely. We owe it to our citizens to practice the highest standards of emergency preparedness and response, from the design of new facilities through construction and operation to their eventual decommissioning.

Issues of nuclear power and safety are no longer purely matters of national policy, alone. They are a matter of global public interest. We need international standards for construction, agreed guarantees of public safety, full transparency and information-sharing among nations.

Let us make that the enduring legacy of Chernobyl. Amid the silence there, I saw signs of life returning. A new protective shield is being erected over the damaged reactor. People are beginning to return. Let us resolve to dispel the last cloud of Chernobyl and offer a better future for people who have lived for too long under its shadow.

Ban Ki-moon is the secretary general of the United Nations

## **Jimmy Carter And Other Ex- Leaders To Travel To N. Korea (NYT)**

By Mark McDonald

New York Times, April 26, 2011

SEOUL, South Korea — Former President Jimmy Carter was to arrive in North Korea on Tuesday for talks aimed at reducing tensions on the fractious Korean Peninsula.

The so-called six-party talks on the denuclearization of North Korea remain in limbo, and Mr. Carter said official dialogue with the North “appears to be at a standstill.” The talks have involved North and South Korea, the United States, Russia, China and Japan.

Mr. Carter and three former leaders from Europe arrived in Beijing on Sunday. Traveling with Mr. Carter were former President Martti Ahtisaari of Finland, former Prime Minister Gro Harlem Brundtland of Norway and former President Mary Robinson of Ireland. The four are members of The Elders, an independent group of world leaders founded by Nelson Mandela.

“Clearly, there is a great level of mistrust between North and South Korea,” Mr. Ahtisaari said. “But the stakes are too high to allow this standoff to continue.”

The group was hoping to meet with the North Korean leader, Kim Jong-il, although Mr. Carter said Monday that such a meeting had not yet been arranged.

On Thursday, after meetings in Pyongyang, the North’s capital, the Elders group is scheduled to travel to Seoul.

It was also unclear whether Mr. Carter would press North Korean officials to release an American man who has been detained by North Korea on unspecified charges since November.

This month, the North Korean government said the man had already “admitted his crime.” The South Korean news agency Yonhap, citing sources in the United States that it did not name, said he was Jun Young-su, a Korean-American businessman in his 60s from Orange County, Calif.

Yonhap said Mr. Jun had been taken into custody in connection with illegal religious activities in the North.

A State Department spokesman, Mark C. Toner, confirmed that an American was being held by the North, but he and other United States officials declined to name the detainee and offered no personal details, citing privacy rules. The United States called on North Korea to release the American "on humanitarian grounds."

The State Department has said that Mr. Carter's trip is a private journey and that he is not acting as an American envoy.

Mr. Carter has been successful at freeing jailed Americans in the past. He made a private trip to Pyongyang last August to win the release of Aijalon Mahli Gomes, 31, of Boston, who had been convicted of illegally entering North Korea.

Mr. Gomes was sentenced in April 2010 to eight years of hard labor and was fined \$700,000. The Carter Center, the organization founded by Mr. Carter and his wife, Rosalynn, said Mr. Gomes was granted amnesty by Mr. Kim.

## **Iran Discovers New Cyberattack (NYT)**

By William Yong

New York Times, April 26, 2011

TEHRAN -- Iran has discovered a new hostile computer virus designed to damage government systems, an Iranian official who heads a cyberdefense agency said in comments reported Monday.

In comments published by Iran's semiofficial Mehr News Agency, the official, Gholam-Reza Jalali, said the Stars virus had infiltrated government systems but was being decoded. "Fortunately, our scientists have successfully identified the Stars virus, which has now been sent to laboratories," said Mr. Jalali, a senior Revolutionary Guards commander.

He said no final conclusions had yet been reached about the virus's aim. In its initial state, it mimics a regular executable file.

In recent days, Mr. Jalali admitted that the powerful Stuxnet virus discovered last year did indeed infect computer systems related to the country's nuclear program, but said that it was discovered before causing serious damage. Mr. Jalali said that the threat from Stuxnet had not yet been completely dispelled, and cautioned that further attacks were anticipated.

"The nation should ready itself for the next virus since it is possible that new viruses will be considerably more dangerous than the first," he said.

Many computer security experts believe the Stuxnet virus was created by a government or governments trying to sabotage Iran's nuclear program, which Western countries believe is aimed at creating a nuclear weapon, but which Iran maintains is for peaceful purposes. After that virus was discovered last year, Iran reported delays in parts of its nuclear program.

## **Iran: Country Under Attack By Second Computer Virus (WP)**

By Thomas Erdbrink and Joby Warrick

Washington Post, April 26, 2011

TEHRAN -- An Iranian military official revealed on Monday that the country had been attacked by a new computer virus apparently aimed at nuclear facilities, an acknowledgment that seemed to suggest a broader campaign by foreign saboteurs to undermine Iran's atomic energy program.

The new computer worm has been dubbed "Stars" by the Iranians and described as an "espionage virus," although few details were made public.

In the same announcement, the military also confirmed continuing problems with an earlier virus, "Stuxnet," which began wreaking havoc on Iran's main uranium enrichment facility in 2009.

"The Stars virus has been presented to the laboratory but is still being investigated," said Gholam Reza Jalali, who heads the Passive Defense Organization, which counters sabotage.

A report by the group said the new virus mimics government computer files and is difficult to destroy in its early stages. "No definite and final conclusions have been reached," Jalali said in a report posted Monday on his organization's Web site, [paydarymelli.ir](http://paydarymelli.ir).

The statement follows recent official acknowledgments of the damage wrought by Stuxnet, which infected several nuclear facilities and industrial sites and is believed to have destroyed more than a tenth of the centrifuges Iran uses to make enriched uranium.

A military official this month blamed US and Israeli spy agencies for planting the computer worm, although officials in both countries have declined to comment on either of the reported cyber attacks. A US official familiar with clandestine operations said the Iranian reports are being monitored with high interest.

Iran worked frantically last year to replace more than 1,000 Stuxnet-damaged centrifuges at its main uranium enrichment plant at Natanz, and its scientists boasted of making significant strides to overcome the setback. Iran also has notified U.N. nuclear officials of plans to install hundreds of more advanced centrifuges with a dramatically higher production rate and presumably more resistance to sabotage.

Yet the report released on Monday acknowledged that the Stuxnet virus is still not under complete control. "These viruses have a shelf life and can reappear and continue their activity in another form," Jalali said.

Some US and European officials and nuclear experts have said that the toll from the cyber attacks may be greater than initially thought. David Albright, a nuclear weapons expert who has analyzed Stuxnet, said that the worm was designed to continue to operate until 2012, and that it could remain dormant in infected systems until activated by remote command.

Although Iran could attempt to eliminate the malware by replacing computers and erasing hard drives, it remained possible for Stuxnet to reinfect computers without proper protection, or to spread to new facilities and networks, he said.

"The success of Stuxnet would have whetted the appetite of the intelligence community to try again," said Albright, president of the Washington-based Institute for Science and International Security. He cautioned, however, that repeated cyber attacks -- regardless of their authorship -- probably would encourage Iran to retaliate, perhaps by attacking "soft" computer networks used by consumers and businesses in the West.

In addition to the virus problems, the number of industrial incidents reported by Iranian media has increased sharply. Often they are blamed on accidents, but also increasingly on sabotage.

The official Iranian Islamic Republic News Agency also reported Monday that a major 56-inch gas pipeline had exploded in the south of the country, a week after officials blamed two similar pipeline explosions on "acts of sabotage." Authorities said pipe corrosion apparently caused the Monday blast.

The same pipeline, which connects Iran's biggest gas field to its largest gas refinery, exploded under unexplained circumstances last year, the news agency's Web site reported. Nearly a dozen such incidents have occurred in the past 18 months.

Warrick reported from Washington.

## **Iran Says It Has Uncovered Second Cyber Attack (AP)**

By Ali Akbar Dareini, Associated Press

Associated Press, April 26, 2011

TEHRAN, Iran – Iran has been hit by a second computer virus, a senior military official said Monday, suggesting it was part of a concerted campaign to undermine the country's disputed nuclear program.

Gholam Reza Jalali, the head of an Iranian military unit in charge of combatting sabotage, said that experts discovered the "espionage virus," which he called "Stars."

"The Stars virus has been presented to the laboratory but is still being investigated," Jalali said in a report posted Monday on his organization's website, [paydarymelli.ir](http://paydarymelli.ir). "No definite and final conclusions have been reached."

He did not say what equipment or facilities the virus targeted, or when experts first detected it.

"Stars" is the second serious computer worm to hit Iran in the past eight months. Late last year, a powerful virus known as Stuxnet targeted the country's nuclear facilities and other industrial sites.

Iran has acknowledged that Stuxnet affected a limited number of centrifuges — a key component in the production of nuclear fuel — at its main uranium enrichment facility in the central city of Natanz. But Tehran has said its scientists discovered and neutralized the malware before it could cause serious damage.

Jalali downplayed the impact of Stars, but said it is "harmonious" with computer systems and "inflicts minor damage in the initial stage and might be mistaken for executive files of governmental organizations."

Jalali heads a military unit called Passive Defense that primarily deals with countering sabotage. The unit was set up on the orders of Iran's Supreme Leader Ayatollah Ali Khamenei.

A separate unit has also been set up by Iran's Ministry of Information Technology and Telecommunications to decode incoming computer viruses and neutralize them, Jalali said.

Last week, Jalali said Stuxnet could have caused large-scale accidents and loss of life and claimed that Iranian experts have determined that the United States and Israel were behind the malware, which can take over the control systems of industrial sites like power plants.

The US and its allies suspect Iran's nuclear program aims to develop atomic weapons. Iran denies the charges, and says the program is only for peaceful purposes.

## **Iran Says It Has Detected Second Cyber Attack (REU)**

By Ramin Mostafavi

Reuters, April 26, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.





# NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

WEDNESDAY, APRIL 27, 2011 7:00 AM EDT

[WWW.BULLETINNEWS.COM/NRC](http://WWW.BULLETINNEWS.COM/NRC)

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## NRC NEWS:

### **NRC Conducts Special Inspection Of Perry Plant Following Radiation Exposure.**

The AP (4/26, Barr) reports on the high levels of radiation that were recorded at the Perry Nuclear Power Plant in northeast Ohio that "prompted a special inspection" by the NRC. Workers were "immediately evacuated" from the plant April 22 "when radiation levels rose while it was shutting down for a refueling outage, the commission said Tuesday." The NRC said Perry plant officials do not believe workers were exposed to levels

beyond NRC limits. The highest level of radiation exposure to any of the workers was "98 millirems;" equivalent to two or three chest X-rays, a Perry spokesman said. The NRC limits radiation exposure to 5,000 millirems a year.

The Cleveland Plain Dealer (4/27, Funk) reports, "The inspectors want [to] figure out what happened and whether mistakes were made." While removing the source range "monitor, workers identified an increase in radiation, the NRC said in a statement late Tuesday. 'The workers stopped and immediately left the area when the higher-than-expected levels were identified,' NRC spokeswoman Viktoria Mittyng said."

CA/58

Bloomberg News (4/27, Lomax) that the four affected workers in the Perry plant "incident were contractors who failed to use 'proper methods' while removing a piece of equipment from underneath the reactor vessel, Todd Schneider, a spokesman for the power plant, said in an interview. The radiation didn't escape the reactor containment building where the contractors were working, Schneider said." FirstEnergy is "conducting its own investigation into the incident alongside the NRC's inspection, Schneider said."

CNN (4/27) adds NRC spokeswoman Mitylmg "said five workers were involved in the incident, some of them plant employees and others contract workers. She was unable to provide the exact radiation levels detected. ... 'While performing the activities to remove the monitor, workers at the plant identified an increase in radiation levels in their work area,' the NRC statement said."

On its website, WOIO-TV Cleveland (4/26) says that a "source range monitor measures nuclear reactions during start up, low power operations and shutdown conditions. While performing the activities to remove the monitor, workers at the plant identified an increase in radiation levels in their work area." The "NRC's special inspection report will be available within 45 days of the inspection's completion of through the NRC RIII Office of Public Affairs and at the NRC web site."

On its website, WKYC-TV Cleveland (4/26, Wendel) reported, FENOC "does not believe the workers received radiation in excess of NRC limits." The NRC's special inspection team "will gather data to establish a sequence of events, review the utility's work planning and engineering actions, determine if there were human performance factors that may have contributed to the event and evaluate the actual radiological consequences, including exposure to the workers."

WFMJ-TV Youngstown, Ohio (4/26, 11:24 p.m., EDT) broadcast, "High radiation levels recorded at a nuclear reactor just east of Cleveland has prompted a special inspection by the US Nuclear Regulatory Commission. The commission says workers at the Perry Nuclear Power Plant immediately evacuated the plant last Friday when radiation levels rose while the plant was in the process of shutting down for fueling outage. The plant was ruled safe and officials don't believe workers were exposed to radiation levels that exceeded Federal limits." WTOL-TV Toledo, Ohio (4/26, 11:22 p.m., EDT) , WTVG-TV (4/26, 11:08 p.m., EDT) , WJET-TV Erie, Pennsylvania (4/26, 11:05 p.m., EDT) and WBNS-TV (4/26, 11:07 p.m., EDT) also carried this story.

WTAM-AM Cleveland (4/27, Moore) reported on its website that "FirstEnergy Nuclear Operating Company...says the shutdown for refueling also involved numerous safety inspections."

MSNBC (4/27) and Willoughby News-Herald (4/27) run articles similar to the AP report.

**NRC Says It Won't Intervene In Vermont Yankee Lawsuit.** On its website, Vermont Public Radio (4/26, Dillon) reported the NRC "says it won't intervene in the lawsuit against the state over the continued operation of the Vermont Yankee plant." Last month, the agency approved 20-year relicensing for the plant and Entergy, in a lawsuit, says Vermont "cannot veto" that approval, but "NRC spokesman Neal Sheehan says the state has a role in the plant's operation, and the federal government won't try to assert overall authority." Gov. Peter Shumlin say the NRC's "hands-off approach to the litigation" is significant and believes the NRC does not want to "stand in the way of the clear right of the state of Vermont to determine our future."

**Vermont Electric Cooperative Rejects Yankee Power Purchase Plan.** The AP (4/27) reports on the decision by the Vermont Electric Co-operative to reject by a 9 to 1 vote the plan to buy power from Vermont Yankee "even if it continues to operate past March of next year, when state officials expect it to shut down."

According to the Brattleboro (VT) Reformer (4/27), Vermont Electric Co-operative CEO Dave Hallquist, "said the board's primary reason for rejecting the deal was a distrust of Yankee's corporate owner, Entergy Louisiana. That distrust was so deeply felt, said Hallquist, that the board ordered VEC management to never negotiate with Entergy again, despite what the result may be of the lawsuit filed by Entergy against Vermont."

Brattleboro (VT) Reformer (4/27, Audette) reports, "Hallquist said VEC management gave the board four options to vote on: Accept the offer; only accept it if Yankee receives a certificate of public good from the Public Service Board; reject the offer, or, table the decision until further notice. Not only did the board choose option 3, it was adamant that management cut off all future communications with Entergy, he said." Hallquist said the vote "was a clear referendum on Entergy."

The Burlington (VT) Free Press (4/26, Hallenbeck, 34K) says the board chose to send "the strongest message against Vermont Yankee" among several options it considered Tuesday. Yankee spokesman Larry Smith said "the company was disappointed in the board's decision. 'Vermont Yankee is an important resource for the New England region, producing clean, reliable electricity,' he said." Entergy has also failed to reach a power-purchase agreement with Central Vermont Public Service Corp. and Green Mountain Power Corp. Entergy's deal with Vermont Electric Cooperative would "provide 10 megawatts of power starting at a below-market price of 4.9 cents per kilowatt hour, then adjusting future prices to market rate."

WPTZ-TV Burlington, Vermont (4/27) reports, "Nuclear engineer and longtime Yankee critic Arnie Gundersen of Burlington told VEC board members that [Yankee] is already showing signs of age-related stress as it approaches the end of its 40-year operating license." Noting that Yankee plant is the same "vintage and design" as the crippled Fukushima reactors, Gundersen said the NRC's "approval of Vermont Yankee's 20-year license extension this winter came before the Fukushima disaster and relied on key engineering assumptions which must now [be] reconsidered." Vermont Public Radio (4/26, Charnoff) also notes the vote.

WCAX-TV Burlington, (4/26, 5:03 p.m.) broadcast, "Vermont's third largest electric utility has decided not to continue buying power from Vermont Yankee. Entergy reached a tentative deal with Vermont Electric Co-op in March on a new long-term contract at a highly favorable price of 4.9 cents per kilowatt hour. The VEC board met today to decide whether to ratify the contract and late this afternoon they voted 9-to-1 against the deal. Board members said they heard from some many co-op members who are concerned about the safety of the nuclear plant. VEC joins the state's two largest utilities in rejecting a Yankee deal. Central Vermont Public Service and Green Mountain Power said they would not sign a contract because the plant does not have state approval to continue operating."

**Anti-Nuclear Group Holds Vigil At Vermont Statehouse.** On her "vt.Buzz" political blog for Burlington (VT) Free Press (4/26, 34K), Terri Hallenbeck wrote of the "vigil" Tuesday on the Statehouse steps in Montpelier by the group that "wants to see the Vermont Yankee nuclear power plant shut down." The "Vermont Yankee Decommissioning Alliance said the vigil is also in support of those affected by the Fukushima nuclear plant's failure following an earthquake last month in Japan."

**Lawmaker's Bill Would Make It A Crime To Keep Operating Yankee Plant.** On its website, WCAX-TV Burlington, Vermont (4/26, Davenport) reported, Rep. Richard Marek will bring legislation "to make it a crime for Vermont Yankee to stay open after its license expires," making "it a state crime for the plant to operate without state approval. The bill calls for fines of \$100,000 a day." WCAX-TV says the measure is "not likely" to pass this session. Marek said continued operation of Yankee plant would be "an illegal enterprise," subject to fines and the "potential forfeiture of all proceeds for doing so." Meantime, Sen. Randy Brock, said he questioned whether such a bill would conflict with federal pre-emption.

WCAX-TV Burlington, Vermont (4/26, 5:02 p.m., EDT) broadcast, "A state lawmaker wants to make it a crime for Vermont Yankee to stay open after its license expires. The state and Yankee's owner, Entergy, are already headed for a battle in civil court over whether the state has the authority to

force the plant to close. Now Newfane representative Richard Marek is introducing legislation that would make it a criminal enterprise to operate a nuclear plant without state approval. Entergy maintains that nuclear power is regulated by the Federal government which has already granted a 20 year license extension to Vermont Yankee."

### **Group Wants 10-Mile Evacuation Zone Around Nuclear Plants Extended To 50 Miles.**

Citing the Fukushima and Chernobyl nuclear accidents to show that "radiation releases can endanger people and contaminate land many miles beyond evacuation zones," McClatchy News (4/27, Schoof) reports that the "advocacy group Physicians for Nuclear Responsibility, which opposes nuclear power, said Tuesday that the US 10-mile evacuation plan was inadequate and should be extended to 50 miles." A third of the US population lives within 50 miles of a nuclear power plant. PSR member Ira Helfand said the "release of radioactive materials raises the risk of cancer, especially for children, who are more vulnerable than adults."

Greenwire (4/27, Northey) adds the "panel of health and anti-nuclear advocates" said the "placement of reactors near large population hubs and the uncertainty over the travel of radioactive material after a nuclear accident raise doubts about NRC's US plan," especially given that radioactive plumes "tend to go beyond 50 miles and spread like fingers in multiple directions depending on wind speed and other meteorological conditions, said former Energy Department official Robert Alvarez. 'The infeasibility of evacuation is not considered important enough in the hierarchy of priorities relative to the continued operation of these reactors, and that's something we have to look at very seriously,' he said."

### **Most Americans Believe A Nuclear Crisis In US Is Likely.**

McClatchy News (4/27, Lightman) reports, "Most Americans fear that the United States someday could face the kind of nuclear emergency that's plagued Japan in recent weeks, according to a new McClatchy Newspapers-Marist poll." Marist Institute for Public Opinion director Lee Miringoff said there was "clearly a good deal of concern," and division over "whether we're suited to handle this." The "McClatchy-Marist survey found that a solid majority of Americans -- 57 percent -- think that a nuclear crisis is probable here; 41 percent thought such a crisis was likely, while another 16 percent said it was very likely."

### **Pueblo Commissioners Cite Water, Safety Concerns In Nuclear Plant Rejection.**

The Colorado Independent (4/27, Tomasic) reports, "Citing concerns about safety and a lack of water, the Pueblo County commissioners Monday night unanimously voted down a zoning change request by a Pueblo attorney seeking to build

a 'clean energy park,' including a nuclear power plant, just outside the city." Pueblo attorney Don Banner last month "stirred heated debate with his proposal, which has been in the works since last summer but came before the commissioners hard on the heels of the Fukushima Daiichi nuclear power plant disaster in Japan. The commissioners took their time to consider Banner's request, weighing thousands of emails and letters of support and opposition."

The Pueblo Chieftain (4/27, Malone, 45K) reports, "A small anti-nuclear rally outside the Colorado state Capitol on Tuesday commemorated the 25th anniversary of the Chernobyl nuclear plant disaster. The crowd of about 40 also reveled in Pueblo County commissioners' decision Monday against allowing a proposed power plant there."

KJCT-TV Grand Junction, Colorado (4/26, 7:46 a.m., EDT) broadcast, "Pueblo County Commissioners have rejected a request that would have brought a nuclear power plant to the county. 'The Chieftain' reports the commissioners voted 3 to 0 against a special land use permit sought by a Pueblo lawyer. He had proposed rezoning a nearly 38 square mile parcel to create an energy park that would have included the nuclear plant. It would have been the first new plant in the US in three decades." KUSA-TV Denver, Colorado (4/26, 6:33 a.m., EDT) also carried this story.

**Iowa House Approves Bill To Finance New Nuclear Plant.** The AP (4/27, Glover) reports, "On the 25th anniversary of the nuclear disaster at Chernobyl, and as officials in Japan deal with the fallout from a nuclear plant damaged by a tsunami, the Republican-controlled Iowa House approved a measure Tuesday aimed at spurring the development of the state's second nuclear power plant." The measure would clear the way for MidAmerican Energy "to begin billing customers in advance for the estimated \$1 billion cost of developing one or more small modular nuclear reactors that could be on line as early as 2020." House lawmakers rejected several attempts by "critics" to modify the legislation, before approving it in a 68-30 vote. The bill is expected to have a tougher time in the Democratic-led Senate.

The Des Moines Register (4/26, Beeman, 111K) adds that Republican Rep. Chuck Soderberg, "floor manager of the legislation, said the bill would set the stage for a second Iowa nuclear plant, but would not approve the project or a rate increase." He called nuclear power a "proven technology, an available technology," and one that "can be delivered in large, and now, small scales." But Democrats "offered a string of amendments, most of which were ruled out of order or defeated," and Rep. Mary Mascher urged fellow House members to delay voting "on the legislation until a MidAmerican feasibility study is filed."

WHO-TV Des Moines, Iowa (4/26, 11:09 p.m., EDT) broadcast, "A plan to allow MidAmerican Energy to finance a new nuclear power plant, passed in the Iowa house today. The measure allows MidAmerican to begin billing customers in advance to pay for the one billion dollar project. Supporters say the state will soon face an energy shortage and legislators needed to act now because a nuclear plant will take years to complete." Opponents argued "there are too many questions about the safety of nuclear plants, especially in light of the Japanese nuclear disaster." WHBF-TV Davenport, Iowa (4/26, 11:07 p.m., EDT) and KCCI-TV Des Moines, Iowa (11:00 p.m., EDT) also carried this story, as did the Sioux City Journal (4/27, Wiser).

Prior to the vote, the Des Moines Register (4/26, Beeman, 111K) reported that despite "a surplus of electricity in the Midwest and waning demand in a struggling economy," MidAmerican Energy "wants to build a small nuclear plant and is pushing legislation this year to help clear the way. At 540 megawatts, it would be among the nation's smallest." MidAmerican chief William Fehrman "said industry studies have found that nuclear power is one of the cheapest and cleanest energy sources available. ... 'We want to show it can be a proven and safe technology, and see what comes along,' said Fehrman, adding that more modular nuclear units could be added later."

**Palo Verde Relicensing Said To Be An "All Or Nothing" Effort.** In an opinion piece for Arizona's Modern Times Magazine (4/26), John Guzzon wrote, "Whether by coincidence or karma, Arizona's Palo Verde Nuclear Generating Station has taken center stage just as the Fukushima Daiichi disaster has put the world on alert about the potential pitfalls of nuclear power." Guzzon adds that since nuclear plants "such as Palo Verde produce no greenhouse gases and are therefore 'clean,'" they end up offsetting millions of tons of carbon dioxide that would otherwise be generated to make electricity. He adds, "When done right, nuclear power can be like having your cake and eating it too. But if an accident happens, it is more like those trick candles that never go out: You can blow all you want, but no one is eating any cake until you get the fire out."

**Critics Fault Nuclear Industry's Pursuit Of Relicensing, Uprates.** The Newport News (VA) Daily Press (4/27, Nealon, 69K) reports on the nuclear industry's practice of seeking relicensing and power uprates for plants nearing the end of their operational lifespans, and how some "Anti-nuclear groups say the trend does not pose an immediate threat, but they question the wisdom of pumping more power from an aging fleet of reactors." David Lochbaum of the Union of Concerned Scientists said that the group is "concerned" about the practice. "Lochbaum

compared the maintenance and life cycle of nuclear power plants to that of automobiles — both can run efficiently if they're well-maintained, he said. The union holds Surry and Dominion's other nuclear plant in Virginia, North Anna Power Station, in 'high regard,' he said." NRC spokesman Scott Burnell said the uprates are justifiable because the NRC established "conservative power output levels" for the original licenses.

### **New York ISO Report Cautions Closing Indian Point Would Lead To Loss Of Reliability.**

WAMC-Radio Albany, New York (4/26) reported on its website, the New York Independent System Operator's report on the future of New York's energy needs paints an overall good picture for New York, but offers some caution, "when looking to the future, particularly, the upcoming decision on the future of the Indian Point Nuclear Power Plant." John Durso of the New York Affordable Reliable Electricity Alliance "points out that the report highlights the harms that could be done by closing the plant, when its current operating licenses expire in 2013 and 2015. In fact, the report says specifically that the retirement of both nuclear units at Indian Point when their current licenses expire would result in violations of reliability standards in 2016, leading to loss of power supply and transmission voltage support for the greater New York City area."

On its website, Renew Grid (4/27) notes that the NYISO's annual review points to the challenge of developing "adequate replacement generation to serve southeastern New York in the event of the retirement of the nuclear power units at Indian Point. These resources would be needed to prevent violation of mandatory resource adequacy reliability standards and maintain the supply of power and transmission voltage support needed to move electricity over power lines, the NYISO notes."

**Renewable Energy Experts Outline Plan To Replace Indian Point.** The Westchester (NY) Journal News (4/27, Clary) reports, "renewable-energy experts on Monday laid out ways to replace the electricity that Indian Point produces, but pointed out that doing so will take major changes in the way energy is produced and used." At a symposium, Karl Michael, an energy analyst for the New York State Research and Development Authority, said, "It's just been a fact of life we've been wrestling with anytime we try to plan. Using energy efficiently is a wonderful thing, but they keep inventing more big-screen TVs."

**NRC Says Overall, GE's Global Nuclear Fuel Facility Operated Safely.** The Wilmington (NC) Star News (4/27, Brumm) reports, "Global Nuclear Fuel (GNF) operates its nuclear fuel-fabrication plant north of Wilmington in a safe and secure manner, stated the Nuclear Regulatory

Commission in its latest performance review of the Castle Hayne facility." But NRC regulators point out that there is "one area needing improvement." Marvin Syker, the Region 2 branch chief of the NRC's Division of Fuel Facility Inspection, "explained the NRC has determined continued attention is needed to improve GNF's safety controls," and noted that the review identified "a 'risk significant' breakdown associated with GNF's Integrated Safety Analysis that is being addressed by the company."

### **Nine Mile Point Unit 1 Operating At 78 Percent Capacity.**

Bloomberg News (4/27, McClelland) reports, "Constellation Nuclear Energy Group LLC, a joint venture of Constellation Energy Group Inc. (CEG, 708K) and Electricite de France SA, slowed the 621-megawatt Nine Mile Point Unit 1 in New York to 78 percent of capacity from full power yesterday. Another unit at the site, the 1,140-megawatt Unit 2, is operating at full power. The plant is located about 6 miles northeast of Oswego."

### **Natural Gas Promise Could Squash Nuclear Revival.**

In an article titled "Will Natural Gas Surge Mean Lights Out For Nuclear?" Medill Reports: Chicago (4/27, Springer) reports that the promise of natural gas is contributing delays and cancellations of nuclear plant construction projects. Experts say "with some of the lowest and most stable natural gas prices in US history, building new nuclear facilities is no longer a viable option in competitive markets." That is true even for Exelon Corp. which "expects natural gas to affect its investments for years to come." Brian Habacivch, senior vice president of Fellon-McCord & Associates LLC, said, "It looks like the nuclear revolution is falling apart pretty quickly. ... Constellation [Energy] pulled their plug, so did NRG."

### **NRC States No Safety Concerns From Plant Vogtle.**

WAGT-TV Augusta, Georgia (4/26, 11:11 p.m., EDT) broadcast, "Plant Vogtle says a reactor that temporarily shut down is back up and running. We're told its operating at 100 percent. The Nuclear Regulatory Commission says there have been no leaks, damage or other safety concerns reported since the reactor went down last week." WJBF-TV Augusta, Georgia (4/26, 6:04 p.m., EDT) WTOG-TV Savannah, Georgia (4/26, 5:35 p.m., EDT) WTVC-TV Chattanooga, Tennessee (4/26, 5:20 p.m., EDT) and WMAZ-TV Macon, Georgia (4/26, 12:05 p.m., EDT) also carried this story.

### **Malloy, Democrats Near Deal On Energy Tax.**

The New London Day (4/27, Niedel) reports, "Gov. Dannel P. Malloy and Democratic lawmakers appear set on the idea of imposing a new state tax on energy generation. The debate

has now shifted to how that tax should be structured, and whether or not it would get passed on to consumers in the form of higher electric rates." According to projections, the tax will "generate \$72 million a year in state revenue by taxing nearly all electricity producers at the same rate, whether they're nuclear, coal, oil, or natural gas." Dominion has expressed the willingness to "absorb the \$40 million annual cost of the Malloy tax."

Articles by the Tolland Patch (4/27, Srinivasan), the New Haven Register (4/27, Turmelle, 69K) and the Norwich Bulletin (4/27) mention the controversial "Millstone tax."

**USEC Moves Forward In Loan Guarantee Process.** The Chillicothe (OH) Gazette (4/27, 10K) reports, "While political pressure continues to be applied to the Department of Energy to approve a \$2 billion loan guarantee for the American Centrifuge Plant in Piketon, USEC Inc. has announced it is moving to the next step in the approval process." USEC announced "that it has completed most of its due diligence review and the negotiation stage of the application process." Although "no time frame has been announced for a conditional commitment to be issued, USEC President and CEO John Welch is hoping that one would come during the second quarter of this year, which runs through the end of June."

**MIT Study Group Urges Centralized Storage Of Spent Nuclear Fuel.** Platts (4/27) reports, "Centralized interim storage of utility spent fuel is the centerpiece of a Massachusetts Institute of Technology report released Tuesday on the future of the nuclear fuel cycle." The MIT study group also said they "do not believe the US should accelerate the movement of spent fuel" from cooling pools to dry storage casks -- "as some have suggested following the accident at Japan's Fukushima-1 plant after the March 11 earthquake and tsunami." Platts adds, "Instead of accelerating the transfer of spent fuel to storage casks, the US needs to accelerate the move toward a 'rational back-end' program, said Ernest Moniz, the MIT study group's co-chair." The group supports "centralized interim storage" in part because it remains to be seen whether such material might not one day be used as an energy resource.

On his "GreenTech" blog for CNET News (4/26) Martin LaMonica reports, "Regardless of whether spent fuel from today's nuclear reactors is treated as waste or reused as fuel in the future, an expert commission says the US should create a centralized storage system, an issue drawn into sharp focus because of Japan's current nuclear crisis." MIT's report "called the 'Future of the Nuclear Fuel Cycle,'" includes the panel's arguments for a US policy that makes "spent-fuel treatment an integral part of nuclear plant operations, rather than an 'afterthought.'" The "MIT report recommends that

existing spent fuel stored on site be brought to centralized sites and stored in concrete dry casks suitable for 100 years of storage."

**Lawmakers Tour Yucca Site.** The AP (4/27) reports House subcommittee on the energy and economy chairman John Shimkus (R-IL) led a tour of the Yucca Mountain nuclear waste repository site Tuesday. "Democratic Congressman Gene Green of Texas and Republican Congressman Michael Burgess of Texas are scheduled to join Shimkus." Shimkus has said that "the nation urgently needs a nuclear storage site," and "there is no scientific or technical basis for shuttering Yucca Mountain."

The Las Vegas Review-Journal (4/27, Rogers, 178K) reports that Shimkus said during the tour, "It's a national asset that would be sad to let go to waste," adding, "Could you think of the jobs that would be back in Nevada?" While Burgess said, "I think Japan changed the equation. I'm bothered by the fact that we spent so much time and so much money and we're not finding the answer." Said Green, "There's been a lot of money invested so why are we starting over?"

In a separate story, the Las Vegas Review-Journal (4/27, Rogers, 178K) adds that Senate Majority Leader Harry Reid (D-NV) said that the trip was a waste of taxpayer money. He went on to say in a statement, "Taxpayers have already spent too much money for too many years on a dangerous project that is not only too costly, but technically and scientifically unsound," adding, "As long as I am the majority leader of the United States Senate, this ill-conceived project will never see the light of day and we will never truck nuclear waste through Nevada's neighborhoods."

**Study: Stimulus Funding Saved, Created Jobs In SRS Region.** According to a new study from the O'Connell Center for Executive Development at the University of South Carolina Aiken, Augusta State University, and Claflin University, the Augusta (GA) Chronicle (4/27, Pavey) reports "federal stimulus dollars spent in the five-county region surrounding Savannah River Site created or saved 4,600 jobs and helped mitigate the impacts of the worst recession in recent history." The economists produced "an analysis of American Recovery and Reinvestment Act spending and its impacts on Aiken, Barnwell and Allendale counties in South Carolina, and Richmond and Columbia counties in Georgia." The study found, "Every dollar of the Recovery Act invested in this area funded 86 cents of additional economic activity in the region, and each job funded by the SRS Recovery Act program created an additional 0.90 jobs in the local community."

**Difficulties Of Waste Transfer At Hanford Explored.** NPR (4/27) reports, "One of the most difficult

challenges at the Hanford Nuclear Reservation is moving radioactive waste from point 'A' to point 'B.'" Although it is seven miles from the site's new waste treatment plant to the farthest waste tanks, "the technical challenges engineers have to overcome to make that journey are enormous." Tom Fletcher, a top manager with the DOE, said, "I'm going to have every finger and toe crossed that that machine turns on successfully and we transfer successfully, because it's a history-making event when we make that first glass log," referring to the glass logs that the waste will be transformed into at the new plant.

**NPR's "Talk Of The Nation" Discusses Benefits And Costs Of Energy Sources.** On NPR's "Talk of the Nation" (4/27), host Neal Conan says, "Almost everybody depends, one way or another, on the energy from coal, oil and nuclear power." Conan adds "we also take notice when there's an accident at a nuclear power plant or an explosion on a deepwater oil rig, or when we lose more than two dozen men in a coal mine explosion." Conan then discusses the costs and benefits of coal, oil and nuclear power with James Fallows, the national correspondent for The Atlantic. According to Conan, Fallows wrote an article for The Atlantic that "startled some readers," because it stated "that there is no plausible way to meet the world's unavoidable energy demands without dirty, sooty, toxic coal."

**ORNL Responds To Cyberattack.** In the aftermath of a cyberattack, the Knoxville News Sentinel (4/27, Munger) reports, the Oak Ridge National Laboratory's Information Technology staff members – "and experts brought to Oak Ridge to help with the investigation and response -- have worked virtually around the clock trying to cleanse the systems of any traces of the intrusive malware and get things back to normal as soon as possible." Meanwhile "some declared the temporary break from email a blessing and even put a good face on the loss of Internet access, using the time to do focused work without the usual distractions or conduct physical cleanup or reorganization of files, etc." While some "have suggested that the cyber attack/invasion of [ORNL] is an embarrassment to an institution that is considered perhaps the world's leading center for scientific computing," ORNL director Thom Mason pointed out that other institutions, such as Google, have been targeted by similar attacks, and ORNL will remain a target because "we've got information that people want."

**NSA Director: Cybersecurity Requires More Than "Static Defense."** The Tulsa (OK) World (4/26, Evatt, 101K) reports NSA Director Gen. Keith B. Alexander, who also heads the US Cyber Command, "says at least 5,000 new bits of malicious code show up on the Internet every day." Speaking Monday at the University of Tulsa, Alexander "said

these constant new threats mean that simply throwing up a computer firewall and fixing things when they break isn't good enough. 'We can no longer depend on a static defense,' he said." The Oklahoman (4/27, Evatt, 146K) also reports the story.

## **INTERNATIONAL NUCLEAR NEWS:**

**"Culture Of Complicity" Likely Contributed To Japanese Nuclear Plant Problems.** The New York Times (4/27, A1, Onishi, Belson, 950K) reports on its front page, "The Japanese are increasingly raising the possibility that a culture of complicity made the plant especially vulnerable to the natural disaster that struck the country on March 11." A number of "inconsistent, nonexistent or unenforced regulations played a role in the accident," including, "the low seawalls that failed to protect the plant against the tsunami and the decision to place backup diesel generators that power the reactors' cooling system at ground level, which made them highly susceptible to flooding." The revolving door between government bureaucracy and the nuclear private sector created a regulatory scheme that "was allowed to remain lax by politicians, bureaucrats and industry executives single-mindedly focused on expanding nuclear power."

**Radiation Levels At Reactor No.1 Rise To Highest Levels Since Accident.** Bloomberg News (4/27, Inajima, Nakayama) reports, "Radiation readings at Japan's Fukushima Dai-Ichi station rose to the highest since an earthquake and tsunami knocked out cooling systems, impeding efforts to contain the worst nuclear crisis since Chernobyl." Robots sent into the reactor No. 1 building "took readings as high as 1,120 millisieverts of radiation per hour, Junichi Matsumoto, a general manager at Tokyo Electric Power Co., said," which is more than four times the annual dose allowed to nuclear workers. According to Bloomberg, "a plan to flood the containment vessel of reactor No. 1 with more water to speed up emergency cooling efforts announced yesterday by the utility known as TEPCO may not be possible now."

**Concerns About Leaks In Other Buildings Grow.** Prior to the announcement about the radiation levels at the No. 1 reactor, the Wall Street Journal (4/27, Obe, Subscription Publication, 2.02M) reports that concerns about a possible leak in the spent fuel pool at reactor No. 4 have grown, according to Nuclear and Industrial Safety Agency spokesman Hidehiko Nishiyama. The pool holds the most fuel rods of any of the plant's six reactor buildings, and TEPCO has increased the amount of water sprayed on the pool in the last few days.

Japan's Mainichi Daily News (4/27, 3.95M) adds that TEPCO also announced Tuesday that "a concentration of radioactive water in the basement of the No. 4 reactor's turbine building at the crippled Fukushima No. 1 Nuclear Power Plant became abnormally high, reaching a maximum of 250 times normal monthly levels." Meanwhile, "radioactive water may be leaking from the basement of the nearby No. 3 reactor's turbine building and the water level there is on the rise, TEPCO sources say, as the ongoing crisis at the power plant continues following heavy damage by the March 11 earthquake and tsunami and subsequent explosions."

**Atmospheric Radiation Exposure Higher Than Previously Estimated.** Meanwhile, Japan's Yomiuri Shimbun (4/27) reports that "data released by the government indicates radioactive material was leaking into the atmosphere from the Fukushima No. 1 nuclear power plant in early April in greater quantities than previously estimated." The Cabinet Office's Nuclear Safety Commission said Saturday that "radioactive material was being released into the atmosphere from the plant at an estimated rate of 154 terabecquerels per day as of April 5," whereas "the NSC previously estimated radiation leakage on April 5 at 'less than 1 terabecquerel per hour.'"

**Chernobyl Anniversary Observed In Several Countries.** Several newspapers reported that people in several parts of the world observed the 25<sup>th</sup> anniversary of the Chernobyl nuclear disaster on Tuesday. The Epoch Times (4/26, Zifcak, Phillips, 1.4M) said Ukrainian President Viktor Yanukovich and Russian President Dmitry Medvedev "laid flowers at a memorial to those who sacrificed their lives working" at the Chernobyl nuclear plant to stop "the catastrophe" 25 years ago. The Times said "nationwide protests in Germany by more than 100,000 people" on Monday "called for an end to nuclear power." In the US, "the Georgia Women's Action for New Directions (WAND) held a small afternoon protest outside Georgia Power's headquarters on Tuesday in Atlanta," according to the Times.

The Christian Science Monitor (4/26, Steinger, 48K) reported that "even though the" Chernobyl "disaster that occurred 25 years ago today caused Europe to reconsider atomic energy, nuclear plants still power much of the Continent." Still, "the recent events at the Fukushima plant in Japan have strengthened the case of the opposition." The paper said "that growing unease was on display Monday when 120,000 people demonstrated against nuclear energy in Germany, while in France several thousand gathered at the power plants in Fessenheim and Cattenom." The article said that in Germany, "phasing out nuclear energy is not a question of if, but when." France, on the other hand, "has seen only minor expressions of dissent about its reactors."

Reuters (4/26) reported Ukraine observed the 25th anniversary of the Chernobyl nuclear plant disaster as Japan continued with its efforts to tackle the ongoing crisis at its Fukushima plant. Reuters said the world community recently promised to provide \$780 million to construct a new dome over the existing shell in Chernobyl, which is leaking radiation.

NPR (4/26, Greene) reported that "in the Ukrainian capital of Kiev, a bell rang 25 times Tuesday morning, marking each year that has passed since the world's worst nuclear disaster." NPR said "many people who lived through the 1986 Chernobyl accident are still suffering the after-effects, and the new nuclear crisis unfolding in Japan serves as another reminder of just how long recovery can take." Notably, "there is not much mobility in post-Soviet Ukraine. People still live in houses they built in Soviet times, so neighbors who lived through Chernobyl remain together today." As these people watch the "news coverage of the nuclear accidents in Japan," it "has reopened some wounds," NPR noted.

**Article Lists Four Ways Chernobyl Disaster Continues To Have An Impact.** The Christian Science Monitor (4/26, Zirulnick, 48K) reported the Chernobyl disaster "continues to have an impact" 25 years after the incident in four ways: radiation, health, zone of alienation, and agriculture. The article said the dome that was built to seal the crippled reactor is "crumbling" and Ukraine is seeking international help to make up for the shortfall in funds.

**Chernobyl's Impact On Health Still Being Debated.** The Chicago Tribune (4/26, Brown, 475K) reported that "even after decades of study" of the impact of the Chernobyl nuclear disaster, "experts are still debating the long-term health effects of the disaster." Though "the UN and other investigators have determined that there is no evidence of excess cancers resulting from the accident," others "suggest that excess cancers and cancer deaths worldwide will number in the tens of thousands, or even higher." The Tribune said a "comment released Monday from the journal The Lancet explains why it's hard to pin down a number: the research is extremely difficult to complete." Co-authors Kirsten Moysich, Philip McCarthy and Per Hall, "who participated in the UN study that found no evidence of excess cancers," said there are "considerable logistical challenges in doing epidemiological research in the countries of the former Soviet Union."

**Blog Highlights Similarities And Differences Between Fukushima, Chernobyl Disasters.** In a posting for the Forbes (4/26, 924K) "Edison 2.0" blog, Osha Gray Davidson wrote that "the crisis at Japan's Fukushima Daiichi nuclear power plant is strikingly similar to the terrible events at the Soviet Chernobyl plant which exploded and burned, releasing massive amounts of radioactive materials on this day, twenty-five years ago." Still "the twin disasters are also

very different." For instance, "one of the biggest differences" is "the amount of resources the two countries possess to minimize long-term effects." He said the erstwhile "Soviet Union was, we now know, facing financial collapse," and opted to "simply abandoned vast amounts of contaminated land." The blog posting said that "given enough resources" it is possible to decontaminate even "a highly radioactive site." Davidson wrote, "It depends primarily on political will."

**India Plans Nuclear Regulatory Authority To Oversee Plants.** The AP (4/26) reported that India says it will "set up an independent watchdog to oversee all of its nuclear reactors in view of mounting concerns about the safety of such installations." The watchdog would operate as "an autonomous nuclear regulatory authority" under a bill being prepared now by the government. In the meantime, "top government leaders also decided to go ahead with the nuclear power plant in Jaitapur" in Maharashtra state, and the government said it would "increase the compensation already paid" to displaced residents "and will reach out to local people to assure them of the plant's safety."

Reuters (4/27, Nayak) reports that India's environment minister also promised that reactors at Jaitapur each "will have a stand-alone safety system," as well as "a dedicated operating and maintenance system." If six reactors are built at the site, it would become the largest such installation in the world. India already has reached a tentative agreement for France's Areva to build and supply two reactors at the Indian site for some \$10 billion. Reuters also points out that India's present constraints on power are holding back economic growth. Some 500 million Indians – or 40 percent of the population – do without electricity.

The Washington Post (4/26, Lakshmi, 572K) reported that Indian officials said the results of safety audits at existing nuclear plants also would be released to reassure residents of their safety. The Jaitapur site has caused confrontations – some violent – between activists and residents of the area. While top Indian officials "made clear Tuesday that the plants will not be scrapped," they also "promised greater transparency and a tightening of safety norms."

The Times of India (4/27, Sethi, 3.15M) reports that government officials "sought to distinguish between 'local protests' and outsiders in Jaitapur and said they did not expect any reconciliation with those ideologically opposed to nuclear power," although the "concerns of the local people" will be addressed. The government also said domestically produced reactors would be at the center of India's program, an "explanation...intended to counter the criticism that the government's nuclear power policy revolves around deals with foreign suppliers."

The Hindu (4/27) also reports the story, noting that India "reaffirmed its commitment to an ambitious nuclear energy

plan" on the same day that "the world marked the 25th anniversary of the Chernobyl nuclear disaster."

**UN Chief Says He Will Call Nuclear Safety Summit In September.** Reuters (4/27) reports that the UN's Secretary-General Ban Ki-moon says he will call a summit meeting on nuclear safety in September, adding that "the tragedy at the Fukushima Daiichi nuclear power plant in Japan has added further urgency to this issue. ... 'This is a time for real global debate on the future of nuclear energy.'" He indicated the summit would be called as part of the General Assembly's annual meeting in New York.

Greenwire (4/27) reports that Ban called for the summit at a special session of the General Assembly that commemorated Chernobyl. Ban told delegates the IAEA should help develop standards for safety, and he noted that one of the lessons from Chernobyl was that it "was not the problem for Ukraine, Belarus, or Russia alone. Chernobyl was our problem, a shared challenge for the world."

**German Lobby Group Says Power Prices Will Rise 30 Percent After Nuclear Exit.** Bloomberg News (4/26, Comfort) reported that the German industry lobby BDI commissioned a study that found "Germany's plan to accelerate its exit from nuclear power generation may raise electricity prices by as much as 30 percent." The study said new costs of 33 billion euros would be incurred by 2020 to generate power through more costly means, and that number could go as high as 51 billion euros "if subsidies for developing renewable energy and the German power grid are included."

**Germany's Environmental Chief Says Emissions Will Be Offset.** Bloomberg News (4/27, Weiss) reports that Financial Times Deutschland said it would carry a report Wednesday that Germany's exit from "nuclear power would not result in a burden to the environment as additional carbon dioxide emissions from coal-fired plants would be offset elsewhere," according to Federal Environment Agency President Jochen Flasbarth.

**Berlusconi Says Italy Will Delay Nuclear Program Until Favorable Public Opinion.** AFP (4/26) reported that Italian Prime Minister Silvio Berlusconi said Tuesday that his government remains "convinced that nuclear energy is the future for the whole world" as well as "the safest" energy source, even though the country has cancelled a "planned return to nuclear power." Italy gave up its nuclear program after Chernobyl and had just decided to resume a program when the disaster occurred in Japan. Berlusconi said a delay would "allow a new public opinion to form in a year or two." Italy's Enel has a nuclear agreement with France's EDF, and French President Nicolas Sarkozy

“said that Italy would have ‘a welcoming and friendly partner’ in France when it decided to return to nuclear energy.”

Reuters (4/27, Hornby) also reports the story, noting that Berlusconi predicted that Italy “would have had to abandon nuclear energy for a long time” if it allowed a referendum to go forward as planned in June. He said “clarity on the technology” would emerge in a year or two, and Italy could revisit nuclear plans. Reuters also points out Italy’s propensity for earthquakes and its heavy reliance on imported oil and natural gas.

### **OPG Study Says Lake Huron Deep Geologic Repository Is Safe Site To Store Waste.**

The Canadian Press (4/27, 88K) reports, “Ontario Power Generation is seeking federal approval to build underground vaults near Lake Huron to store low- and intermediate-level radioactive nuclear waste.” In a 12,500-page submission that includes an environmental impact statement on the Deep Geologic Repository, the utility contends that “the project ‘will not likely result in any significant adverse environmental or public health effects.’” The report asserts that what little moisture there is at “680 metres below the surface of the proposed site is trapped in rock so dense it doesn’t move, said Albert Sweetnam, an executive vice-president at OPG who is in charge of the project.” The rock level is stable and earthquakes are not said to be a great concern, though Greenpeace Canada disputes that and points to the crisis at Japan’s Fukushima plant.

### **China Aims To Encourage Advanced Reactors, Uranium Exploration.**

Reuters (4/27, Stanway) reports, China wants to spur development and construction of advanced nuclear reactor and boost efforts to develop domestic uranium resources, according to the National Development and Reform Commission, which is the country’s main planning agency. The agency said China would pursue advances in uranium isotope separation, handling of spent nuclear fuel and detection of radiation.

### **Financing Concerns, Lack Of Clout Crimp South Korea’s Nuclear Export Plan.**

The Financial Times (4/27, Subscription Publication, 448K) reports that South Korea’s plans to export nuclear reactors have stumbled after a \$20 billion deal to build four reactors in Abu Dhabi, in part because possible buyers are skeptical about the country’s ability to finance nuclear projects. Other experts suspect the country cannot wield enough political clout. South Korea lacks large international banks and has lost deals recently in Turkey, Lithuania, and Vietnam. South Korea had set a goal of selling 80 reactors by 2030.

### **Russia Urges Global Safety Standards For Nuclear Energy On Chernobyl Anniversary.**

On the 25th anniversary of Chernobyl, “the worst nuclear accident in history,” the AP (4/27, Danilova) reports that Russian President Dmitry Medvedev defended nuclear energy but “said he has invited world leaders to work on rules for safer nuclear energy.” Russia sent proposals to G8 countries Tuesday and said “it’s of utmost importance that we understand what kind of force humankind is dealing with” in considering safety rules. He joined Ukraine’s President Viktor Yanukovich in “a religious service outside Chernobyl’s damaged No. 4 nuclear reactor, laying the first stone of a monument to cleanup workers and placing bouquets of red roses at another monument to Chernobyl victims.”

AFP (4/26) reported that the Kremlin said Medvedev believes individual countries should be responsible “for reacting to nuclear accidents in a timely and efficient way,” but that global standards should apply to countries that build and use nuclear power. He “added that international organisations including the International Atomic Energy Agency should be tasked with enforcing those rules.” Medvedev also pushed for “information openness and absolute transparency” as “the norm” at nuclear plants. AFP points out that “the Soviet Union famously stayed silent on the Chernobyl disaster for three days.”

Bloomberg News (4/27, Shiryayevskaya) reports that in addition to sending its proposals to the G8 countries, Russia distributed them to “BRICS countries, the Commonwealth of Independent States, and the International Atomic Energy Agency.” Bloomberg News points out that Chernobyl, “covered by a makeshift shelter, still leaks radiation, as Ukraine seeks to collect funds globally to build a new confinement. Even with radiation leaks, Chernobyl has become a tourist destination.”

Reuters (4/27) reports that Medvedev directly addressed the Soviet Union’s stonewalling on Chernobyl when he spoke Tuesday. He said, “The duty of a state is to tell the truth to its people. It must be acknowledged that the (Soviet) state did not always behave correctly.” He said that Chernobyl, as well as Japan’s experience with its Fukushima plant, made a vivid case for global standards on nuclear plants. Russia recently donated \$65 million for a new containment structure for Chernobyl.

### **French Public, Media Rethinking Dependence On Nuclear Power.**

NPR (4/26) reported on changes in French attitudes toward nuclear power, which supplies 80 percent of the country’s electricity. The “evens in Japan are prompting a rethink – at least by the public and the media,” and one “recent poll...shows that 57 percent of French people say they believe the country should end its reliance on nuclear energy.” Moreover, in a first, “the French nuclear

safety watchdog said that nobody can guarantee that there will never be a nuclear accident in France.” French President Nicolas Sarkozy, however, has “said France would continue to rely on nuclear energy, calling it a pillar of the country’s energy policy.”

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# NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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## **NRC NEWS:**

### **High Radiation Levels Found At Ohio Nuclear Plant (AP)**

By Meghan Barr

Associated Press, April 27, 2011

CLEVELAND – High radiation levels recorded at a nuclear reactor in northeast Ohio have prompted a special inspection by the US Nuclear Regulatory Commission.

Workers at the Perry Nuclear Power Plant immediately evacuated it on April 22 when radiation levels rose while it was shutting down for a refueling outage, the commission said Tuesday. Plant officials don't believe workers were exposed to radiation levels "in excess of NRC limits," the commission said.

"The plant is in a safe condition and there has been no impact to workers at the plant or members of the public from this issue," the commission said in a statement.

Radiation levels rose while workers were removing a monitor that measures nuclear reactions during start-up, low-power operations and shutdown, the commission said.

The highest radiation exposure to any of the workers was 98 millirems, which is equivalent to two or three chest X-rays, a spokesman for the plant's owner said. The NRC's limit for radiation exposure in a year is 5,000 millirems, he said.

The commission, which began inspecting the plant on Monday, did not say how high the radiation levels were or how often such inspections occur.

The nuclear plant, owned by Akron-based FirstEnergy Corp., is about 35 miles northeast of Cleveland and began operating in 1987. FirstEnergy spokesman Todd Schneider said the four workers involved were contractors hired to assist with the plant refueling. He said the contractors were working in a containment building underneath the reactor at the time.

"The contractors did not use the proper method to remove this piece of equipment from underneath the reactor," Schneider said.

The plant refueling has continued on schedule, Schneider said.

"It shouldn't have happened, but the bottom line was it did not impact the safety or health of the contractors or the public," he said.

In March 2010, a small fire broke out in a water pump's lubrication system at the plant. The fire burned for several hours, and two members of the plant's fire brigade were taken to a hospital for heat stress.

The plant experienced numerous safety problems several years ago, causing the NRC to monitor its safety operations every three months in 2005, when the plant was forced to shut down briefly because of problems with pumps that circulate coolant through the reactor's core.

## **Nuclear Regulatory Commission Inspecting Radiation Incident Involving Workers At Perry (PLAINDLR)**

By John Funk

Cleveland (OH) Plain Dealer, April 27, 2011

PERRY -- Workers refueling the Perry nuclear power plant were exposed briefly to unexpectedly high radiation, federal regulators said Tuesday.

The Nuclear Regulatory Commission on Monday sent a team of radiation safety inspectors to the Lake County power plant owned by FirstEnergy Corp.

The inspectors want to figure out what happened and whether mistakes were made.

The incident occurred Friday as four contract workers pulled a radiation monitor from the reactor core. The plant shut down April 18 for refueling and maintenance.

While removing the monitor, workers identified an increase in radiation, the NRC said in a statement late Tuesday. "The workers stopped and immediately left the area when the higher-than-expected levels were identified," NRC spokeswoman Viktoria Mitylyng said.

Company spokesman Todd Schneider said the contractors "did not use the proper method to remove the monitor. We need to improve our oversight. "

He said the highest dose of radiation received by one of the workers was equal to about three x-rays.

In March, the agency notified FirstEnergy that Perry had not improved its three-year record as a power plant with "human performance issues," meaning workers make too many simple mistakes.

## **NRC Inspects FirstEnergy Ohio Plant After Radiation Report (BLOOM)**

By Simon Lomax

Bloomberg News, April 27, 2011

The US Nuclear Regulatory Commission is inspecting a reactor at a FirstEnergy Corp. (FE) power plant in northeast Ohio after "higher-than-expected" radiation was reported last week, the agency said.

Workers at the Perry nuclear plant "identified an increase in radiation levels" on April 22 while the reactor was shut for refueling, the NRC said today in an e-mailed statement. They stopped work immediately and "there has been no impact to workers at the plant or members of the public," the NRC said.

The regulator began the inspection at Perry, about 35 miles northeast of Cleveland, while conducting a 90-day safety review of all US reactors. The examination was prompted by a partial meltdown at Tokyo Electric Power Co.'s Fukushima Dai-ichi plant in Japan, which was damaged by a March 11 earthquake and tsunami.

The four workers in the Ohio incident were contractors who failed to use "proper methods" while removing a piece of equipment from underneath the reactor vessel, Todd Schneider, a spokesman for the power plant, said in an interview. The radiation didn't escape the reactor containment building where the contractors were working, Schneider said.

While the radiation level was unexpectedly high, it was "well within the regulatory limits," Schneider said. One of the contractors received a dose of 98 millirems, or the equivalent of "a couple of x-rays," compared with the NRC's limit of 5,000 millirems a year, he said.

The Akron, Ohio-based company is conducting its own investigation into the incident alongside the NRC's inspection, Schneider said.

## **NRC Begins Special Inspection Of US Nuclear Plant (CNN)**

CNN, April 27, 2011

(CNN) – A special team of federal inspectors are looking into an incident at an Ohio nuclear power plant in which higher-than-normal radiation levels were detected in a work area, the US Nuclear Regulatory Commission said Tuesday.

According to an NRC statement, the company that runs the plant in Perry, Ohio, 35 miles northeast of Cleveland, said the incident was not believed to have exposed workers to unsafe radiation levels.

Viktoria Mitlyng, an NRC spokeswoman, said five workers were involved in the incident, some of them plant employees and others contract workers. She was unable to provide the exact radiation levels detected.

The incident involved the removal of a "source range monitor" from the reactor core on April 22, the NRC statement said, adding that the plant was shut down for refueling at the time. Source range monitors measure nuclear reactions during "start up, low power operations and shutdown conditions," the statement said.

"While performing the activities to remove the monitor, workers at the plant identified an increase in radiation levels in their work area," the NRC statement said. "The workers stopped and immediately left the area when the higher than expected levels were identified. The licensee does not believe the workers received radiation in excess of NRC limits."

The statement said the Perry Nuclear Power Plant was "in a safe condition, and there has been no impact to workers at the plant or members of the public from this issue."

A special inspection team arrived at the plant Monday to determine what happened and evaluate any potential radiation exposure, according to the NRC statement.

Mitlyng said she didn't know how long the inspection would last.

Last week, FirstEnergy Nuclear Operating Company announced that the Perry Nuclear Power Plant shut down for scheduled refueling and maintenance.

The maintenance involved replacing 284 of the 748 fuel assemblies, a company statement said, with "numerous" safety inspections taking place while the unit was offline.

## **Look-Over: NRC Begins Special Inspection At Perry Nuclear Plant (WOIO)**

### **NRC begins special inspection at Perry Nuclear Plant**

WOIO-TV Cleveland, OH, April 26, 2011

The US Nuclear Regulatory Commission has started a Special Inspection to review the circumstances around work activities that led to higher than expected radiation levels in a work area at the Perry Nuclear Power Plant.

The plant is operated by FENOC Nuclear Operating Co. and is located in Perry, Ohio about 35 miles northeast of Cleveland.

The issue involved the removal of a source range monitor from the reactor core on April 22, as the plant was shut down for a refueling outage. A source range monitor measures nuclear reactions during start up, low power operations and shutdown conditions. While performing the activities to remove the monitor, workers at the plant identified an increase in radiation levels in their work area. The workers stopped and immediately left the area when the higher than expected levels were identified. The licensee does not believe the workers received radiation in excess of NRC limits.

The plant is in a safe condition and there has been no impact to workers at the plant or members of the public from this issue.

The special inspection team began work on Monday and will review the circumstances surrounding the higher than expected radiation levels in the work area. The team will gather data to establish a sequence of events, review the utility's work planning and engineering actions, determine if there were human performance factors that may have contributed to the event and evaluate the actual radiological consequences including exposure to the workers. The team will also evaluate the utility's root cause report.

The NRC's special inspection report will be available within 45 days of the inspection's completion of through the NRC RIII Office of Public Affairs and at the NRC web site.

## **NRC: High Radiation Levels At Ohio's Perry Nuclear Power Plant (WKYC)**

By Kim Wendel

WKYC-TV Cleveland, OH, April 27, 2011

PERRY -- The US Nuclear Regulatory Commission has started a Special Inspection to review the circumstances around work activities that led to higher than expected radiation levels in a work area at the Perry Nuclear Power Plant.

The plant is operated by Akron-based First Energy's subsidiary FENOC Nuclear Operating Co. and is located in Perry.

The issue involved the removal of a source range monitor from the reactor core on April 22, as the plant was shut down for a refueling outage.

A source range monitor measures nuclear reactions during start up, low power operations and shutdown conditions. While performing the activities to remove the monitor, workers at the plant identified an increase in radiation levels in their work area.

Four workers stopped and immediately left the containment area when the higher than expected levels were identified. The licensee does not believe the workers received radiation in excess of NRC limits.

The plant is in a safe condition and there has been no impact to workers at the plant or members of the public from this issue.

The special inspection team began work on Monday and will review the circumstances surrounding the higher than expected radiation levels in the work area.

The team will gather data to establish a sequence of events, review the utility's work planning and engineering actions, determine if there were human performance factors that may have contributed to the event and evaluate the actual radiological consequences, including exposure to the workers.

The team will also evaluate the utility's root cause report. The NRC's special inspection report will be available within 45 days of the inspection's completion of through the NRC RIII Office of Public Affairs.

## **NRC To Inspect Perry Nuclear Power Plant (WTAM)**

By Tom Moore

WTAM-AM Cleveland, OH, April 27, 2011

(North Perry) –

The US Nuclear Regulatory Commission has begun a special inspection of the Perry Nuclear Power Plant, saying there had been an incident at the plant in which higher than normal radiation levels were found in a work area of the plant.

The NRC says the Perry plant is safe, and “there’s been no impact to workers at the plant or members of the public from this issue.”

The NRC, in its written statement, says the incident stemmed from a removal of a source range monitor from the reactor core last week, while the plant was shut down for refueling. Source range monitors are used to measure nuclear reactions during certain operations at a nuclear power plant.

FirstEnergy Nuclear Operating Company, which operates the plant, says the shutdown for refueling also involved numerous safety inspections.

An NRC inspection team arrived at the plant Monday to begin its investigation.

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## **High Radiation Found At Ohio Nuclear Plant (MSNBC)**

**Regulators say plant is safe and workers weren't exposed to excessive limits**

MSNBC, April 27, 2011

CLEVELAND — The US Nuclear Regulatory Commission said Tuesday it has started a special inspection at a nuclear reactor in northeast Ohio where high radiation levels were reported in a work area.

Workers at the Perry Nuclear Power Plant immediately evacuated on April 22 when radiation levels rose while the plant was in the process of shutting down for a refueling outage.

The commission said the plant is safe and that officials do not believe workers were exposed to radiation levels "in excess of NRC limits."

The commission said radiation levels rose when workers were removing a monitor that measures nuclear reactions during start-up and shutdown.

It did not specify the level of radiation detected.

"The special inspection team began work on Monday and will review the circumstances surrounding the higher-than-expected radiation levels in the work area," the NRC said in a statement.

"The team will gather data to establish a sequence of events, review the utility's work planning and engineering actions, determine if there were human performance factors that may have contributed to the event and evaluate the actual radiological consequences including exposure to the workers."

The nuclear reactor, owned by Akron-based FirstEnergy Corp., is about 35 miles northeast of Cleveland. A FirstEnergy spokesman did not immediately return a request for comment after business hours Tuesday.

In March 2010, a small fire broke out in a water pump's lubrication system at the plant. The fire burned for several hours, and two members of the plant's fire brigade were taken to a hospital for heat stress.

The plant experienced numerous safety problems several years ago, causing the NRC to monitor its safety operations every three months in 2005, when the plant was forced to shut down briefly because of problems with pumps that circulate coolant through the reactor's core.

## **Officials Investigating Perry Plant Incident (WILLNH)**

Willoughby (OH) News-Herald, April 27, 2011

US Nuclear Regulatory Commission officials are conducting an investigation after workers at the Perry Nuclear Power Plant made a mistake that exposed them to higher-than-usual levels of radiation.

Plant spokesman Todd Schneider said the incident happened on Friday when four contracted workers were doing refuelling work on a reactor in the plant's containment building.

The workers were removing a part from under the reactor but did not use the proper length of cable to pull the equipment out.

As a result, the piece did not go into a protective covering as it would have had they used the proper cable, Schneider said.

While in the vicinity of the exposed equipment, the workers' radiation monitors began to sound. They immediately left the area to avoid further contamination.

Schneider said that although the radiation levels were higher than usual, they were not dangerous.

"The highest level in any of the workers was equivalent to getting about three X-rays," he said.

The incident also does not pose a health risk to the public since it happened in the plant's containment building, Schneider said.

On Tuesday, officials worked to replace the equipment as the NRC began its investigation.

According to Schneider, the plant is conducting its own investigation into the incident as well.

## **NRC Won't Intervene In Yankee Lawsuit (VTPR)**

By John Dillon

Vermont Public Radio, April 26, 2011

(Host) The Nuclear Regulatory Commission says it won't intervene in the lawsuit against the state over the continued operation of the Vermont Yankee plant.

Yankee owner Entergy wants a court to rule that only the federal government has the right to control Yankee's future operation.

But the NRC says Vermont has a regulatory role as well.

VPR's John Dillon has more:

(Dillon) Last month, the Nuclear Regulatory Commission granted Entergy a 20-year extension of Yankee's operating license.

And Entergy's lawsuit says Vermont cannot veto that decision. It says federal law trumps a state statute that requires approval of the Legislature and the Public Service Board for Yankee to operate beyond its original 40-year license.

But NRC spokesman Neal Sheehan says the state has a role in the plant's operation, and the federal government won't try to assert overall authority.

(Sheehan) "At this point, we are not anticipating playing a role in this legal challenge. But we will have to review it."

(Dillon) NRC Chairman Gregory Jaczko made a similar point when the commission awarded Yankee the new license. He said the federal decision was just one of a series of regulatory approvals that Entergy needs.

(Jaczko) "From what I've seen so far from the actions of the state, the actions that they are taking do not involve any of our authorities or responsibilities."

(Dillon) Governor Peter Shumlin says it's significant that the NRC seems to be taking a hands-off approach to the litigation. Shumlin said he and the Vermont congressional delegation have discussed the issue with Jaczko.

(Shumlin) "They do not intend to file suit; they do not intend to join the case. They do not intend to stand in the way of the clear right of the state of Vermont to determine our future."

(Dillon) The US Supreme Court has already addressed the question of a state's role in regulating nuclear power. In a 1983 unanimous decision involving a California utility, the court said the federal government should oversee nuclear safety.

But the court also said that states - quote "retain their traditional responsibility" - for determining questions of need, reliability, cost and other related state concerns.

Yankee has a record of operating more than 500 days without a shutdown - a fact that Yankee supporters say shows the plant is reliable. But Shumlin says repeated mishaps at the plant, including leaking pipes and collapsed cooling towers, shows it is unreliable.

NRC chairman Jaczko told reporters last month that the federal government may leave it to the state to decide what constitutes acceptable "reliability."

(Jaczko) "Determination of what is acceptable for reliability - all of those kinds of things are in the purview of the state, and I would not anticipate that we would be involved in that determination."

(Dillon) And the NRC also says Vermont has clear authority over other aspects of Yankee's operation. That includes state environmental review for a discharge permit the plant needs to release heated water into the Connecticut River.

For VPR News, I'm John Dillon in Montpelier.

## **Co-op Rejects Vermont Yankee Power Deal (AP)**

Associated Press, April 27, 2011

MONTPELIER, Vt.—The Vermont Yankee nuclear plant continues to take a beating in public forums in the state.

In Johnson on Tuesday, the board of the Vermont Electric Co-operative voted 9 to 1 to reject buying power from the plant even if it continues to operate past March of next year, when state officials expect it to shut down.

Meanwhile, a member of the Vermont House said he's introducing legislation that would make it a crime for Vermont Yankee to continue operating after the expiration of its current, 40-year license. Representative Dick Marek, a Newfane Democrat, says his bill would fine Vermont Yankee up to \$100,000 a day for operating without a state certificate of public good.

## **Vermont Electric Says No To Yankee Power Deal (BR)**

Brattleboro Reformer, April 27, 2011

In a decisive vote, the board of directors of the Vermont Electric Company voted 9 to 1 against accepting a long-term agreement to purchase power from Vermont Yankee nuclear power plant in Vernon.

Dave Hallquist, CEO, said the board's primary reason for rejecting the deal was a distrust of Yankee's corporate owner, Entergy Louisiana.

That distrust was so deeply felt, said Hallquist, that the board ordered VEC management to never negotiate with Entergy again, despite what the result may be of the lawsuit filed by Entergy against Vermont.

"They gave us a very clear message to never speak to Entergy again," he said.

## **VEC Rejects VY Power Buy Offer Cites Distrust Of Entergy As Reason For The Decision (BRATBORO)**

By Bob Audette

Brattleboro Reformer (VT), April 27, 2011

In a decisive vote, the board of directors of the Vermont Electric Cooperative voted 9 to 1 against accepting a long-term agreement to purchase power from Vermont Yankee nuclear power plant in Vernon.

Dave Hallquist, CEO, said the board's primary reason for rejecting the deal was a distrust of Yankee's corporate owner, Entergy Louisiana.

"That was the primary motivator for turning the contract down," he said.

That distrust was so deeply felt, said Hallquist, that the board ordered VEC management to never negotiate with Entergy again, despite what the result may be of a lawsuit filed by Entergy against Vermont.

"They gave us a very clear message to never speak to Entergy again," he said.

Hallquist said that a number of board members were also upset about the way Entergy announced to the media three weeks ago the proposed purchase agreement.

"They essentially implied we had an agreement, though they had only made an offer," he said.

Entergy offered electricity to VEC at 4.9 cents per kilowatt for the first year of a 20-year deal with the price thereafter tied to market rates.

Hallquist said VEC management gave the board four options to vote on: Accept the offer; only accept it if Yankee receives a certificate of public good from the Public Service Board; reject the offer, or, table the decision until further notice.

Not only did the board choose option 3, it was adamant that management cut off all future communications with Entergy, he said.

"It was a clear referendum on Entergy," said Hallquist.

One of the other options given the board was to turn the decision over to the shareholders. Because VEC is a co-op, all of its ratepayers are shareholders with a potential vote on any contract.

However, said Hallquist, "The board believes they know the sentiment of our members."

The e-mails and phone calls received by VEC were about 20 to 1 against the deal, he said.

Prior to casting their votes, the board members heard from Michael Coloumb, Yankee site vice president, and Arnie Gundersen, a former nuclear engineer and nuclear safety advocate.

Both spoke for 30 minutes, said Hallquist, but he believed the decision was made prior to the meeting convened.

"They pretty much had their minds made up," he said.

Larry Smith, director of communications for Vermont Yankee, said Entergy was disappointed in the board's vote.

"Yankee is an important resource for the New England region, producing clean, reliable electricity," he said. "This agreement would have provided Vermont Electric Company's customers with access to that resource at attractive rates."

Last March, the Nuclear Regulatory Commission approved Entergy's application for a 20-year extension of Yankee's operating license. The original 40-year license is due to expire on March 21, 2012.

However, to continue operation, Entergy must also receive a certificate of public good from the Vermont Public Service Board, which can only issue such a certificate if it has been authorized to do so by the Vermont State Legislature. Entergy agreed to that stipulation when it signed off on a memorandum of understanding prior to buying the plant in 2002.

But in 2006, the State Legislature voted itself the authority to prohibit the PSB from issuing a certificate. In January 2010, the Vermont Senate voted 26 to 4 against its issuance. The House of Representatives declined to discuss the issue.

On April 18, Entergy sued the state, accusing it of attempting to pre-empt the federal approval of the license extension. It also argued that the state went back on its 2002 memorandum of agreement when the Legislature voted in 2006 to give itself the power to prevent the PSB from issuing the CPG.

Even though, in light of the ongoing crisis at Fukushima in Japan, safety and reliability were on the minds of the board members, said Hallquist, it really boiled down to the trust issue.

Board members were also concerned that no other nuclear power plant owned and operated by Entergy has run past its initial 40-year license, he said.

"One board member said we don't want to be the experiment here," said Hallquist.

He said the board's vote was no reflection on the employees and the operations at Yankee.

"I really feel bad for the folks at Vermont Yankee," said Hallquist. "They are intelligent, hard workers."

Two weeks ago, Hallquist toured the plant.

He said he was very impressed by everyone he met, but added "it's a sad thing" that Entergy has such a bad relationship with the state.

"Yankee is a very well-run operation," said Hallquist. "It's one of those places I could work at."

Because the deal was rejected, he said, the average residential ratepayer will see his or her bill go up by 52 cents a month.

On the high end, some of VEC's commercial ratepayers could see their bills go up by \$3,000 a year, he said.

The Entergy offer was attractive because it was a 20-year deal, said Hallquist.

"We can't get many, if any, long-term contracts anymore," he said.

However, he added, "We are pretty well set with our power supply through 2016."

## **Vermont Electric Cooperative Board Nixes Deal With Vermont Yankee (BURFP)**

By Terri Hallenbeck

[Burlington \(VT\) Free Press](#), April 26, 2011

JOHNSON — Eleven board members sat a table and heard each side make its case Tuesday afternoon. Then, like a jury, the Vermont Electric Cooperative Inc. board voted.

The verdict: No contract with Vermont Yankee.

The board of directors of the state's third-largest electric utility voted 9-1 against signing a 20-year power purchase agreement with the 39-year-old nuclear power plant that is fighting for its life in court. (Board President Thomas Bailey of Derby does not vote unless he needs to break a tie.)

"I have not heard a single member say, 'Yes, sign this contract,'" director Mark Woodward of Johnson said.

John Ward of Newport was the lone voice on the board in support of the contract.

"We need lower-priced power to keep our jobs and maybe get some new jobs," he said, after the board had heard that Vermont Yankee power would save the co-op \$375,000 the first year of the deal. "This will save our ratepayers a lot of money."

The board opted for the strongest message against Vermont Yankee among several choices it considered Tuesday. The board could have decided not to vote at all on the deal, or to accept it pending either the state's or the court's permission for the plant to keep operating after next year. Co-op Chief Executive David Hallquist said the board essentially was telling the staff to cease negotiating with Vermont Yankee owner Entergy Corp. on a new power agreement.

Vermont Yankee spokesman Larry Smith said afterward the company was disappointed in the board's decision. "Vermont Yankee is an important resource for the New England region, producing clean, reliable electricity," he said. "This agreement would have provided VEC's customers with access to that resource at attractive rates."

The Vermont Electric Cooperative board took the unusual step Tuesday of hearing from a Vermont Yankee executive and a critic of the plant, giving each side 30 minutes to speak at a meeting in the truck garage at the utility's Johnson headquarters.

"It's a democratic process," Hallquist said.

After failing to come to a power-purchase agreement with the state's two largest utilities, Central Vermont Public Service Corp. and Green Mountain Power Corp., Entergy last month announced a proposed deal with Vermont Electric Cooperative. The deal would provide 10 megawatts of power starting at a below-market price of 4.9 cents per kilowatt hour, then adjusting future prices to market rate.

For Entergy, reaching a power deal would help bolster the company's argument for gaining the state's permission to operate the plant for another 20 years beyond March 2012. The Vernon plant last month won a 20-year extension from the US Nuclear Regulatory Commission, but amid concerns about recent tritium leaks at the plant, the state Legislature has blocked state approval. Last week, Entergy filed a lawsuit in federal court challenging the state's role.

The co-op's board hadn't signed off on the proposed power deal, however, deciding last month to delay the decision until the April meeting.

That brought Mike Colomb, Vermont Yankee's site vice president, to Johnson on Tuesday to defend the plant. He touted its reliability and the unlikelihood that the plant ever would suffer the damage that the Fukushima plant in Japan has experienced following last month's earthquake and tsunami.

The two plants are of similar design, he acknowledged, but Vermont Yankee has a low probability of facing a large earthquake, he said. It has several backup power sources to maintain cooling, including a diesel pump, upgraded battery capacity and the ability to connect to the Vernon dam, he said.

Vermont Yankee is more likely to face flooding risks, he said, but during the worst flood in history in 1936, the Connecticut River came 20 feet short of where the plant sits, he said.

Vermont Yankee has run at a capacity of 98.7 percent in 2009 and 89.9 percent in 2010, Colomb said, with its performance evaluated at the US Nuclear Regulatory Commission's highest ranking.

The board also heard from Arnie Gundersen, a former nuclear engineer from Burlington who is a critic of the plant. He said the Fukushima accident will have repercussions throughout the US nuclear power industry that will drive Vermont Yankee out of business. He said he expects regulators to require increased safety measures that will make operating a relatively small plant such as Vermont Yankee unprofitable.

"What I've come to is, they're going to shut it down in a year or two," he said.

He said Vermont Electric Cooperative, which provides power to 34,000 members in 74 towns, would be better off locking into a long-term deal for power with another source.

That argument took hold for board member Craig Kneeland of Eden Mills.

"We need to lock in with a credible supplier," he said. "We need to deal with a company that has the trust and support of the majority of our members. Entergy isn't that company."

## **VEC Board Rejects Proposed Contract With Vermont Yankee (WPTZ)**

### **Board Voted 9-1 To Not Purchase Power from Vernon Nuclear Plant**

WPTZ-TV Burlington, VT, April 27, 2011

JOHNSON, Vt. --

The Board of Directors at Vermont Electric Co-op, Vermont's third largest electric utility, voted 9 to 1 to reject the proposed contract to buy power from the beleaguered Vermont Yankee nuclear plant.

The state's Legislature and governor appear convinced the Vernon reactor is "not reliable" and ought to close when the original 40-year operating license expires in March, 2012. Gov. Peter Shumlin has repeatedly focused on a series of VY management and maintenance missteps, which have included leaking pipes that spewed radioactive fluids into the ground last year.

The state's leaders have refused to allow the Vermont Public Service Board to consider a new permit application sought by VY's owner, Entergy Nuclear, which prompted Entergy to file a federal lawsuit against Vermont last week.

The suit claims Vermont's position interferes with federal law and interstate power markets.

Vermont Yankee offered to renew VEC's current power deal, known as a PPA (power purchase agreement) at rates that begin at 4.9 cents per kilowatt hour. The price fluctuates over time but is capped at 6.1 cents, a deal Co-op CEO Dave Hallquist calls "fair" -- but not "great."

That price would mean a typical VEC residential customer would have saved about \$6 per year compared to other available power sources, Hallquist said.

The VEC board members have four options:

- Approve the PPA contingent on the State granting a new permit to VY
- Approve the PPA if Entergy obtains the right to continue operation through the courts
- Reject the PPA
- Take no action, leaving options open in future.

Nuclear engineer and longtime Yankee critic Arnie Gundersen of Burlington told VEC board members that Yankee is already showing signs of age-related stress as it approaches the end of its 40-year operating license.

Gundersen noted Yankee is of the same vintage and design as the crippled Japanese nuclear reactors. Gundersen said the federal Nuclear Regulatory Commission approval of Vermont Yankee's 20-year license extension this winter came before the Fukushima disaster and relied on key engineering assumptions which must now be reconsidered.

A top manager at Vermont Yankee, Vice-President Mike Colomb, followed Gundersen. Colomb tried to reassure the VEC board Yankee remains a safe, clean, and reliable power generator which had made the Co-op an attractive offer to remain its customer.

Asked how long Vermont Yankee could continue in operation, Colomb said ongoing upgrades of key components made projections difficult. "More than 40 years is new territory," Colomb said.

The 12-member VEC board is elected to represent the wishes of the utility's 34-thousand Vermont customers. The board is expected to make a decision later this afternoon.

Hallquist says the membership is "quite divided" on the question.

Vermont Yankee now supplies one-third of Vermont's electricity and employs 650 workers in Vernon.

No other Vermont utility has signed off on an agreement to purchase power from VY after 2012, citing the uncertainty over securing the required state permits, and the abundance of replacement power from the New England market.

## **Electric Utility Rejects Power Offer From Vermont Yankee (VTPR)**

Vermont Public Radio, April 27, 2011

(Host) The Vermont Electric Cooperative has rejected a proposed twenty-year contract offer to purchase electricity from the Vermont Yankee nuclear power plant. Of the ten board members voting on Tuesday at VEC's headquarters in Johnson, nine voted to reject the offer.

Their decision follows the lead previously set by Green Mountain Power and Central Vermont Public Service.

The board heard from VEC members as well as nuclear industry experts.

Dave Hallquist is the company's CEO.

(Hallquist) "I really think today was a referendum on Entergy's relationship with the state of Vermont. In fact, we as a management team got a clear message not to speak with Entergy again".

(Host) Hallquist says VEC's current purchase contracts will keep the cooperative on solid ground until 2016.

This is the online edition of VPR News. Text versions of VPR news stories may be updated and they may vary slightly from the broadcast version.

## **Anti-nuke Vigil Planned At Vermont Statehouse (BURFP)**

By Terri Hallenbeck

Burlington (VT) Free Press, April 27, 2011

A group that wants to see the Vermont Yankee nuclear power plant shut down will hold a vigil from 4:30-6 p.m. Tuesday on the Statehouse steps in Montpelier to mark the 25th anniversary of the Chernobyl nuclear accident.

The Vermont Yankee Decommissioning Alliance said the vigil is also in support of those affected by the Fukushima nuclear plant's failure following an earthquake last month in Japan. Those with family or friends near Fukushima will speak, planners aid,

"The Solidarity/Support for the People of Japan vigil will mostly be silent. We are asking that people bring a paper crane or make one at the vigil," the group said in a news release.

## **Lawmaker Wants To Make Keeping Vt. Yankee Open A Crime (WCAX)**

By Melinda Davenport

WCAX-TV Burlington, VT, April 26, 2011

Montpelier, Vermont -

A state lawmaker wants to make it a crime for Vermont Yankee to stay open after its license expires.

The nuclear plant's owner, Entergy, is suing the state, saying Vermont does not have the authority to shut down the plant.

Now, Rep. Richard Marek of Newfane is introducing a bill that would make it a state crime for the plant to operate without state approval. The bill calls for fines of \$100,000 a day.

Vermont Yankee won a federal license extension. Its current operating license expires next year.

The bill is not likely to pass this year.

"That's an illegal enterprise. It would be subject to potential forfeiture of all proceeds for doing so, plus a fine of up to \$100,000 a day," said Marek, D-Newfane.

"A real question is whether or not that bill runs into conflict with federal pre-emption. And I would have to have a very good legal opinion on whether or not a bill like that passes muster," said Sen. Randy Brock, R-Franklin County.

Entergy maintains that nuclear power is regulated by the federal government which has already granted a 20-year license extension to Vermont Yankee.

## **Nuclear Evacuation Zone Should Be Expanded, Group Says (MH)**

By Renee Schoof McClatchy Newspapers

Miami Herald, April 27, 2011

The nuclear power accidents at Fukushima this spring and at Chernobyl 25 years ago Tuesday show that radiation releases can endanger people and contaminate land many miles beyond evacuation zones.

The advocacy group Physicians for Nuclear Responsibility, which opposes nuclear power, said Tuesday that the US 10-mile evacuation plan was inadequate and should be extended to 50 miles. One-third of the US population lives within 50 miles of nuclear power plants.

In Japan, much of the radiation plume went over the Pacific Ocean in the early weeks after the March 11 earthquake and tsunami, but wind and rain drove some of it onto land. The release of radioactive materials raises the risk of cancer, especially for children, who are more vulnerable than adults, Ira Helfand, a member of Physicians for Social Responsibility, said at a news conference.

The Chernobyl accident in 1986 in the former Soviet Union contaminated 58,000 square miles of land, stretching as far as 300 miles north of the plant, the International Atomic Energy Agency reported. Unlike the Fukushima plants or US plants, Chernobyl had no concrete and steel structure to contain accidental releases.

The Fukushima accident spread fallout beyond the government's initial 12-mile evacuation zone as a result of explosions. At Fukushima and in the US, the pools where spent radioactive fuel is stored aren't inside the containment structure.

Measurements of soil samples as far as 30 miles from the Fukushima plant have detected cesium-137, a long-lived radioactive element that human bodies can absorb. It was measured at levels that were above the cutoff that was used to determine the permanent exclusion zone around Chernobyl, said Andrew Kantèr, the president-elect of Physicians for Social Responsibility.

Other measurements, at playgrounds outside the exclusion zone, showed levels equivalent to the limit of radiation permitted for an adult nuclear-plant worker. That amount would mean that one in 200 children would get cancer as a direct result of the exposure, Helfand said.

The US nuclear industry said American experts had determined that it was highly unlikely that evacuation would be necessary beyond 10 miles, even in a worst-case accident. The US observes a 50-mile zone to limit exposure to contaminated water, milk and food, and local officials could expand an evacuation order if they thought it necessary, Steve Kerekes, a spokesman for the industry's Nuclear Energy Institute, said in an email.

In Japan, work is still under way to cool the reactor cores and spent-fuel pools to stop further releases of airborne radioactive materials.

"Once they decide how to put the reactors into some sort of safe storage mode, they will need to deal with the contamination in and around the plants," said Kathryn Higley, a professor of radiation health physics at Oregon State University.

When the cleanup phase begins, workers probably will use shovels to remove contaminated soil for disposal in a nuclear landfill, said Lake Barrett, a former official with the Department of Energy and the Nuclear Regulatory Commission who was involved in the cleanup of Three Mile Island in Pennsylvania after a nuclear accident there in 1979.

Some of the land that's cleaned up in Japan might end up being good enough for a factory or a parking lot, but not for a garden or a pasture, he said in an interview.

"It took 10 years for Three Mile Island," Barrett said, "and that was simple compared to what they've got."

Physicians for Social Responsibility says the risks of nuclear power to public health and of nuclear proliferation are too high.

The group reported Tuesday that it had used a computer simulation to model what would happen in the case of a complete meltdown and massive release of radiation from a power plant in a metropolitan area. It studied Braidwood, outside Chicago. The projection was that 20,000 people might get lethal doses, and thousands of doctors and firefighters would be unable to work because the radiation levels would be so high.

Scientists still debate how many deaths were due to Chernobyl's radiation releases. A US National Research Council report concluded that there's no safe level of radiation and cancer risks rise with increased exposure.

## **Advocacy Group Questions US Evacuation Plans (GWIRE)**

By Hannah Northey

Greenwire, April 27, 2011

The Nuclear Regulatory Commission's current evacuation system would not safeguard more than a third of the US population living within 50 miles of a nuclear reactor, a panel of health and anti-nuclear advocates said today.

NRC mandates evacuations within a 10-mile radius of US reactors, but the agency recommended a 50-mile evacuation zone for Americans in Japan after a magnitude-9 earthquake and tsunami crippled a nuclear complex last month.

The placement of reactors near large population hubs and the uncertainty over the travel of radioactive material after a nuclear accident raise doubts about NRC's US plan, members of the group Physicians for Social Responsibility said at a press conference at the National Press Club in Washington, D.C.

Radioactive plumes tend to go beyond 50 miles and spread like fingers in multiple directions depending on wind speed and other meteorological conditions, said former Energy Department official Robert Alvarez.

"The infeasibility of evacuation is not considered important enough in the hierarchy of priorities relative to the continued operation of these reactors, and that's something we have to look at very seriously," he said.

Anxiety over the safety of nuclear power has been piqued in recent months as information has trickled out of Japan's Fukushima Daiichi nuclear plant, where officials are struggling to cool and stabilize damaged reactors.

Nuclear opponents are also pointing to the 25th anniversary today of the 1986 accident at Unit 4 of the nuclear power station at Chernobyl, Ukraine, which destroyed the reactor and released massive amounts of radioactivity into the environment. After the accident, an 18-mile area around the plant was closed and 135,000 people were evacuated, according to NRC.

Alvarez and the panel of health advocates and doctors said scientists are still learning about health impacts from the Chernobyl accident. Doctors are still finding new types of cancer and are studying the relationship between radiation and illnesses such as heart disease, said Jeff Paterson, a professor at the University of Wisconsin and member of Physicians for Social Responsibility.

In Japan, it's still unclear where radioactive material is traveling and settling, and officials there are not sure when and where to resettle evacuees, Alvarez said.

Grass-roots organizations in Japan are now finding "hot spots" of high radioactive levels northeast of the evacuation zone surrounding the damaged Fukushima Daiichi plant, Alvarez said. Exacerbating the situation, the Japanese government is now allowing children to be exposed to 20 millisieverts annually, a level usually allowed only for workers at nuclear power plants, Alvarez said.

US 'lessons learned'

NRC responded to the disasters at Chernobyl and Fukushima by launching a review of events abroad and applying "lessons learned" to American reactors.

Last month, NRC launched a short-term review of the United States' 104 reactors in the wake of the Japanese disaster and plans to launch a longer-term review once more information is known about the situation at the Fukushima plant.

In 1989, NRC released a report that found no immediate changes were needed in its regulations regarding the design or operation of US commercial nuclear reactors as a result of the lessons learned from the Chernobyl disaster.

Specifically, the NRC report found that US reactors have different plant designs, broader shutdown margins, robust containment structures and operational controls to protect them against the combination of lapses that led to the accident at Chernobyl.

The commission released a final report in 1992, summarizing follow-up research, including looks at the decontamination, ingestion pathways and relocation of people.

But Alvarez said the Chernobyl accident accelerated the shutdown of the US nuclear weapons program by turning a spotlight on DOE's use of 1950s reactors without containment domes. Such focus sparked a series of investigations that revealed sites across the country were being contaminated, he said.

Fukushima will raise concerns about spent fuel pools and storage needs within the United States, he said, noting that more than 65,000 metric tons of spent nuclear waste was generated from nuclear plants by the end of last year.

Three-fourths of that waste is stored in pools that were not constructed to hold such large amounts of waste, and are holding four to five times the amount of material they were designed to hold.

Spent fuel pools do not face the same safety standards as nuclear reactors, and are only covered by buildings designed to protect the pools from the elements, he said. The material could remain on-site indefinitely without a national repository on the horizon, and should be stored as safely as possible until a final solution is found, Alvarez said.

## **Poll: Most Americans Think A Nuclear Accident Is Likely Here (MCT)**

By David Lightman

McClatchy Newspapers, April 27, 2011

Most Americans fear that the United States someday could face the kind of nuclear emergency that's plagued Japan in recent weeks, according to a new McClatchy Newspapers-Marist poll.

"There's clearly a good deal of concern, and there's division about whether we're suited to handle this," said Lee Miringoff, the director of the Marist Institute for Public Opinion in New York, which conducted the survey.

"Nuclear power is very controversial," he noted.

Last month's earthquake and tsunami on Japan's northeast coast badly damaged the Fukushima Daiichi nuclear power plant.

Tuesday, in its latest daily update, the International Atomic Energy Agency said the situation at the plant "remains very serious, but there are signs of recovery in some functions," such as electrical power.

The McClatchy-Marist survey found that a solid majority of Americans - 57 percent - think that a nuclear crisis is probable here; 41 percent thought such a crisis was likely, while another 16 percent said it was very likely.

Fewer think it's not going to happen: 31 percent said it wasn't very likely, while 9 percent said it wasn't likely at all.

The April 10-14 poll surveyed 629 people nationwide. The margin of error was plus or minus 4 percentage points.

People split over the US government's ability to manage such a disaster. Forty-nine percent said it was prepared or very prepared, but 48 percent said it wasn't very prepared or wasn't prepared at all.

If such an accident should occur, 56 percent thought it probably would be the result of an accident, while 40 percent feared a terrorist attack.

Few differences emerged among subgroups; generally, opinion divided the same way among people of all ages, political beliefs, education and from different regions of the country.

There was a bit of a gender gap, however. Women said an emergency probably would be the result of an accident, not a terrorist attack, by 50-45 percent, while men said an accident by 61-36 percent.

Overall, the poll's findings "are directed by attitude, not demographics. They cut across the traditional political demarcations. This is not a Democratic or Republican issue," Miringoff said.

The Japan incident led US officials to re-examine nuclear safety policies.

US power plant safety improved after the 1979 accident at Pennsylvania's Three Mile Island plant. Equipment failure caused fuel to melt, but the containment structure kept radioactive material from leaking uncontrollably.

## **Pueblo Commissioners Point To Water, Safety Concerns In Denying Nuclear Plant (COLOIND)**

By John Tomasic

Colorado Independent, April 27, 2011

Citing concerns about safety and a lack of water, the Pueblo County commissioners Monday night unanimously voted down a zoning change request by a Pueblo attorney seeking to build a "clean energy park," including a nuclear power plant, just outside the city. The vote was 3-0 to deny the zoning change.

"I respectfully disagree with their decision but it's theirs to make and like the rest of us we all have to live with our decisions and they'll have to live with theirs," Pueblo attorney Don Banner said, according to KKTV.

Last month Banner stirred heated debate with his proposal, which has been in the works since last summer but came before the commissioners hard on the heels of the Fukushima Daiichi nuclear power plant disaster in Japan. The commissioners took their time to consider Banner's request, weighing thousands of emails and letters of support and opposition.

Ultimately, the commissioners decided the potential jobs were outweighed by community concern over a lack of water to cool any future reactors and the potential safety and environmental concerns stemming from storing spent fuel on site.

Colorado's only previous foray into nuclear power ended in 1989 when the Fort St. Vrain power plant near Platteville (between Longmont and Greeley) was shut down because it never fully operated at peak efficiency. More than 14 metric tons of spent nuclear fuel is still stored at the facility, near where Xcel Energy currently runs a gas-fired power plant.

Typically Colorado has seen environmental battles over the front end of nuclear power, the milling and mining of uranium later converted into fuel rods and exported overseas. Colorado Sen. Mark Udall has been a big backer of reviving the nuclear power industry in the United States in order to reduce fossil fuel consumption and lower greenhouse gas emissions.

## **Anti-nuke Rally Revels In Pueblo Decision (PUEBLO)**

Pueblo Chieftain, April 27, 2011

DENVER — A small anti-nuclear rally outside the Colorado state Capitol on Tuesday commemorated the 25th anniversary of the Chernobyl nuclear plant disaster. The crowd of about 40 also reveled in Pueblo County commissioners' decision Monday against allowing a proposed power plant there.

4/27/2011 12:00:00 AM

DENVER — A small anti-nuclear rally outside the Colorado state Capitol on Tuesday commemorated the 25th anniversary of the Chernobyl nuclear plant disaster. The crowd of about 40 also reveled in Pueblo County commissioners' decision Monday against allowing a proposed power plant there.

The Colorado Coalition to Prevent Nuclear War and Physicians for Social Responsibility hosted the event on the west steps of the Capitol. Its featured speakers included state Rep. Wes McKinley, D-Walsh, who knows nukes from his service as foreman of a grand jury that handed down the Rocky Flats indictment for environmental crimes.

McKinley made light of the timing of the proposed Pueblo plant, which kicked off several days of public hearings at the same time that the nuclear power plant in Japan was grabbing headlines for posing health threats in the aftermath of a tsunami there. Pueblo lawyer Don Banner did his best to defend the proposed plant as a clean, safe and economical engine for jobs.

"The guy down in Pueblo, he really picked a bad time to try and promote that," McKinley said. "But thank goodness. It's kind of nice that things happened that was able to stop that. I'm thinking if it wasn't for that, we might have had something."

McKinley opposed the proposed nuclear plant near Pueblo.

"I couldn't believe they were even considering that ludicrous idea," he said. "It was about the dumbest idea I ever heard."

McKinley said he viewed the proposal as a threat to the health of generations of Southern Coloradans that aren't even born yet.

## **Iowa House OKs Financing For New Nuclear Plant (WASHEX)**

Washington (DC) Examiner, April 27, 2011

On the 25th anniversary of the nuclear disaster at Chernobyl, and as officials in Japan deal with the fallout from a nuclear plant damaged by a tsunami, the Republican-controlled Iowa House approved a measure Tuesday aimed at spurring the development of the state's second nuclear power plant

If approved, it would clear the way for MidAmerican Energy, the state's largest utility, to begin billing customers in advance for the estimated \$1 billion cost of developing one or more small modular nuclear reactors that could be on line as early as 2020.

Supporters say Iowa faces a looming energy shortage, and new nuclear plants take years to complete, so lawmakers must act. Critics say more study is needed.

The House rejected a series of efforts by critics to modify the measure and approved it in a 68-30 vote. It now goes to the Democratic-led Senate, where it faces an uncertain future.

"I think this is a huge step for Iowa," said Rep. Chuck Soderberg, R-Le Mars, the bill's main supporter. "This is a huge step if we want to grow this state."

Soderberg and others say the bill would benefit the utility's customers because, by raising money in advance and paying over time, it wouldn't have to borrow money and then pass on the cost of interest. They also say the state needs to take action now to address a looming electrical capacity shortage.

"The easy thing would be to do nothing," Soderberg said. "If businesses are going to stay here, we need to provide them with electricity."

Critics point out lawmakers approved a \$15 million, three-year study of the role nuclear power should play in the state's energy production last year, and it has barely begun.

"You are acting before we have the information," warned Rep. Mary Mascher, D-Iowa City.

Consumer and environmental groups lobbied against the measure.

"We're not debating whether nuclear is the smart option, though we should have that debate," said Mike Carberry, of the Group Green State Solutions. "If this passes, 100 percent of the financial risk goes on ratepayers."

With lawmakers in the closing days of this year's session, the measure's future is uncertain. And, even if it passes the Senate, Republican Gov. Terry Branstad's spokesman Tim Albrecht said he was open to the option of nuclear power but hadn't made a final decision on that specific measure.

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"We're not debating whether nuclear is the smart option, though we should have that debate," said Mike Carberry, of the Group Green State Solutions. "If this passes, 100 percent of the financial risk goes on ratepayers."

With lawmakers in the closing days of this year's session, the measure's future is uncertain. And, even if it passes the Senate, Republican Gov. Terry Branstad's spokesman Tim Albrecht said he was open to the option of nuclear power but hadn't made a final decision on that specific measure.

On the 25th anniversary of the nuclear disaster at Chernobyl, and as officials in Japan deal with the fallout from a nuclear plant damaged by a tsunami, the Republican-controlled Iowa House approved a measure Tuesday aimed at spurring the development of the state's second nuclear power plant

If approved, it would clear the way for MidAmerican Energy, the state's largest utility, to begin billing customers in advance for the estimated \$1 billion cost of developing one or more small modular nuclear reactors that could be on line as early as 2020.

Supporters say Iowa faces a looming energy shortage, and new nuclear plants take years to complete, so lawmakers must act. Critics say more study is needed.

The House rejected a series of efforts by critics to modify the measure and approved it in a 68-30 vote. It now goes to the Democratic-led Senate, where it faces an uncertain future.

"I think this is a huge step for Iowa," said Rep. Chuck Soderberg, R-Le Mars, the bill's main supporter. "This is a huge step if we want to grow this state."

Soderberg and others say the bill would benefit the utility's customers because, by raising money in advance and paying over time, it wouldn't have to borrow money and then pass on the cost of interest. They also say the state needs to take action now to address a looming electrical capacity shortage.

"The easy thing would be to do nothing," Soderberg said. "If businesses are going to stay here, we need to provide them with electricity."

Critics point out lawmakers approved a \$15 million, three-year study of the role nuclear power should play in the state's energy production last year, and it has barely begun.

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## **Iowa House Is Debating MidAmerican Energy Nuclear Plant [update] (DMR)**

By Perry Beeman

Des Moines Register, April 27, 2011

The Iowa House of Representatives is nearing the three-hour mark in its debate of House File 561, which would help set up the financial machinery needed for MidAmerican Energy to build a nuclear plant at an undisclosed Iowa site.

Representative Chuck Soderberg, a Republican from Le Mars and floor manager of the legislation, said the bill would set the stage for a second Iowa nuclear plant, but would not approve the project or a rate increase. Those decisions would come from the Iowa Utilities Board, he stressed.

"It's a proven technology, an available technology, that can be delivered in large, and now, small scales," Soderberg said. "This is an opportunity to create hundreds of new jobs in the state of Iowa."

Soderberg said a MidAmerican nuclear plant would bring 500 construction jobs and 300 to 800 full time positions with an average salary of \$75,000.

Democrats countered that the proposal needs more study both to protect Iowans' pocketbooks and to protect their safety following the nuclear disaster in Japan weeks ago. The debate comes on the 25th anniversary of the Chernobyl nuclear disaster, Democrats repeatedly noted.

Democrats offered a string of amendments, most of which were ruled out of order or defeated.

One Democrat, Rep. Mary Mascher of Iowa City, asked House members not to vote on the legislation until a MidAmerican feasibility study is filed. Legislation last year approved a study of up to three years. The report had not been filed with lawmakers Tuesday afternoon.

"For us to act on something before we have the information is just irresponsible," Mascher said.

Soderberg responded that the utility appeared to have studied potential sites and the financial feasibility enough to decide to support the legislation.

Rep. Lance Horbach, a Republican from Tama, agreed with MidAmerican that the legislation needs to move forward now. MidAmerican executives have said that pending limits on greenhouse gases and the volatility of natural gas prices leave nuclear the most promising source of large amounts of power year-round.

This body has a history of studying when we should be acting," said Horbach. "We need to act. The people want solutions."

Other lawmakers sought to delay the legislation for various studies. "I think eight and a half months should be OK to wait" for a study to be completed, said Rep. Janet Petersen, a Democrat from Des Moines. "The bulk of the risk is going to be to the ratepayers. I don't believe we need to be in a rush."

The legislation appears to have significant support in the Legislature, though a group of Democrats asked for action to be delayed after the nuclear disaster in Japan. Several more amendment proposals are expected this afternoon.

Rep. Curtis Hanson, a Democrat from Fairfield, wanted lawmakers to study the legislation until next year's session. "We need to have more information," Hanson said. "We need to protect the investors and consumers of our utilities."

Soderberg several times pointed out the Iowa Utilities Board would have to approve any nuclear plant project, should MidAmerican decide to proceed. The US Nuclear Regulatory Commission would not approve an unsafe plant, he added.

Supporters, including MidAmerican, say nuclear power is relatively cheap and would reduce air pollution while giving the state more energy independence. Critics, including some environmental groups, say it is dangerous, more expensive than reported and comes with unresolved issues over where to dispose of spent radioactive fuel.

MidAmerican says the legislation is crucial to attracting investors because it would allow the recovery of up-front costs. The utility has addressed concerns about cost overruns at nuclear facilities by asking lawmakers to build in extra reviews of finances during plant development.

Rep. Anesa Kajtazovic, a Democrat from Waterloo, offered an amendment she hoped would limit the amount Iowans would have to pay for the plant. She said some Iowans support nuclear energy as one option to generate electricity, "they do not support giving an open checkbook." The amendment failed, 54 to 39.

A companion bill in the Iowa Senate, Senate File 390, also is pending.

## **Iowa House Approves Nuclear Power Bill (SIOUX)**

By Mike Wisner

Sioux City Journal, April 27, 2011

DES MOINES - The Iowa House gave the go-ahead Tuesday to legislation that helps pave the way for a new nuclear power plant in Iowa.

Whether MidAmerican Energy will decide to build a plant is not a done deal, but its ratepayers would be on the hook to help cover the cost of nearly all facets of the pre-planning and construction of a new nuclear facility, even if the plant is never built.

The legislation allows MidAmerican Energy to recover "all prudent preconstruction and construction costs incurred," regardless if it is completed.

Proponents of the legislation said without those assurances, the utility company would be hard-pressed to find investors in the project which would leave the state behind as it moves toward energy independence.

The 68-30 vote came after 5 1/2 hours of debate. If built, the cost of construction is expected to be between \$1 billion and \$2 billion and create 500 construction jobs. Operation of the plant, if built, is expected to create 300 jobs.

"This is a huge step for Iowa, and it is a huge step if we believe we want to grow the great state of Iowa," said Rep. Chuck Soderberg, R-Le Mars, chairman of the House's commerce committee and floor manager of the bill. "If Iowans, if businesses are expected to stay here, we need to provide them with power."

The legislation was controversial at the start, but became more so after the March earthquake and tsunami in Japan which damaged the reactors at the Fukushima Daiichi nuclear plant.

On the heels of that disaster, several lawmakers pushed for at least a year of study before moving forward with a bill that sets the stage for a new nuclear facility in Iowa.

House members tried the same tactic Tuesday, offering several amendments that called for outside studies and independent reviews of the state's power needs and the potential facility. House members also pointed to legislation passed that year that called for a three-year study of the state's power needs, which has not been turned in.

"Why are we going forward without the information we need?" said Rep. Mary Mascher, D-Iowa City. "The irony that this is the 25th anniversary of the Chernobyl tragedy is not lost on me."

Pocketbook issues also dominated Tuesday's debate. Soderberg stressed that the bill doesn't allow the utility to raise rates. Those decisions are still made, he said, by the Iowa Utilities Board.

That assurance wasn't enough for all House members. Rep. Anesa Kajtazovic, D-Waterloo, moved an amendment that would cap rate increases at 1 percent per year by MidAmerican.

"I know there are people back home that support nuclear energy as part of a comprehensive plan," Kajtazovic said. "But they don't support an open checkbook." The amendment failed on a largely party-line vote.

Ahead of the debate, Friends of the Earth released a SurveyUSA poll showing 75 percent of Iowans oppose the legislation to permit the electricity rates of MidAmerican Energy customers to be increased now to pay for future construction of a nuclear reactor.

"The results are clear, Iowans simply do not want their rates increased by MidAmerican to finance nuclear reactors," said Damon Moglen, climate and energy director at Friends of the Earth. "Iowans have not been duped - they're not going to pay for MidAmerican's boondoggle. On top of being dangerous for the public and for the environment, nuclear reactors are just too costly and risky an investment."

Soderberg responded saying, "I know what the survey said, I would have liked it to continue and have asked 'How many Iowans would like to spend \$800 million on old, outdated (coal) plants?'" he said. "Not many, I don't think."

AARP also opposed the legislation, citing the potential cost to its members, older Iowans, many who live on fixed incomes.

"AARP is concerned about this legislation, not because of the question of nuclear power, but because we oppose raising rates for consumers already struggling to afford their utility bills for a plant yet to be built, where we don't know the actual cost to build, and may or may not even be built in Iowa," the organization said in a statement.

## **Utilities Seek Two Plants; Does Iowa Need Them? (DMR)**

By Perry Beeman

Des Moines Register, April 27, 2011

Iowa's two investor-owned utilities each plan to build a major power plant in the next decade, despite a surplus of electricity in the Midwest and waning demand in a struggling economy.

MidAmerican Energy wants to build a small nuclear plant and is pushing legislation this year to help clear the way. At 540 megawatts, it would be among the nation's smallest.

Alliant Energy is mulling a natural gas plant only a couple of years after shelving a controversial coal-fired generator planned for Marshalltown.

The Iowa House's version of the nuclear power bill, House File 561, is on today's debate calendar.

What happens next will help determine the environmental and health risks Iowans will face, the state's ability to attract more business and industry, and the price consumers will pay for electricity.

By some calculations, the Midwest grid has as much as 10,000 megawatts of surplus power, enough to power up to 8 million homes for a month. That has raised questions about whether the state needs additional power plants, regardless of the type.

But MidAmerican and Alliant note that they are required by law to provide power for their customers, and buying it off the grid is expensive. And surplus power can be sold to other utilities, which holds down costs for MidAmerican and Alliant customers.

"We have an obligation to serve our area," said MidAmerican chief William Fehrman. "We're trying to provide the maximum energy supply to meet demand and local growth, and to offset changes to keep rates even."

MidAmerican hasn't raised its rates since 1995; Alliant's Iowa division has had a couple of rate increases in the past several years.

Environmental groups say the utilities should be focused more on beefing up energy conservation programs and building on some solid investments in wind, solar and other renewable energy sources. They argue that those technologies are environmentally friendly and help wean Iowa and the rest of the nation from fossil fuels that have been linked to climate change.

Here is a look at some of the choices Iowa faces as it prepares to meet its energy needs - present and future - and the pros and cons that come with each.

Natural gas

Supporters of natural gas-fired power plants tout them as a cleaner alternative to coal that offers the same reliability from an abundant fuel supply.

Critics say that while such plants emit lesser amounts of greenhouse gases, they are far from environmentally friendly. Chemicals used to extract natural gas from the ground have been found to pollute groundwater. And natural gas prices are volatile. Those fluctuations render it an unreliable source for large-capacity electricity generation, some say.

In Iowa, most of the natural gas talk is at Alliant.

Natural gas emerged as a contender after the utility revised its future power-production projection downward, going from needing an additional 300 megawatts by roughly 2013 to 200 megawatts by 2025.

What changed? The computer analysis used to forecast the company's needs had to catch up with an economy so bad that demand has fallen off, Aller said.

"We've seen customers using less of our product," Aller said. "The need to produce more and to have more online, maybe that line gets extended a bit. We don't want to build any resources until you need it, because customers have to pay for it."

Now, the focus is natural gas, said Aller, though he wouldn't rule out a coal plant later.

"Clearly, probably the best choice for customers would be some kind of natural gas facility," Aller said, one eye on the wavering gas prices. "It's that whipsawing effect that is very difficult for major customers to absorb."

Coal

Both utilities have changed their energy mix over the past decade, relying less on coal.

Coal-fired power plants now account for just over half of the electricity produced by MidAmerican and Alliant, down from 70 percent and 60 percent, respectively, since 2000.

For utilities in Iowa and elsewhere, any long-term strategy that continues to depend heavily on coal seems increasingly risky. Congress and federal regulators have signaled they intend to tighten controls on greenhouse gas emissions, with a goal of phasing out coal and natural gas as sources of electricity over the next 20 to 50 years.

At MidAmerican, that uncertainty over emissions questions has resulted in a decision to build no more coal-fired plants. MidAmerican's Fehrman said the 790-megawatt coal unit it opened in Council Bluffs in 2007 would be its last.

Alliant has not ruled out someday adding more coal-based capacity to its mix, said Tom Aller, chief of the division that serves Iowa.

But for now, the company believes a new natural gas plant that would come online by 2016 or 2017 would be the best option for new generation, some of which would replace electricity now produced with coal.

"The issue to us is that moving from where we are, from coal at 52 percent to something else, will take a period of time," Aller said. "If that's what policymakers decide, that's fine with us. Just let us know what the rules of the road are.

"These plants are huge investments. We don't want to make an investment and have Congress say, 'We were just kidding. We want you to do something else.' "

Nuclear

For MidAmerican, at least, that something else is nuclear.

Fehrman said industry studies have found that nuclear power is one of the cheapest and cleanest energy sources available. It is reliable and sidesteps the emissions problems associated with coal and, to a lesser extent, natural gas plants, he said.

"We want to show it can be a proven and safe technology, and see what comes along," said Fehrman, adding that more modular nuclear units could be added later. "We want to keep that option open."

Iowa now has just one nuclear power plant, FPL's Duane Arnold Energy Center near Palo, which is just slightly bigger than the one proposed by MidAmerican.

If approved, MidAmerican would share the 540-megawatt plant's capacity with partners that could include municipal and rural utilities. A site most likely could take several units that size.

Fehrman said he's not sure how much nuclear power MidAmerican will add in the long term. It depends on how long the utility will be able to run its coal plants, he said.

MidAmerican wants solid, steady power - enough to sell some surplus to others.

"We sell extra power to help hold costs down," Fehrman said, adding that power sales have generated \$300 million that will be used to offset future rate cases.

Alliant, which sold Duane Arnold to FPL in 2006, has no plans to build a nuclear plant, Aller said. Still, electricity generated from nuclear power and purchased elsewhere accounts for 21 percent of Alliant's capacity.

Environmental groups are staunchly opposed to MidAmerican's plan.

They say serious questions remain about the safety of nuclear plants and the lack of long-term disposal for spent radioactive fuel, particularly after a tsunami decimated a nuclear plant in Japan last month.

"At this time of unspeakable tragedy and unimaginable chaos in Japan, Iowa is still considering promoting nuclear power," said Pam Mackey-Taylor of the Iowa Sierra Club.

"Nuclear power plants are dirty, unsafe, deadly and expensive," she said. "If Iowa is to ever become a renewable-energy state, nuclear power will seriously delay that."

Wind, solar and other renewables

Iowa is one of the nation's leaders in wind energy, and some believe it could play an even bigger role in promoting renewable energy and energy efficiency.

Nathaniel Baer, energy policy staffer at the nonprofit Iowa Environmental Council, said, for example, that energy produced by the state's strong winter winds could be supplemented in summer by solar-generated electricity.

Iowa could be a part of a Midwestern collection of renewable-energy projects that would equal the capacity of a large fossil fuel plant, especially if transmission lines were improved, Baer said.

And every megawatt saved is one that doesn't have to be generated. "MidAmerican and Alliant both have energy efficiency programs that are delivering results," Baer said. "But there is still substantial potential for more."

A US Department of Energy study looked into the prospect of the nation getting 20 percent of its power from renewables by 2030. Such a move would require Iowa to produce five times the wind energy it does now, Baer said.

"That would help not only Iowa and the region but the nation to reach renewable-energy goals and achieve energy independence," he said.

MidAmerican and Alliant don't disagree that wind energy figures into their plans.

Wind-generated electricity accounted for 18 percent of MidAmerican's capacity last year and is expected to hit 25 percent in coming years. At Alliant, 6 percent of its power is produced by wind, triple the amount in 2000.

The biggest problem with wind energy is that it can't easily be stored for future use. That makes it an unreliable source for large-capacity power production, MidAmerican and Alliant say.

For now, at least, they contend gas, coal and nuclear are better choices than wind and other alternatives.

## **Palo Verde Nuclear Plant Set For 20 More Years (MODERNMAG)**

By John Guzzon

Modern Times Magazine, April 27, 2011

Whether by coincidence or karma, Arizona's Palo Verde Nuclear Generating Station has taken center stage just as the Fukushima Daiichi disaster has put the world on alert about the potential pitfalls of nuclear power.

Last week, Palo Verde Nuclear Generating Station, located about 40 miles southwest of Phoenix and the nation's largest, received a new 20 year operating licenses for all three of the units. The plant provides nearly one-third of the base-load power for the state. Since it was conceived in the 1970s and brought online in the 1980s, the plant has become an integral part how Arizona is powered.

Originally scheduled to begin come offline in 2025, the Nuclear Regulatory Commission approved last week a renewal application that will allow the plant to remain in operation until at least 2045.

"The ongoing operation of Palo Verde is important to a reliable and affordable energy future for Arizona," said Don Brandt, Arizona Public Service chairman and CEO. "For many more decades, Palo Verde will supply billions of kilowatt-hours that are safe, clean, low cost and secure."

There can be no denying that nuclear power plants such as Palo Verde produce no greenhouse gases and are therefore "clean." According to APS, since it began operating, Palo Verde has offset the emission of nearly 484 million tons of carbon dioxide (or the equivalent of taking as many as 84 million cars off the road); more than 253 thousand tons of sulfur dioxide (a primary component of acid rain); and 618 thousand tons of nitrogen oxide (contributes to the formation of ground level smog).

And, there also can be no denying that compared to other power plants, nuclear power is highly cost-efficient in the long run.

APS says the license renewal for Palo Verde primarily saves money for customers by delaying construction of new plants to replace the nuclear facility. If Palo Verde were to cease operation at the end of its original license, replacement cost of natural gas generation – the least expensive alternative – would total \$36 billion over the 20-year license renewal period, according to the company.

Cost savings for depreciation and decommissioning will also be significant and APS says that as a result of the approved renewal application, the rate request APS will file with the Arizona Corporation Commission on June 1 will be approximately \$34 million lower because of reduced annual Palo Verde depreciation expenses as a result of the renewed license. Decommissioning and spent nuclear fuel costs for the plant that are collected from customers will also be reduced in early 2012 by approximately \$10 million per year.

Nice chunks of change to be sure. But to be fair, this is where the 'rub' is in regards to nuclear power. All of these savings are verifiable and quantifiable as long as there is never a nuclear accident. Fukushima Daiichi taught us that for sure. So did Chernobyl and so did Three Mile Island.

The folks at APS, the largest single owner and operator of the plant, know that as well.

"As our response to recent events in Japan demonstrates, Palo Verde and the entire US nuclear power industry are committed to continuous learning and improvement to enhance safety," Brandt said. "The NRC's approval of the license renewal is a mandate for even greater commitment to safety at Palo Verde."

Indeed, at a nuclear power plant, it is vital to be dedicated to maintenance and improving all aspects of all of the systems because unlike coal or gas fuel sources, the general population has a slight chance of immediate and widespread death and injury.

"Our mission is to safely and efficiently generate electricity for the long term," said Randy Edington, Executive Vice President and Chief Nuclear Officer for APS. "We have worked very hard to demonstrate to the NRC through extensive inspections and audits that Palo Verde is prepared to operate for an additional 20 years. The plant is important to our customers, the economy and the environmental future of the Southwest, and we will always continue to strive to improve our performance at Palo Verde."

But a power plant that is typically downwind from Phoenix means that it is also crucial to maintain open dialogue with residents, such as Edington's recent appearance at the In The News lecture series at The Arizona Science Center last Saturday.

"A critical part of our operating philosophy has been public outreach, something that will not change," said Edington. "When Palo Verde was first dedicated, it was called the 'energy cornerstone of the Southwest.' It has lived up to that promise and will continue as an essential part of our energy supply throughout its operating life."

Palo Verde has some distinct advantages over other nuclear power plants and the most significant might be that as the only plant not directly adjacent to a river or ocean — considered vital in order to make sure there is enough water to contain the heat from a possible unstoppable chain reaction — there is little chance that it can harm the environment before cleanup.

And, Palo Verde uses treated wastewater from the largest cities in the valley on a massive scale. Even if new water supplies were not available, their reservoirs can handle full operation for 15 days or a year if shutdown.

The Phoenix metropolitan area and Palo Verde are also located at one of the least likely spots in the US for an earthquake. The viability of the plant to maintain its performance levels — 85 to 95 percent availability and annual production of about 3.2 gigawatts of electricity — without an accident will truly be the determining factor.

When done right, nuclear power can be like having your cake and eating it too.

But if an accident happens, it is more like those trick candles that never go out. You can blow all you want, but no one is eating any cake until you get the fire out.

## **USA Extending Life Span Of Nuclear Power Plants (NWPRTNWZ)**

Newport News (VA) Daily Press, April 27, 2011

More than half of the 104 commercial nuclear reactors in the United States, including four in Virginia, last decade were given 20 additional years to operate.

Of those granted extensions, more than half received permission to produce more electricity. And some, according to anti-nuclear groups, operate with less government oversight than decades before.

Anti-nuclear groups say the trend does not pose an immediate threat, but they question the wisdom of pumping more power from an aging fleet of reactors.

"We're concerned about that. It doesn't mean one's going to blow up tomorrow, but we're concerned," said David Lochbaum, director of the Union of Concerned Scientists' nuclear safety project.

At the dawn of the nuclear age, Congress decided to issue 40-year licenses to commercial nuclear power plants. The time length was chosen because it mirrored what the Federal Communications Commission gave television and radio channels, Lochbaum said.

Many US reactors were built during the 1970s, meaning their licenses would expire this decade. Utilities began applying for extensions in the late 1990s; the first was granted in 2000.

The Nuclear Regulatory Commission approved 60 more since — the latest on March 21, days after a tsunami struck a Japanese nuclear power plant triggering the industry's worst crisis since the Chernobyl accident in 1986.

Utilities favor extensions because they're easier than building new reactors, a costly and usually controversial endeavor, Lochbaum said. Plus, there's no guarantee a new reactor will outperform an older one, he said.

"A 45-year-old plant can be as safe — if not safer — as a 20-year-old plant," Lochbaum said.

The license for Surry Power Station, the older of two nuclear power plants in Virginia, was set to expire next year. The plant's owner, Dominion Virginia Power, received a 20-year extension in 2003. It is now licensed until 2032.

Lochbaum compared the maintenance and life cycle of nuclear power plants to that of automobiles — both can run efficiently if they're well-maintained, he said. The union holds Surry and Dominion's other nuclear plant in Virginia, North Anna Power Station, in "high regard," he said.

The plants' four reactors are among 75 nationwide given permission last decade to produce more power than originally allowed. The boosts, which industry calls "uprates," come as utilities operate plants more efficiently.

Plants typically ran at 70 percent capacity in the 1990s, meaning that reactors were shuttered three of every 10 days due to equipment problems or employee errors, Lochbaum said. Plants are currently running at 90 percent capacity, he said.

"Performance today is better," said commission spokesman Scott Burnell. The uprates are justifiable because the commission set conservative power output levels in the original licenses, he said.

Since 1977, the commission has authorized nearly 6 gigawatts of additional power from nuclear reactors. A gigawatt equals one billion watts.

The nation's 104 reactors produce roughly 800 terawatts, or 20 percent of the nation's electricity, according to commission data. A terawatt equals one trillion watts.

Because there are fewer equipment malfunctions and human errors, the commission requires less rigorous testing at the better performing plants, Lochbaum said. Burnell disputes the claim.

"The requirements don't change because of how well a plant is performing," he said. "Components change. Things are improved. You're dealing with an upgraded plant."

With dozens of nuclear reactor building projects stalled, including adding a third at North Anna, the commission anticipates 35 uprate requests into 2015.

For more science and environment news, read The Deadrise blog at [dailypress.com/deadrise](http://dailypress.com/deadrise).

## **Report Highlights NY's Power Needs, Indian Point's Future (WAMC)**

WAMC-Radio, April 27, 2011

Natural gas, solar, and wind are just some of the options on the table, when talking about New York's future energy needs. WAMC's Greg Fry takes a look at a new report, which highlights the biggest needs to ensure that New York's power stays on...

The report from the New York Independent System Operator takes a look at the past, present, and future power needs in the state. Since 2000, more than 86-hundred megawatts of new power generation has been produced by private entities and public authorities. 80-percent of that has come in New York City, on Long Island, and in the Hudson Valley - the three areas where demand is greatest.

The overall picture looks good for New York. The report indicates that immediate power needs are not a concern, however, caution comes when looking to the future, particularly, the upcoming decision on the future of the Indian Point Nuclear Power Plant.

John Durso, Junior is the Executive Director of the New York Affordable Reliable Electricity Alliance. He points out that the report highlights the harms that could be done by closing the plant, when its current operating licenses expire in 2013 and 2015.

In fact, the report says specifically that the retirement of both nuclear units at Indian Point when their current licenses expire would result in violations of reliability standards in 2016, leading to loss of power supply and transmission voltage support for the greater New York City area.

The topic of what to do without Indian Point was a main one at a summit Monday sponsored by the environmental organization Clearwater. The two-part summit included a discussion of the risks over nuclear energy, and the need to transition to a green energy economy. Melissa Everett moderated the latter portion of the summit. She's the Executive Director of Sustainable Hudson Valley. Everett says the situation can be improved by a number of new energy measures, but points mostly toward conserving energy. While the technology may be in place, much of the discussion at Monday's summit centered on the need to prepare, and to do so quickly.

The report by the New York Independent System Operator makes mention of the fact that the time frame to construct major energy projects can often range from five to ten years. While the debate rages on among those on both sides of the Indian Point re-licensing, Durso says lawmakers in Albany can take other action to ensure New York's power supply is secure. NYISO Report

## **Grid Outlook Is Positive, But Challenges Persist (RENWGRID)**

Renew Grid, April 27, 2011

Although the immediate outlook for New York state's electric grid is generally positive, the sustained adequacy of power will be impacted by a range of challenges, according to a new report released by the New York Independent System Operator (NYISO).

The report is NYISO's annual review of the forces and factors affecting the state's electric system. According to the authors, developments over the past decade have contributed to a more reliable system, and with planned additions in the near future, the adequacy of power resources is not an imminent concern.

Some of these developments include smart grid efforts encompassing an array of technological solutions intended to enhance the operation of the transmission and distribution systems, as well as to empower the end-use electricity consumer. According to the report, the new technology may be combined with consumer access to dynamic pricing that involves a rate structure reflecting the changing supply-and-demand conditions in the wholesale electricity market.

#### Emerging challenges

However, the sustained adequacy of resources may be challenged by several factors, the report cautions. For instance, the considerable lead time required for power infrastructure project development - given the time frames needed to finance, permit and construct major energy projects - is a concern. Consequently, the report recommends that the planning horizons of policymakers and regulators encompass the time required for the electric industry to address new laws and changes in regulatory requirements.

In addition, the expected adequacy of New York's power resources over the next decade does not diminish the need to address aging generation and transmission infrastructure. As of the end of 2010, 60% of the state's power-plant capacity was put into service before 1980. Similarly, 84% of the high-voltage transmission facilities in New York went into service before 1980.

Another challenge, according to the report, is the ability to develop adequate replacement generation to serve southeastern New York in the event of the retirement of the nuclear power units at Indian Point. These resources would be needed to prevent violation of mandatory resource adequacy reliability standards and maintain the supply of power and transmission voltage support needed to move electricity over power lines, the NYISO notes.

Furthermore, the New York electric system faces the cumulative impact of impending environmental regulations of various existing power plants. Therefore, attention must be paid to the impact that proposed regulations will have on more than half of the installed generating capacity in the state, the report states.

Renewable energy integration is also lacking, and although the mix of fuels used to generate electricity in New York is relatively diverse - including a relatively balanced mix of hydropower, nuclear, coal, natural gas and oil - fossil-fueled generation predominates in the high-demand downstate regions of New York.

The report reviews efforts to remove barriers to trade among regional power markets, increase renewable resources and energy efficiency, improve coordination among neighboring grid operators and combine the perspectives of energy system planners across the Eastern Interconnection for a more comprehensive assessment of existing assets. These efforts include "Broader Regional Markets" initiatives estimated to yield annual savings of \$193 million for New York.

To view the entire NYISO report, [click here](#).

## **Experts Tout Ways To Replace Electricity From Indian Pt. (WESTJN)**

By Greg Clary

Westchester Journal News, April 27, 2011

GARRISON — Three renewable-energy experts on Monday laid out ways to replace the electricity that Indian Point produces, but pointed out that doing so will take major changes in the way energy is produced and used.

"Over time, we expect energy use to go up," said Karl Michael, an energy analyst for the New York State Research and Development Authority. "It's just been a fact of life we've been wrestling with anytime we try to plan. Using energy efficiently is a wonderful thing, but they keep inventing more big-screen TVs."

Michael spoke at a symposium hosted by the environmental group Hudson River Sloop Clearwater, which used the afternoon to look at the dangers associated with nuclear power in the wake of the Fukushima disaster and at strategies the power industry could adopt if opponents shut down Indian Point.

Michael said Indian Point provides 10 percent of the state's energy and 16 percent of the downstate region's use, numbers that are well below what state grid operators and utilities say.

Melissa Everett, executive director of Sustainable Hudson Valley, told the 50 people in the audience at the Desmond-Fish Library that a 2008 study found that energy efficiency could cut use by 40 percent. She cited University of Michigan research that examined how changing daily habits, such as drying laundry on a clothesline or bicycling instead of driving, could reduce residential energy use by 20 percent and the national use by 7 percent.

The government can lead in some of this, said Tom Kacandes, founder of Solar Advantage Solutions.

"What if the 250-plus municipalities and agencies in the downstate, grid-constrained part of the state, developed collectively 200 megawatts just taking some of their load off the downstate grid during peak hours?" he asked.

He said the state can't continue to allow demand — or even centralized production — to grow unabated.

## **Feds Say Castle Hayne Nuclear Fuels Plant Is Safe, Secure (WILMIN)**

By Jim Brumm

Wilmington Star News, April 27, 2011

Global Nuclear Fuel (GNF) operates its nuclear fuel-fabrication plant north of Wilmington in a safe and secure manner, stated the Nuclear Regulatory Commission in its latest performance review of the Castle Hayne facility.

But Marvin Syker, the Region 2 branch chief of the NRC's Division of Fuel Facility Inspection, said there is one area needing improvement. He spoke during a meeting Tuesday at the Fisher Student Center on the campus of the University of North Carolina Wilmington.

Syker explained the NRC has determined continued attention is needed to improve GNF's safety controls.

He said the performance review had identified a "risk significant" breakdown associated with GNF's Integrated Safety Analysis that is being addressed by the company.

GNF's Chief Operating Officer Nicole Holmes said the company agreed with the NRC's assessment and is working on an 18-month program to address the safety failures.

She said the company's action plan will be reviewed at a public meeting beginning at 9:00 a.m. Wednesday at the GE Nuclear facilities, 3901 Castle Hayne Road.

GE has manufactured fuel assemblies in New Hanover County since the late 1960s, creating GNF in early 2000 when Hitachi and Toshiba purchased stakes of 18 percent and 22 percent, respectively, in the fuel-manufacturing operation.

Syker also said the NRC will continue annual reviews of GNF's fuel assembly operations, but public meetings to discuss these reviews will be on a biannual basis.

This means the next meeting presenting GNF's performance reviews will cover the period ending December 31, 2012.

## **US Nuclear Production Rises As Comanche Peak 2 Reactor Starts (BLOOM)**

By Colin McClelland

Bloomberg News, April 27, 2011

US nuclear-power output increased from 4½-year lows as Energy Future Holdings Corp. started the Comanche Peak 2 reactor in Texas, the Nuclear Regulatory Commission said.

Power generation nationwide increased 857 megawatts from yesterday to 72,898 megawatts, or 72 percent of capacity, according to an NRC report today and data compiled by Bloomberg. Twenty-six of the nation's 104 reactors were offline.

Energy Future is operating the 1,150-megawatt Comanche Peak 2 at 1 percent of capacity. The 1,200-megawatt Comanche Peak Unit 1 is producing at full power.

The Comanche Peak plant is located 66 miles (106 kilometers) southwest of Dallas.

Southern Co. (SO) boosted the 1,109-megawatt Vogtle 1 reactor in Georgia to full power from 30 percent of capacity yesterday after it automatically tripped offline April 20. The cause is under investigation, the NRC said April 21.

The 1,127-megawatt Vogtle 2 is operating at full capacity. The plant is 26 miles southeast of Augusta.

Exelon Corp. (EXC) increased output from the 1,164-megawatt Byron 1 reactor in Illinois to 65 percent of capacity from 40 percent yesterday after a refueling outage. Another unit at the site, the 1,136-megawatt Byron 2, is operating at full power. The plant is located 85 miles west of Chicago.

Exelon boosted the 1,134-megawatt Limerick 2 reactor in Pennsylvania to 97 percent of capacity from 34 percent yesterday after returning from a refueling and maintenance outage.

Another reactor at the site, the 1,134-megawatt Limerick 1, is operating at full capacity. The plant is about 30 miles northwest of Philadelphia.

Progress Energy Inc. (PGN) boosted the 937-megawatt Brunswick 2 unit in North Carolina to 99 percent of capacity from 89 percent yesterday. The 938-megawatt Brunswick 1 is operating at full power at the Cape Fear site 130 miles south of Raleigh.

Constellation Nuclear Energy Group LLC, a joint venture of Constellation Energy Group Inc. (CEG) and Electricite de France SA, slowed the 621-megawatt Nine Mile Point Unit 1 in New York to 78 percent of capacity from full power yesterday.

Another unit at the site, the 1,140-megawatt Unit 2, is operating at full power. The plant is located about 6 miles northeast of Oswego.

Vermont Yankee

Entergy Corp. (ETR) lowered output from the 620-megawatt Vermont Yankee reactor to 76 percent of capacity from full power yesterday. The plant is located in Vernon, in the southeast corner of Vermont, 80 miles northwest of Boston.

Entergy slowed both units at the Arkansas Nuclear One plant. The 843-megawatt Unit 1 reduced output to 42 percent of capacity and the 995-megawatt Unit 2 dropped to 78 percent of capacity. Each unit was operating at full power yesterday at the plant located 65 miles northwest of Little Rock.

Xcel Energy Inc. (XEL) slowed the 551-megawatt Prairie Island 1 reactor in Minnesota to 96 percent of capacity from full power yesterday. The 545-megawatt Prairie Island 2, another reactor at the site about 40 miles southeast of Minneapolis, is operating at full power.

Some reactors close for maintenance and refueling during the spring and fall in the US, when demand for heating and cooling is lower. The outages can increase consumption of natural gas and coal to generate electricity.

The average US reactor refueling outage lasted 41 days in 2009, according to the Nuclear Energy Institute.

## **Will Natural Gas Surge Mean Lights Out For Nuclear? (MR)**

By Kate Springer

Medill Reports: Chicago, April 27, 2011

Following the Fukushima nuclear disaster, utility companies overseas and across the US have halted or cancelled plans to build nuclear power plants, the latest being NRG Energy Inc. in Texas.

But in many cases it's not the disaster that is causing hold-ups. It's the promise of natural gas.

With some of the lowest and most stable natural gas prices in US history, building new nuclear facilities is no longer a viable option in competitive markets, experts say. That's true even for Exelon Corp., operator of the nation's largest fleet of nuclear power plants.

Because Exelon's future parallels the power industry's, the Chicago-based company expects natural gas to affect its investments for years to come.

"The problem will be that low natural gas prices will inhibit building new nuclear plants, because low natural gas prices hold down electricity prices," said Judith Rader, Exelon's senior external communications manager. "We were exploring building a nuclear plant in Victoria, Texas, but we have scaled back plans, because it's no longer economical to do so."

Exelon, which has six of its 11 nuclear facilities in Illinois, has not been able to build new nuclear plants in the state for the past 25 years, because of a state moratorium.

Last week an Exelon critic, the Citizens Utility Board, conducted a survey asking residents whether or not the Illinois' moratorium should end. About 59 percent of 1,300 respondents said "yes, it should."

But even if legislation were to change, Exelon has no plans to build.

"If wholesale electricity prices are low," she added, "it makes it hard to justify building a new nuclear plant because you can't sell that electricity at a cost that will recoup our investment."

Exelon isn't shirking modernization of its vast facilities.

For the fourth quarter of 2010, Exelon reported capital expenditures of \$3.46 billion, but analyst Angie Storzynski of Macquarie Group Ltd. ABN said the trajectory is not "particularly good."

"Exelon has no plans to build more plants—nuclear, gas or otherwise," said Storzynski. "When you read any single newspaper writing about what Exelon is going to do next, the fact is they aren't going to do anything."

Morningstar Inc. analyst Travis Miller believes Exelon will continue to be successful.

"Its ability to produce low-cost electricity with minimal greenhouse gas emissions should produce substantial, sustainable, and growing shareholder value for many years, regardless of what path power prices take," wrote Miller in an April research note.

Though it is more cost-effective to build a natural gas plant at this point, Rader said that this does not mean Exelon will push into natural gas.

"We don't generate a lot of power from natural gas, in fact, less than 1 percent comes from oil or natural gas," she said. "But it's reshaping our industry."

According to its website, Exelon generates 93 percent of its owned power from nuclear, 5 percent from coal, 1 percent from natural gas, 1 percent from oil, and 1 percent from renewable energies such as wind, solar and hydro.

Over the past decade, natural gas prices have dropped from approximately \$12 per million British thermal units to \$4 per MMBtu thanks to shale gas reserves discovered across the country.

The most recent discoveries stretch across Pennsylvania and New York's Marcellus reserve, according to the US Energy Information Administration.

The Marcellus reserve, known as the Saudi Arabia of natural gas, underlies more than 95,000 square miles and holds an estimated 1.135 trillion cubic feet of recoverable shale gas, according to IHS Inc., a global information company.

Natural gas is experiencing this upswing thanks to a drilling technique called hydraulic fracturing, or “fracking,” that breaks through hard rock formations. But scientists and consultants are divided when it comes to natural gas’s role in the future and what its abundance means for nuclear, pollution and fresh water resources.

“The energy is cheap now,” said Mark Prelas, director of research at the University of Missouri’s Nuclear Science and Engineering Institute, “but it will not be cheap forever.”

Prelas predicts that by 2030, fresh water shortages may cause natural gas prices to skyrocket, because fracking is a water-intensive process.

“In the future, when you start seeing problems with natural gas prices, Exelon’s fleet will most likely still be intact,” he said.

He also warned against potential ground-water pollution from fracking.

“The environmental issues are not being addressed appropriately and this waste water is going to be a continuous problem,” said Prelas. “The more you drill, the more you are going to have to deal with it.”

Other experts don’t view nuclear and renewable energy sources as fuels of the future.

“Natural gas is the only available fuel source that can fill the gap of retiring coal,” said Brian Habacivch, senior vice president of Fellon-McCord & Associates LLC, an energy management firm based in Louisville, Ky.

Habacivch doesn’t view nuclear and renewable energy sources as fuels of the future.

“It looks like the nuclear revolution is falling apart pretty quickly,” said Habacivch. “Constellation [Energy] pulled their plug, so did NRG.”

“If we’re not building more nuclear and we’re going to retire coal, the only thing that can fill that gap in the next five to 10 years is natural gas, but coal will play a part, too,” he said.

According to the Energy Information Administration, electricity use will increase 39 percent by 2030 and natural gas will account for 57 percent of new electricity-generation capacity built by 2025.

Some energy experts argue that nuclear could be priced out of the market and eventually decommissioned.

“The risk, long-term planning, engineering and local opposition make nuclear facilities very challenging to build,” said David Schieren, CEO of EmPower SolarCES LLC and executive committee member of the Greater Long Island Clean Cities Coalition.

Sterling Burnett, lead analyst of the National Center for Policy Analysis in Texas, said natural gas will be the future’s big energy winner, but nuclear will not disappear.

“Natural gas will be the fuel of the future. Everyone predicts that, and I believe they are 100 percent correct,” said Burnett.

Though he expects the natural gas rush will cause nuclear to falter by 2025, Burnett said that in the long run nuclear could re-emerge.

“By 2050, that could turn around,” Burnett said. “If technology evolves and companies focus on modular reactors and micro-nukes, which are safer and less expensive, and we start recycling spent nuclear fuel like in France, then it could take off.”

Others say nuclear is still very much on the table as part of the future’s energy portfolio.

Natural gas will be an important transition fuel as we work toward new energies, but nuclear will not disappear, said Raymond Orbach, former under secretary of the US Department of Energy and director of the Energy Institute at the University of Texas at Austin.

Though he said the US may see natural gas used for more and more electricity in the future, Orbach expects nuclear to remain a major player.

“Nuclear is going to have to face competitive pressures, but it’s an almost unlimited source,” said Orbach.

A study by Daniel LaGatta of GEI Consultants Inc., a consultant to electric power providers, predicts that the US will need an additional 35 to 40 nuclear plants by 2035 if nuclear is to continue to provide 20 percent of our base-load need.

Presently, Illinois ranks No. 1 in nuclear-generated electricity with 48 percent, compared with 20 percent nationwide, according to the Clean and Safe Energy Coalition.

By 2025, the Illinois EPA will require 25 percent of the electricity supply to be from renewable energies and Exelon has its own goals of lowering its carbon footprint through decommissioning coal plants, upgrading present nuclear facilities and energy efficiency programs.

Exelon’s nuclear fleet produces more than 130 million megawatt-hours of power annually – enough to power 11.5 million homes – with virtually no greenhouse gas emissions, according to Exelon’s 2020 plan.

In the plan established in 2008, Exelon vowed to reduce, offset or displace at least 15 million tons of greenhouse gas emissions per year by 2020. By 2010, Exelon achieved more than half of its goal.

Despite both optimistic and dire predictions for the future of nuclear, Exelon expects its plants to remain profitable, especially after a series of upgrades, also known as “uprates.”

By design, every nuclear plant in the US can be upgraded, a process that can increase a reactor's power output by 10 percent to 20 percent, according to the Nuclear Regulatory Commission.

Through 2017, Exelon plans to uprate its nuclear fleet by between 1,300 and 1,500 MW of additional generation capacity, the equivalent of a new advanced nuclear reactor. This process would displace 8 million metric tons of carbon dioxide emissions annually, according to the 2020 plan.

Uprate projects are underway at Exelon's Braidwood, Byron, Dresden, LaSalle and Quad Cities plants in Illinois, and Limerick and Peach Bottom plants in Pennsylvania.

"If the economics don't support individual projects due to natural gas prices or potential increased regulation, our uprate projects have always had off-ramps," said Rader.

Though Rader could not provide financial outlooks further than one year ahead, the company expects its 2011 full-year operating earnings to be between \$3.90 and \$4.20 per share.

Wall Street analysts estimate Exelon's target price per share during 2011 to be \$4.08. In 2012, they estimate, the price will decrease to \$2.97, then hold steady at \$2.95 during 2013.

Exelon stock is relatively cheap compared to the industry, with a trailing price-earnings ratio of 9.99.

Exelon stock closed up 40 cents at \$41.17 Tuesday.

## **Debate On Energy Tax Shifts To How It Would Be Implemented | News From Southeastern Connecticut (NLDAY)**

By JC Reindl

New London (CT) Day, April 27, 2011

Gov. Dannel P. Malloy and Democratic lawmakers appear set on the idea of imposing a new state tax on energy generation. The debate has now shifted to how that tax should be structured, and whether or not it would get passed on to consumers in the form of higher electric rates.

"A decision about a tax has already been made -- it's already in the finance package -- the question is what exactly that tax will look like," state Rep. Vickie Nardello, D-Cheshire, co-chairman of the legislature's energy committee, said Tuesday. "The number can be debated and we can reach a number that people agree with ... it's the structure that I'm more concerned with."

Nardello made her remarks immediately after a news conference at the state Capitol complex, where a Connecticut AARP director warned that Malloy's energy generation tax would likely result in consumers paying more.

The tax is projected to generate \$72 million a year in state revenue by taxing nearly all electricity producers at the same rate, whether they're nuclear, coal, oil, or natural gas. Only renewable sources such as solar would be exempt under the temporary, two-year tax.

"We do not believe the (\$72 million) that's account for in the governor's budget is the way to go because we do believe that will get passed along to the ratepayers," said John Erlingheuser, AARP Connecticut advocacy director.

Erlingheuser said rates would increase because Malloy's tax wouldn't exempt any major form of generation. "That sets the clearing price for all generation, so you're raising the clearing price that everybody gets to rise up with, thereby raising rates because that gets passed along to ratepayers," he said.

A spokeswoman for the governor issued the following response to AARP concerns about his tax proposal: "Governor Malloy is acutely aware of the shared sacrifice he is asking of everyone in the state. There are no easy answers. But he believes that his proposal is the most equitable and fair and will help stabilize our state's economy and put people back to work."

An alternative proposal, backed by Nardello and fellow co-chairman State Sen. John Fonfara, D-Hartford, has passed their energy committee but isn't in the revised version of the governor's budget.

Nardello said she also fears the Malloy energy tax plan would result in higher rates. Nardello said the structure of Senate Bill 1176 -- the measure she backs -- would keep rates down because it doesn't impose a tax on natural gas. That measure is projected to generate \$340 million by taxing nuclear as well as oil and coal generation. Renewables would also be exempt.

"If you go back to a system where you tax gas generation as well, you have a much higher likelihood that it will be passed on to consumers," Nardello said.

However, the Nardello-backed tax would fall disproportionately on the Millstone Power Station in Waterford, the state's sole operating nuclear facility. Plant owner Dominion says the measure would cost it \$332 million annually and force the company to shut down Millstone for economic reasons.

Yet Nardello insists that Dominion would still make \$200 million in annual profits at Millstone under the tax. The company disputes her assertion.

But Dominion says it is willing to absorb the \$40 million annual cost of the Malloy tax.

The AARP announced at the news conference the results of a survey showing that eight in 10 Connecticut residents who are at least 50 years old are concerned about the rising cost of electricity in the state, and feel they're paying too much.

## **Not A Light Matter: Possible Electric Rate Increase Ahead (TOLPATCH)**

### **Possible Electric Rate Increase Ahead**

By Sujata Srinivasan

Tolland Patch, April 27, 2011

A bill pending senate action could, if passed, increase electricity rates for consumers across the state. That's a tough sell even in an environment of "shared sacrifice" – a rallying term coined by Gov. Dannel Malloy to brace up for increased taxes.

The state budget, approved by Democrats last week, includes personal income tax set at a whopping 6.7 percent, an increase in sales tax from six to 6.35 percent, an increase in gasoline tax by three cents per gallon, and a reduction in property tax credit to \$300, from a previous high of \$500.

SB 1176, which was introduced by the Energy and Technology Committee and is under consideration by the state senate, is taking a lot of flak from bipartisan groups on the additional burden it could impose on beleaguered residents and businesses.

The proposal calls for a \$340 million tax on electricity generators, 90 percent of which would be paid by Millstone Power Station in Waterford.

However, given that Millstone is a key supplier and lights up businesses and residences in more than half of the state, the tax burden is expected to be transferred to electricity consumers.

"It's a no-win situation for Connecticut, its residents and businesses. It's a dangerous precedent for the state to adopt the only production tax in the country," said Kevin Hennessy, assistant counsel at the Connecticut Business & Industry Association (CBIA). "If passed, SB 1176 will negatively impact everyone who pays an electric bill in Connecticut—business and residential customers—because the new tax would likely be passed on to consumers through higher electric rates."

"It would also serve as a disincentive for companies to invest, grow and create jobs in the state and ultimately hurt Connecticut's energy infrastructure by decreasing electric reliability in the state. Connecticut already has among the highest electricity rates in the country and the state legislature should be working to reduce those costs, not increase them," Hennessy added.

Several CBIA member-companies, including Highland Manufacturing in Manchester, are opposed to the proposal. Business owners said they were concerned about their profit margin, which is already tight.

"In my business, I cannot pass on a possible tax increase to customers. We are already competing internationally and with other low-cost states in the US such as Kansas and Indiana. Anything that increases our costs will make us less competitive," said Christian Queen, Founder and CEO of Highland Manufacturing. "While it's never a good time to raise taxes, the worst time is during a down economy."

Rep. David Baram, D-Windsor and Bloomfield, said he is listening to both sides of the argument and is evaluating the implications of an increased electricity production tax on consumers.

Rep. Christopher Davis, R-East Windsor and Ellington, said he is opposed to any tax increase that targets a specific industry.

"By increasing taxes on electricity generators, those taxes will be passed on to consumers. Already people are concerned about high electricity costs in Connecticut. This is not something people are happy with," Davis said.

House Republican Caucus Chairman Rep. Penny Bacchiochi, who represents Somers, Stratford and Union, said the proposal was clearly wrong-footed.

"As a member of the Energy and Technology committee, I was shocked to see a bill like this," she said. "The bill singles out one industry, it will jeopardize good jobs and will could very well result in the closing of one of our major employers."

## **Older Residents Back Conn. Bills To Lower Electricity Rates (NHR)**

By Luther Turmelle, Angela Carter

New Haven Register, April 27, 2011

HARTFORD — Eight in 10 state residents age 50 and over say they are concerned about the rising cost of electricity and a majority of respondents think they are paying too much, according to a survey released Tuesday by AARP Connecticut.

Another 40 percent of the 802 residents surveyed by telephone between March 21 and April 1 said their electric bill has gone up in the past 12 months. Participants were members and non-members of AARP, said John Erlingheuser, the organization's state advocacy director.

Twenty percent of respondents purchase power through alternative suppliers, he said.

The survey also found that 68 percent do not believe state elected officials are doing enough to lower their electric bills.

"AARP is calling on the legislature and the governor to enact legislation this year that will begin to lower electric rates for state residents and make Connecticut more competitive with our neighbors," said Brenda Kelley, state director of AARP, which has nearly 600,000 Connecticut members who are 50 years old or more.

The survey results come as Connecticut lawmakers consider a pair of bills that focus on remaking the way the state regulates energy and create a tax on power generators in the state.

When it comes to specific provisions of Senate Bill 1, An Act Concerning Connecticut's Energy Future, 89 percent said they support legislation that mandates a reduction in electricity rates by 15 percent over the next five years; and 58 percent said they would be more likely to vote for a candidate who supports this legislation.

The legislation would consolidate the existing Department of Environmental Protection and DPUC into a single Department of Energy and Environmental Protection with three bureaus of Energy, Environmental Protection and Public Utility Control.

AARP Connecticut supports language in the bill that would create a procurement manager position under the Public Utility Control bureau. That person would ensure that electricity is acquired for customers of Connecticut Light & Power Co. (CL&P) and The United Illuminating Co. "at the lowest reasonable cost." Seventy-seven percent of survey respondents said they support putting that into law and 53 percent said they would back a candidate who supports such legislation.

David Thomas, AARP's lead advocacy volunteer for energy and utilities, said staff and volunteers have heard anecdotal stories about customers receiving surprising jumps in their rates, companies rolling over contracts when they expire into a more expensive plan without notice to customers and cancellations without notice.

Erlingheuser said the legislature should pass stronger consumer protections requiring greater transparency.

"Our laws should ensure that a consumer is fully informed when choosing a new electrical supplier," Thomas said.

Dominion Energy, the operator of the Millstone Nuclear Power Plant in Waterford, opposes one of the pieces of legislation. The Virginia-based company said Senate Bill 1176, An Act Concerning Electric Rate Relief unfairly targets Dominion Energy with a generation tax that would result in increased electric rates for Connecticut consumers or force the utility to close the power plant.

And the Retail Energy Supply Association, a group of companies that sells electricity to Connecticut consumers, said Senate Bill 1 could scuttle the competitive marketplace in the state. That, said Jay Kooper, a spokesman for the group, would remove "the consumer's best hopes for lower electric rates."

"We think energy competition should be preserved because it puts downward pressure on prices," Kooper said. "We have some concerns that S.B. 1 will impede customer choice at a time when customers need all the choice they can get."

Kooper said the claim that Connecticut has some of the highest electric rates in the country is misleading,

"If you take the actual commodity prices, that claim is not true," he said. "What drives the prices into higher territory are charges and other assessments that are added on to customers' bills."

Senate Bill 1 has been passed by the Energy and Technology Committee and the Planning and Development Committee.

"It has a few other committees to visit," said state Rep. Vickie Nardello, D-Prospect, co-chair of Energy and Technology.

Lawmakers are trying to balance efforts to reduce costs with implementing policies that increase efficiency, such as purchasing renewable energy sources, she said.

Erlingheuser said the AARP is "happy" with current language in S.B. 1, but if that changes, "we'll shift gears if we have to. We're out to protect the ratepayer. We believe this bill does that."

## **Computer Sciences Corp. Sees Continuing Growth In Norwich (NB)**

Norwich Bulletin, April 27, 2011

Norwich, Conn. —

Computer Sciences Corp. continues to land additional business for its Norwich data center and may undertake another physical expansion in about two years.

Executives of the company, which is Norwich's largest taxpayer, gave a briefing to state lawmakers and city leaders Tuesday at its Stanley Israelite Norwich Business Park complex. A sales tax exemption granted by state government in 1992 was praised frequently by the executives as largely responsible for their Connecticut "success story."

"We made a commitment to each other," CSC Vice President and Aerospace and Defense Industry Executive Mark Dieterle told the group. "Both sides have kept their commitments."

Recent business moves include moving Pfizer Inc. data processing from Albany, N.Y., to Norwich. CSC was not "heavily impacted" by the recession and continues to briskly seek new business, including that outside of the United States, Dieterle said.

"Wouldn't it be nice to bring work from Brazil to Connecticut?" he said. "Bringing work to Connecticut is key for us."

Responding to a question from Norwich Community Development Corp. Executive Director Bob Mills, Dieterle said the company is looking to grow its health care business, one of its six industry groups. The CSC executive said he would welcome talks with Eastern Connecticut hospitals.

CSC also gave permission for information about its services to be shared with Chinese officials. Norwich leaders are scheduled to visit China next month and Mayor Peter Nystrom is looking to "talk up" CSC. A China delegation recently visited Norwich.

"This is a success story that needs to be shared," Nystrom said.

Responding to a question from state Rep. Christopher Coutu, R-Norwich, Dieterle said CSC is concerned about the electricity costs involved in running its computer mainframes and servers, particularly a state proposal that would boost taxes on the Millstone Nuclear Power Station in Waterford by \$335 million per year. Executives including Account Executive David Ryan described the relationship with Norwich Public Utilities as "excellent."

General Dynamics Corp. parent company of Electric Boat Corp., was CSC's first major Connecticut client and the two entities continue to work closely, Dieterle said. CSC is seeking new business with two or three out-of-state military contractors, he said.

CSC pays \$10 million in taxes annually to Norwich. Its local workforce numbers about 400 with dozens contractors from other firms visiting regularly. About \$19 million was spent building a data center and \$5 million on security upgrades and a customer briefing center. It has added 472 servers and three mainframes, doubling its MIPS, or million instructions per second, capability in the past two years, executives said.

## **USEC Takes Next Step In Obtaining Funding For Piketon Centrifuge (CHILLGAZ)**

Chillico Gazette, April 27, 2011

While political pressure continues to be applied to the Department of Energy to approve a \$2 billion loan guarantee for the American Centrifuge Plant in Piketon, USEC Inc. has announced it is moving to the next step in the approval process.

USEC announced today that it has completed most of its due diligence review and the negotiation stage of the application process. It now moves on to the draft credit package, which includes a negotiated term sheet that includes specific terms and conditions USEC must meet to close on the loan guarantee.

Should the draft credit package be approved by the Department of Energy's Credit Review Board, Energy Secretary Steven Chu could decide to issue a conditional loan guarantee commitment. If that happens, the company would have to work with DOE to satisfy any remaining technical and financial conditions for funding and complete final documentation that would allow a financing deal to close and the company to have access to the funds.

While no time frame has been announced for a conditional commitment to be issued, USEC President and CEO John Welch is hoping that one would come during the second quarter of this year, which runs through the end of June.

Estimates for job creation if the Centrifuge Plant receives the guarantee to finish construction include roughly 4,000 construction jobs and about 400 long-term jobs at the plant once in full operation.

## **Centralized Storage Of Spent Fuel Is Centerpiece Of MIT Nuclear Report (PLATTS)**

Platts.com, April 27, 2011

Centralized interim storage of utility spent fuel is the centerpiece of a Massachusetts Institute of Technology report released Tuesday on the future of the nuclear fuel cycle.

At the same time, two members of the MIT study group on the nuclear fuel cycle said Tuesday that they personally do not believe the US should accelerate the movement of spent fuel from nuclear power plants' spent-fuel pools to dry storage casks -- as some have suggested following the accident at Japan's Fukushima-1 plant after the March 11 earthquake and tsunami.

In the wake of the devastation at the Fukushima-1 nuclear power plant that knocked out the plant's ability to cool the fuel in its cores and spent-fuel pools, several US lawmakers called for an accelerated transfer of spent fuel from pool storage to air-cooled dry storage casks in this country. The fuel must be cooled for a minimum of five years in storage pools before it can be moved to dry storage casks.

Article continues below...

But the biggest potential challenges could arise during the first five years after the fuel is removed from the core, according to Andrew Kadak, a former MIT nuclear science and engineering professor. That period is when the irradiated fuel is hottest, with the fuel's decay heat reducing as it cools, said Kadak, who now is director of nuclear services and principal at the engineering consultancy Exponent.

Instead of accelerating the transfer of spent fuel to storage casks, the US needs to accelerate the move toward a "rational back-end" program, said Ernest Moniz, the MIT study group's co-chair.

Kadak and Moniz made their comments in response to a question during a press briefing Tuesday on the release of the MIT report. Typically, the fuel cycle involves a wide range of fuel issues, from the availability of uranium to the disposal of utility spent fuel.

The MIT group spent three years examining the future of the nuclear fuel cycle. Many of its recommendations, such as the creation of a quasi-governmental organization to manage the back end of the fuel cycle, include options that already have surfaced in policy discussions on what to do with utility spent fuel after the US Department of Energy canceled its Yucca Mountain repository project in Nevada last year.

#### CENTRALIZED INTERIM STORAGE MEANS FUEL AVAIL FOR FUTURE OPTIONS

The MIT study supports centralized interim storage in part because of what it called "uncertainty" about whether the irradiated fuel is waste or an energy resource. The fuel still has more than 90% of its energy-producing isotopes by the time it is removed from the core and placed in spent fuel storage pools.

Moniz said the country should plan on storing spent fuel for 100 years as part of an integral fuel cycle strategy. If other options for managing the spent fuel become available, the spent fuel is there, he said. The federal law that governed the Yucca Mountain project did not include a centralized interim storage facility.

Charles Forsberg, executive director of the MIT study and a nuclear science and engineering professor at MIT, likened a repository to a "lock box." Spent fuel could be placed in a repository and later removed if it is determined to be an important energy resource, he said.

It could be several decades before reprocessing is considered an attractive option for the back end of the fuel cycle, Moniz said.

There is "no economic incentive" to reprocess and recycle spent fuel now, a situation that underscores the need for centralized interim storage, according to Kadak.

Spent fuel will stay at reactor sites until there is a facility -- whether it is a storage or disposal facility or a reprocessing facility -- available to take that material. Spent fuel now stored at decommissioned reactor sites could be moved to a centralized facility as a demonstration project, he said.

Moniz and four members of the MIT Nuclear Fuel Cycle Study Advisory Committee are members of President Barack Obama's blue ribbon commission on nuclear waste. That panel is evaluating alternatives to the Yucca Mountain repository project that DOE dismantled last year.

The MIT report is just one of several inputs the blue ribbon commission will consider as it prepares an interim report for release in July, Moniz said when asked if the MIT report reflects the commission's position. He added that members of the advisory committee do not necessarily endorse views expressed in the MIT report.

Advisory group members who also sit on the blue ribbon commission are Phil Sharp, advisory committee chairman and president of Resources for the Future; Jonathan Lash, president of World Resources Institute; Richard Meserve, president of Carnegie Institute for Science; and John Rowe, president and CEO of Exelon.

### **MIT Recommends Interim Storage For Nuclear Waste (CNET)**

By Martin LaMonica

CNET News, April 27, 2011

Spent fuel is stored in large pools where enough residual heat is released after about five years for the fuel rods to be removed. (Credit: Martin LaMonica/CNET)

Regardless of whether spent fuel from today's nuclear reactors is treated as waste or reused as fuel in the future, an expert commission says the US should create a centralized storage system, an issue drawn into sharp focus because of Japan's current nuclear crisis.

The Massachusetts Institute of Technology today released a report called the "Future of the Nuclear Fuel Cycle," where a panel argued that US policy needs to make spent-fuel treatment an integral part of nuclear plant operations, rather than an "afterthought." Today is the 25th anniversary of the Chernobyl accident.

Used nuclear fuel from power plants is currently stored on site at nuclear power plants in the US and other countries in spent-fuel pools or in concrete dry casks. Following a devastating earthquake and tsunami, workers at the Fukushima Daiichi power plant in Japan have been struggling to reinstate the cooling system of spent-fuel pools to avert a release of more radioactive material.

The MIT report recommends that existing spent fuel stored on site be brought to centralized sites and stored in concrete dry casks suitable for 100 years of storage. For long-term storage of thousands of years, geological formations are suitable for safe storage, the study says.

Following the Fukushima Daiichi disaster, the US utility industry and Nuclear Regulatory Commission are reevaluating the notion of a centralized interim storage operation, some of the study's authors said at a press conference today. The disaster will also raise the costs of nuclear power because of the uncertainty around policy and public acceptance.

"Really my hope is that one of the outcomes of the Fukushima crisis...is that it will get a refocusing on the need to get our act together on the back end of the fuel cycle," said Ernest Moniz, who co-chaired the study and is the director of the MIT Energy Initiative. Related links

- Japan crisis challenges nuclear around the world
- NRC plans review as focus turns to nuclear fuel storage
- Will Japan's nuclear crisis affect US energy debate?
- Nukes 101: Up close and personal with nuclear power

To deal with the question of how to handle nuclear waste, the report recommends that a quasi-governmental body be created with the authority to influence policy and deal with local communities on siting storage facilities.

Light-water reactors endure

One of the conclusions from the spent-fuel study is that light-water reactors, the current design of nuclear power plants, will remain in place for decades unless there is a sharp increase in the use of nuclear power.

Technology transitions in the nuclear industry take decades and there is not a strong economic incentive to move away from light-water reactors because of the supply or cost of uranium, according to the study.

A dry cask storage which is suitable for decades of spent-fuel storage. (Credit: Nuclear Regulatory Commission)

Given that light-water reactors will remain dominant for decades, the study's authors argue that research and development on the order of \$1 billion a year should be dedicated to improving current designs and dealing with spent fuel to prevent release of radioactive material and limit nuclear proliferation.

Interim storage can be done so that countries have the flexibility to retrieve spent fuel from light-water reactors for use as a fuel in so-called fast reactors.

"France has shown we can do spent-fuel storage for 50 years using dry casks," said Andrew Kadak, the director of nuclear services at consulting company Exponent and researcher at the Massachusetts Institute of Technology. "It will be many decades before we know whether this is a resource or a waste. Right now there is no economic incentive to recycle spent fuel."

Having a strategy around spent fuel will also aid nuclear proliferation, said Moniz. One possibility is to start leasing fuel from one country to others, which would limit proliferation risk, but that requires a storage policy, he said.

The report was funded by the Electric Power Research Institute, the Idaho National Laboratory, and large companies working in the nuclear industry.

## **House Subcommittee Members To Tour Nevada's Yucca Mountain Nuclear Waste Site (AP)**

Associated Press, April 27, 2011

The chairman of a House subcommittee on the energy and economy is leading a tour of Nevada's Yucca Mountain nuclear waste repository.

Republican Congressman John Shimkus of Illinois says the nation needs a place to permanently store spent nuclear fuel.

Democratic Congressman Gene Green of Texas and Republican Congressman Michael Burgess of Texas are scheduled to join Shimkus on the tour 90 miles from Las Vegas on Tuesday.

Shimkus says the nation urgently needs a nuclear storage site. He says there is no scientific or technical basis for shuttering Yucca Mountain.

Opponents of Yucca Mountain say they are concerned about contamination.

The Obama administration has said it will look for other ways to address the disposal of highly radioactive waste from commercial nuclear power plants.

## **House Members Tour Nevada Yucca Mountain Site (LVSRJ)**

By Keith Rogers

Las Vegas Review-Journal, April 27, 2011

Full-text stories from this source currently cannot be included in this document. You may, however, click the link above to access the story.

## House Members Tour Yucca Site (LVSRJ)

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## Stimulus Money Helped Region, Study Says (AUGC)

By Rob Pavey

Augusta Chronicle, April 27, 2011

Federal stimulus dollars spent in the five-county region surrounding Savannah River Site created or saved 4,600 jobs and helped mitigate the impacts of the worst recession in recent history, according to a new study unveiled today.

Economists at O'Connell Center for Executive Development at the University of South Carolina Aiken partnered with Augusta State University and Claflin University to produce an analysis of American Recovery and Reinvestment Act spending and its impacts on Aiken, Barnwell and Allendale counties in South Carolina, and Richmond and Columbia counties in Georgia.

"Every dollar of the Recovery Act invested in this area funded 86 cents of additional economic activity in the region, and each job funded by the SRS Recovery Act program created an additional 0.90 jobs in the local community," the study found.

## Questions Remain About Piping Hanford's Nuclear Waste (NPR)

NPR, April 27, 2011

One of the most difficult challenges at the Hanford Nuclear Reservation is moving radioactive waste from point "A" to point "B." The federal government is spending billions of dollars on a waste treatment plant. Piping that radioactive waste across the desert is sort of like getting ketchup out of a bottle. But it's a whole lot more complicated and dangerous.

Mike Thien works for a federal contractor that's trying to figure out how to mix up and sample radioactive sludge while it's still in underground tanks. Photo by Anna King

Tom Fletcher, a top manager with the US Department of Energy, shows off some wrapped up piping that's waiting to be dug into the desert. Photo by Anna King

From the farthest of Hanford's waste tanks to the new treatment plant it's just seven miles as the crow flies. But the technical challenges engineers have to overcome to make that journey are enormous.

I'm out here near the center of the colossal Hanford site, with Tom Fletcher. He's one of the top guys in charge of that 53 million gallons of radioactive tank waste.

Anna King: "The night before you pump some waste, what are you going to be thinking?"

Tom Fletcher: "I'm going to have every finger and toe crossed that that machine turns on successfully and we transfer successfully, because it's a history-making event when we make that first glass log."

Glass logs about the size of telephone polls. That's what the sludge will be when it comes out of the treatment plant for long term storage.

But in its current state, that radioactive toxic brew acts like ketchup.

It's what scientists call a non-Newtonian liquid. That's right, it doesn't follow the laws of Isaac Newton – you know the ones about gravity and motion.

Walt Tamosaitis: "If you turn a ketchup bottle upside down it won't flow out."

Walt Tamosaitis is an engineer and manager and has worked for about 40 years in the chemical and nuclear industries.

Walt Tamosaitis: "You have to squeeze the bottle or pound on the bottle in order to instill a sheer, a motion inside. Once the fluid gets a motion, it becomes thinner and it flows. That's a non-Newtonian material."

And that's a problem for pumping. At first you have to pump really hard to get the sludge moving. Later though, you pump less hard to keep that same speed.

But the sludge also contains heavy particles, like plutonium. Imagine chocolate chips in your ketchup.

Walt Tamosaitis: "The chocolate chips will sit in the ketchup and not fall to the bottom of the bottle. But if you shook the dickens out of that bottle the chocolate chips would fall to the bottom because the ketchup would thin out."

Anna King: "The same thing could happen if you were pumping sludge through a pipeline. So why do we care?"

Walt Tamosaitis: "A plugged pipeline is a very bad thing. In a chemical plant the vessels and the pipelines are like the heart and arteries in your body. If you have a problem in the heart like the vessels, or the pipe, like the arteries, it's history. You have a bad problem."

Tamosaitis says radioactive particles could possibly accumulate and make gas. The worst case scenario is what engineers call a "criticality" or explosion.

In fact, Tamosaitis says he was taken out of his job for raising some of these very questions with the waste treatment plant. His removal from his position at a key Hanford contractor last year is now the focus of an investigation by the Defense Nuclear Facilities Safety Board.

But Tamosaitis isn't alone. I talked to other experts on Hanford sludge who share the same concerns. And they told me there are other technical challenges that remain unsolved:

- What happens if government workers ever have to stop the flow in the pipelines?
- How do you clear clogs?
- And how do you keep the sludge the same consistency from batch to batch so you know how it will act?

That last one is the big-daddy question that Mike Thien is working on in an oversized garage in Pasco.

Thien mixes water and various powders in what looks like an industrial-sized fish tank. This simulated waste is like a milkshake in a massive blender.

He takes a sample, to see if that little bit is the same as everything else in the tank.

Mike Thien: "This is critically important because if we cannot demonstrate that we can accurately sample and deliver tanks, that would mean we'd have to find another way to do it."

Finding another way of doing it could mean changing the design of the government's \$12 billion processing plant. Or it could mean building another treatment plant to handle the waste before it ever gets to the massive plant they're constructing now.

It's possible to make the toxic waste flow better by simply adding water. But scientists say the evaporation that would be required later would drag out a mission that's already scheduled to run 60 years.

The Defense Nuclear Facilities Safety Board is studying Hanford's plans for getting radioactive waste to its new facility. The agency plans to offer up an opinion, but hasn't said when.

## 'Cheap' Energy Carries Many Hidden Costs (NPR)

### "Talk of the Nation"

By Neal Conan

NPR, April 27, 2011

NEAL CONAN, host:

This is TALK OF THE NATION. I'm Neal Conan, in Washington.

Almost everybody depends, one way or another, on the energy from coal, oil and nuclear power. Everybody assumes when they flick that switch, the power goes on. Turn the key, the car starts up.

We also know there are costs, and when average gas prices approach \$4 a gallon, we start to pay more attention. We also take notice when there's an accident at a nuclear power plant or an explosion on a deepwater oil rig, or when we lose more than two dozen men in a coal mine explosion. And there are other prices: pollution, destruction of the land and all the problems associated with global warming.

We know there are other sources of power, but for today, let's limit the conversation to coal, oil and nuclear. How do you weight the costs and the benefits? Our phone number is 800-989-8255. Email us: [talk@npr.org](mailto:talk@npr.org). You can also join the conversation on our website. Go to [npr.org](http://npr.org), and click on TALK OF THE NATION.

Later in the hour, we'll talk about gay rights and civil rights. But first, James Fallows joins us from his home in Washington, D.C. He's a national correspondent for The Atlantic and appears regularly on ALL THINGS CONSIDERED on the weekends.

Jim, always nice to have you on the program. Jim Fallows, are you there?

And we're having some trouble finding Jim Fallows on the line. We should have him there momentarily. We're talking about coal, oil and nuclear power today, and how do you balance the - oh, Jim, are you there? Jim Fallows?

It's live radio, ladies and gentlemen. We'll have him in just a moment, Jim Fallows, the national correspondent for The Atlantic and regular contributor to ALL THINGS CONSIDERED.

Mr. JAMES FALLOWS (National Correspondent, The Atlantic): Correct. I have heard nothing. And I hear you, but that's all I hear, not that I'm complaining. I'm only hearing you.

CONAN: Jim? Now he can't...

Mr. FALLOWS: Now I hear Neal.

CONAN: Now you hear Neal because you're on the radio, Jim.

Mr. FALLOWS: Oh, great. Neal, hello.

CONAN: Hi, Jim. How are you?

(Soundbite of laughter)

CONAN: Sorry for the mix-up. Anyway, nice to have you with us. And a little - a couple or three months ago, you wrote an article for The Atlantic that startled some readers, where you wrote that there is no plausible way to meet the world's unavoidable energy demands without dirty, sooty, toxic coal.

Mr. FALLOWS: I did. And it was something - it was a conclusion I didn't naturally come to, but it came out of traveling around China during the three years I was living there and just trying to hear from people there about the math of how to set aside the world's energy demands and the rapid growth in places like China without making better use of coal. And there seems to be no way to resolve that equation without it.

CONAN: And that despite the fact that you acknowledge coal is, well, dangerous to produce, produces all kinds of horrible side effects. We hear about mountains being detonated in this country, and I'm sure lots of things like that go on in other countries, as well - and, of course, just a little over a year ago, the explosion in West Virginia.

Mr. FALLOWS: Oh, sure. And I think it may seem somehow sacrilegious to convert Winston Churchill's famous line about democracy - which is the worst form of government, except for all the rest - to coal, which is the - it's the worst form of energy except that there, at the short term, does not seem to be an obvious alternative to it.

The human toll, the environmental toll in China - which is like the US, a huge producer of coal - is at least as devastating as it is here, because the regulations are so much weaker and so much less well-enforced.

And the human toll is much greater, on average, something like - something between five and eight people per day die in coalmining incidents in China. So it is a very, very destructive form of energy, and therefore, if it has to be used, there's all the more reason to make it less damaging to mine and less polluting to burn.

CONAN: And what we're talking about, though, let's not - you're not, you know, coloring the rose here. You're acknowledging there are also - coal is the single biggest contributor to global warming.

Mr. FALLOWS: Yes. Yes, indeed. And just to go back a step or two, my instinct, like many Americans, is - my instinct, like many Americans, is to be concerned about environmental and climate issues.

And probably more than most Americans, from having lived in China for a while, I am very, very acutely aware of the environmental penalty imposed on China and the world by its very rapid industrialization.

But then there is the reality that right now, about 70 percent of all the power that China produces is from coal. And even if there are very, very rapid increases in wind power and in nuclear power and in hydropower and in geothermal power, all of which have their drawbacks, there still is so large a fraction created now by coal that you can't move away from it very quickly.

So the challenge then is how to use this unavoidable source in less destructive ways from climate terms and human terms and all the rest.

CONAN: One of the conclusions you come to is if you go to the countryside in China - or you assume India or lots of other places, too - people aren't that concerned about the environmental effects of coal or energy production of any sort. They're concerned about getting electricity to their houses, getting pumps that work. They're concerned about air conditioning and cars.

Mr. FALLOWS: Sure. And one way to envision this: If you took the average global output of CO<sub>2</sub> per year, it comes to something like - there's something like 36 or 37 billion tons of CO<sub>2</sub> produced by all the world's activities every year, which would average out to about six tons per person around the globe.

But, of course, the way it actually works is Americans account for about four times that much through all the sort of level of our living, and people in China account for only about one-third as much per capita as we do.

And for several hundred million people in China, still, they have very limited electricity. Their houses aren't very well-heated in the summer or - in the winter or cooled at all in the summer, and there is no plausible way to tell them: Well, we're going to keep having all of our new data-server farms in the US, but you can't have heat in the winter. And so they are going to demand more electric power, and so that is the challenge: finding ways to create it.

CONAN: And I have to say that your article does approach the question of when we are going to hit the tipping point and go past the point at which, well, really unpredictable results happen as the result of global warming. When the Albedo Effect is gone, the ice sheets retreat, and all kinds of things can happen.

Mr. FALLOWS: Indeed. And while I don't present myself as being, by background, a climate scientist, I spent a lot of time interviewing them, you know, in Europe and in China and the US for this article and trying to lay out, in basic terms, how this debate is posed.

And the main point is of that 37 billion tons of carbon dioxide that, per year, the world is putting out, expected to rise to about 50 billion tons within 20 years or so, the effect is to raise the concentration of carbon dioxide in the atmosphere by about two parts per million each year.

And before the Industrial Age, it was probably thought to be around 280 parts per million. Now it's almost 400 parts per million. And the question is: If it gets a lot higher than this - in the, say, 450 realm - what then happens to ice sheets and the tundra and all the rest? Does a self-accelerating process begin?

CONAN: Let's get some callers in on the conversation: 800-989-8255. Email: talk@npr.org. Yes, we know there are other sources, but today, we're focusing on oil, coal and nuclear power. How do we weigh the costs and the benefits? Give us a call. Let's start with Al, and Al's with us from White County in Arkansas.

AL (Caller): Well, I am - I called, actually, about the natural gas drilling boom and the costs of natural gas...

CONAN: Again, we're going to talk about that another day, Al. We're just talking about these other three sources.

AL: Because that is extremely damaging to the environment. You know that there's a new study about the climate effects of natural gas and methane, unintended releases of methane from natural gas.

But I want to put this in context of our children and our great-grandchildren and investing in technologies that will benefit not us, but our grandchildren and our great-grandchildren.

You know, I recently saw a documentary about John Muir and how he fought to preserve - save Yellowstone from - or, excuse me, Yosemite from development. He wasn't doing it for himself. He was doing it for his grandchildren and his great-grandchildren.

Teddy Roosevelt fought to save the Grand Canyon from development. It wasn't about him, he said. It was about his grandchildren. If we put off our luxuries, we can invest in technologies that will reduce our carbon footprint. We just have to make it a priority.

CONAN: And James Fallows, is that likely to be - by the way, Al, we urge you listen June 2nd. We're going to be focusing on natural gas and fracking and the promises and the benefits...

AL: Thank you so much, because this - natural gas has been a nightmare.

CONAN: I understand, Al. But stay with us. But James Fallows...

Mr. FALLOWS: What's very interesting about Al's question, I think, is two political ramifications. One is, as he points out: Historically in the United States, environmental conservation has been a conservative cause.

You know, Teddy Roosevelt, of course, you know, a prominent Republican, was one of the great advocates of that. And when Central Park was built in New York City, there were a lot of Republican sponsors of that. That's some - the great national park movement under Teddy Roosevelt was Republican.

And so you would think there will come a time when we can have some kind of -not - we can move past the really polarized Republican-Democratic split on this. The other is that interestingly, one of the hard-boiled people I interviewed in this article, people who run power companies and build coal plants and all the rest, they say that the only way, really, to encourage industries and everybody else to conserve coal more, to clean it up further and all the rest is to have some kind of price on carbon.

Unless there is some sort of tax or market signal that encourages people around the world to use things more sparingly, it just can't be done by edict.

And interestingly, that should be as much as a conservative, libertarian, even Republican cause as a Democratic environmentalist one, because it's the most efficient way to make the change. And so I think that is, internationally and domestically, something that would be worth trying to revive the push for.

CONAN: Coal, for example, you write, is about two cents per kilowatt hour, far and away the cheapest source - unless you factor in all of the costs that are not calculated into that.

Mr. FALLOWS: Exactly. And so not simply the environmental ones, environmental ones of cleaning up mountaintop removal of having safety for the miners or all the rest, but the burden being placed on people right now from extreme climate conditions and all the more so on children and grandchildren if they have to cope with all these consequences.

So that externality - which we were familiar with 30 or 40 years ago in having plants clean up their obvious air and water pollution - if that is not factored into the full price of the coal, then it will be just by far the cheapest alternative, especially to wind and solar.

CONAN: But not part of the political debate.

Mr. FALLOWS: At the moment, it's a difficult case. The time will come, and I think it's worth trying to speed the time when it comes.

CONAN: We're talking about the costs and benefits of coal, oil and nuclear power. Pretty much all of us use it. We have to weigh the costs of it, too.

800-989-8255. Email us: talk@npr.org. Jim Fallows of The Atlantic is with us, and when we come back, we're going to be talking with Ellen Vancko, a nuclear energy and climate change project manager for the Union of Concerned Scientists about nuclear power, as well.

Stay with us. I'm Neal Conan. It's the TALK OF THE NATION, from NPR News.

(Soundbite of music)

CONAN: This is TALK OF THE NATION from NPR News. I'm Neal Conan.

Most people tend to agree that, in the long run, renewable energy will play a larger and larger part in how we power our homes, our offices and cars. Solar, wind, other options are growing but are still nowhere near what we need to keep the lights on.

In the meantime, much of that relatively cheap, reliable energy comes from three sources: coal, oil and nuclear power. There are others. We're going to focus on those today. Each has its benefits and its drawbacks. How do you weigh the costs and benefits? 800-989-8255. Email [talk@npr.org](mailto:talk@npr.org). You can also join the conversation on our website. Go to [npr.org](http://npr.org), and click on TALK OF THE NATION.

James Fallows is national correspondent for The Atlantic and wrote their December cover story, "Dirty Coal, Clean Future." There's a link to that piece on our site. Go to [npr.org](http://npr.org). Again, just click on TALK OF THE NATION.

And let's bring another voice into the conversation now, Ellen Vancko, who is a nuclear energy and climate change project manager for the Union of Concerned Scientists in Washington, D.C., and she been kind enough to join us here in Studio 3A. Nice to have you with us today.

Ms. ELLEN VANCKO (Nuclear Energy and Climate Change Project Manager, Union of Concerned Scientists): Thank you very much. It's nice to be here.

CONAN: And as we have this sort of embarrassment of anniversaries of energy disasters this month, the 25th anniversary of Chernobyl, today we just passed the one year anniversaries of both the oil spill in the Gulf and the Upper Big Branch mining explosion, not to mention the ongoing nuclear crisis in Japan. What does this say about the state of energy in the world today?

Ms. VANCKO: Oh, that's a tough question. Interestingly, I had made the same list you just recited before I came here. But what it tells us is there is no easy solution to producing and meeting our energy needs.

And all of those events show that the conventional resources we rely on as a nation and as a world are particularly risky in some way or another, whether it's to the environment, whether it's to the people who produce it or both.

Climate change is only going to exacerbate the risks of coal and oil, natural gas as the first caller had brought up, as well. But you asked me here to talk about nuclear power. So that's what I've prepared to discuss.

We realize that the risks of climate change are so grave that we can't afford to rule out any non-carbon or low-carbon energy source at this point. However, prudence dictates that we develop as many options as we can, whether that's solar, renewables, efficiency, nuclear. We need to make sure that we have - we do everything we can to reduce our emissions as quickly and as economically as possible.

CONAN: Yeah, and nuclear power emits no carbon. It has a number of other drawbacks, though, including the fact that there's no place right now to put the spent fuel.

Ms. VANCKO: Well, that's absolutely correct. And let's be clear: Getting a nuclear plant built actually does generate a lot of carbon in the production of the concrete, the steel, the transportation of the components. So it's not a completely carbon-free energy source. However, that can be said for building windmills or solar panels.

Everything has an externality. Everything has a cost. Everything has an environmental impact. But nuclear power is unique in that it poses significant risk from a security standpoint, a safety standpoint, a waste-disposal standpoint that no other low-carbon resource actually poses.

CONAN: And perfectly safe except when it isn't.

Ms. VANCKO: Exactly.

CONAN: Let's get another caller in on the conversation. We'll go to Norman(ph), Norman with us from Marin County in California.

NORMAN: Yeah, I think we should note, too, that uranium enrichment has a carbon footprint, as well, which is inevitable for nuclear power. You know, I've been on this issue for about 35 years and spoke twice here in Marin County in the last week on nuclear dangers.

I think, you know, as we experienced a few minutes ago, you know, even telephone technology, simple as it is, is not failsafe.

(Soundbite of laughter)

NORMAN: And, you know, a plane, God forbid, can malfunction, and it's a horrible tragedy. But when a nuclear power plant malfunctions, you know, the consequences are horrific, as we're seeing in Japan.

I think in terms of public investment, we need to get beyond choosing our poisons and really invest massively in renewable and solar and wind and so forth.

And let me say, Neal, that I'm actually running for Congress here, partly to shut down the two nuclear power plants in California. And I have a article called "Nuclear Power Madness" that people can read on the Web at SolomonforCongress.com.

CONAN: And Norman, that's all the campaigning we're going to let you do.

NORMAN: OK.

CONAN: All right. Thank you very much. But he raises some questions, and Ellen Vancko?

Ms. VANCKO: Well, one of the things, the primary thing that the events in Fukushima show us is that we need to quickly and thoroughly assess the safety of the existing nuclear fleet in the United States today.

And two of the plants located in California are located on fault lines. So the safety and security of those plants, in the wake of what we have seen in Fukushima, as well as following what we learn.

You have to realize that the Nuclear Regulatory Commission, which regulates the safety and security of power plants in the United States, nuclear plants, has initiated a 90-day review period, where it's going to evaluate lessons learned from Fukushima in the short run and then review their own regulations to make sure that the nuclear power plants are operated safely and securely and that existing regulations are actually followed and enforced.

That will be very critical in those plants that have been identified as being located on major fault lines in this country.

CONAN: Let's see if we can go next to - this is George(ph), George with us from San Francisco.

GEORGE (Caller): Thanks. If we're going to rely on coal over the next period, maybe 100 years, whatever it is, the time that your guest is projecting, then we also have to rely on water.

So when you did your projections, where did you reckon the water would continue to come from reliably if, as you appear to already have conceded, the climate is in dynamic changes, which might mean that supplies of water are in doubt?

CONAN: Jim Fallows?

Mr. FALLOWS: Sure, and the supplies of water are in differing situations in different parts of the world. And so there are parts of the world where it is a serious constraint and parts where it is not.

And I guess the point I would make, too, to be in congruence with what we're hearing about the nuclear industry, is that the challenge - and the most difficult part to grasp for this entire challenge, from my point of view, from sort of a public-policy point of view, is it requires moving ahead on every front as fast as we can, that renewables need to be developed as quickly as we can.

But even so, it's striking that, say, between the mid-'80s and the late '90s, when we were having so many - sorry, the mid-2000s, we were having so many new, renewable sources, even so, the absolute increase in the amount of power generated by coal was greater than that, but for the increase in solar or wind.

And so the water challenge is one of many challenges with coal. And I describe in my article the ways in China in particular, where so many of these new coal plants are being built, they're trying to work on all these challenges at once.

CONAN: Go ahead, Ellen.

Ms. VANCKO: I was just going to say that not only is water a challenge for coal plants, but nuclear, thermonuclear plants, the most water-intensive power plants in the world. Dry-cooling is possible. That doesn't require as much water, but it's expensive, and the majority of the plants in existence today do use a very water-intensive process.

CONAN: Thanks, George.

This is a follow-up from Jeff(ph) by email: Is there a way economically to provide clean coal? By clean, I mean non-polluting coal.

And some of the technologies you were talking about that are being worked on, well, one plant in the United States using in-ground gasification.

Mr. FALLOWS: Yes, and the arena where most of this is going on, again, is in China. And I saw just a month ago, outside Beijing, a place where they're doing some of this underground gasification, as well.

And the idea is, though a combination of doing more of the underground work, which avoids the miner danger - the danger to miners and the environmental landscape danger, you can leave many of the pollutants down there.

So there are experiments underway on projects from sequestering the CO2 from the - aboveground, after combustion. There was much more efficient do it pre-combustion, too. So on all fronts, there are these efforts.

CONAN: This is an email question from Suzanne(ph) in Sedona, Arizona: I have never understood why I should have an electric car when the electricity to charge it comes from non-renewable sources. Am I missing something?

And Ellen Vancko, yeah, you can charge up your car overnight and drive 40, 80 miles, depending on the model you've got, but yeah, that comes from - half of it, a national average, from a coal-fired plant.

Ms. VANCKO: Well, the caller is exactly right. That just points to the fact that our current electricity system is not sustainable. Burning coal, which does account for nearly half of our electricity, poses serious risks to the public health, to the

environment, to the economy. It's the largest source of air pollution that causes lung and heart disease, kills hundreds of thousands of people a year, sends thousands to emergency rooms. We need to get beyond that. Energy efficiency...

CONAN: That's not to say that tailpipe emissions on their own aren't a problem, too.

Ms. VANCKO: No, no, absolutely not. And we do need to move to a clean vehicle fleet, whether it's hybrids or all-electric cars. But there are technological hurdles. There are going to be barriers to powering those cars. And we need to get beyond that.

But we do that by increasing the efficiency of our existing fleet, both automobile and power plant, by improving the efficiency of the entire economy and by embracing renewables: solar, wind. The costs of those technologies are coming down. They can be widely deployed, and battery storage, smart grid, there's a whole host of technologies that need to be developed, invested in and integrated so that we can have a clean energy economy in the future that will power those electric vehicles.

Mr. FALLOWS: Neal, can I say a word more about the electric vehicles, too? Obviously, I agree with that on the big picture. I think there is probably -there is sort of one and a half arguments you can make for the environmental...

(Soundbite of laughter)

Mr. FALLOWS: ...superiority of electric cars. One of them is that that much more of the petroleum, the oil that we use to power cars now is imported and from difficult parts of the world than is the coal-generated electric power, you know, which is much more domestically supplied. So there is that sort of international geostrategy argument.

The half argument would be that what drives the construction of electric plants is peak demand, and so if you are recharging these batteries at night when demand is low, it is some - it's less taxing on the whole electric system than, say, is a summer afternoon air-conditioning demand.

CONAN: I have to say, though, I've - we just past another anniversary, and that was Earth Day last week. And I'm old enough to remember the first Earth Day and hearing about all these technologies ever since 1970. And the fact is, as you mentioned, Jim, coal is now a bigger part of our power-generation system than it was 25 years ago.

Mr. FALLOWS: This is - I try to be an optimist, in general, in my journalistic work over the years. The - a sobering conclusion that I came from, from this study of Chinese and US efforts on coal is that technically, and even economically, most of the solutions to this problem are much more closely in reach than they seemed to be politically or intellectually.

I also remember the first Earth Day. I also remember working for Jimmy Carter as a speech writer 30-plus years ago when he was having, you know, the first big energy crisis in US politics. And for 10 years after that, cars became much more efficient, buildings became more efficient, and then, a lot of that went away. And so the stop-start nature of dealing with what is, in reality, a very, very long-term challenge is a real problem we have in the US, in particular.

CONAN: Ellen Vancko, short of a crisis atmosphere, do you see real change happening any time before a real crisis hits?

Ms. VANCKO: Well, we're in the midst of a real crisis.

CONAN: But people don't feel it.

Ms. VANCKO: That's the point that most people miss. Yes. I understand that, but we are seeing sea level rise on a gradual basis. We are seeing increasingly severe storms. We need to set the proper investment structures and incentives in place. We need to put a price on carbon.

If we put a price on carbon, that will direct investment, that will direct capital to where it needs to go to help us produce cleaner and less environmentally harmful technologies.

CONAN: We're talking about the future and oil, coal and nuclear power. Our guests are Ellen Vancko, nuclear energy and climate change project manager for the Union of Concerned Scientists here in Washington D.C.; James Fallows, a national correspondent for The Atlantic and a regular contributor to ALL THINGS CONSIDERED on the weekends. You're listening to TALK OF THE NATION from NPR News.

And let's go next to Dan. Dan with us from Tampa.

DAN (Caller): Yes. Am I on the air?

CONAN: You're on the air. Go ahead, please.

DAN: Yes, sir. I just wanted to say that regardless of the difference in cost between nuclear and carbon base, politically, I believe the carbon base will always win out. People are very afraid of nuclear. People react on emotion, and they're going to favor carbon because of that whole unknown and fear factor regarding nuclear.

So I think that we need to keep our eyes or ears listening to the experts and really evaluate the dangers of nuclear. I mean, true, this last problem happened in a seismic area, but there's a lot of other areas that are non-seismic. So, I really feel that, politically, nuclear is not going to favor very well in discussions, 'cause it's very emotional.

CONAN: Ellen Vancko, we seemed to be on the cusp of a new generation of nuclear plants, and now, everyone is holding their breath. I think that's fair to say.

Ms. VANCKO: Well, we've been hearing a lot about a nuclear renaissance over the past decade. A nuclear's been posited is the answer to climate change, the only viable base level alternative to coal, but there's been an entire storyline drawn around this by the nuclear power industry that spent almost a billion dollars over the past decade lobbying - making campaign contributions and spending untold amounts of dollars positioning that energy source as a fuel.

So the story was out there, and the story was going very well since we hadn't had an accident since Chernobyl, and people said, well, since it hasn't happened in 30 years, it's not going to.

Well, we're now watching a disaster unfold in Japan, and it is making starkly clear again, that nuclear power poses a serious risk that are unique among all of our energy options.

Again, the risks posed by climate change are very grave. We can't afford to rule out low-carbon options, even nuclear power, but until we get the economics fixed, the safety fixed, the security fixed, the caller is correct in saying that that technology is going to very - face a very high hurdle going forward.

CONAN: This from David. It bothers me that not enough is being done to highlight alternative design to nuclear power plants. The pebble bed reactors use passive cooling, and fast breeder reactors could deal with waste. These are engineering problems, not impossible problems. China is already working on pebble bed reactors. Why are not we?

Ms. VANCKO: The United States has investigated various reactor designs, and it continues too through research programs at the Department of Energy, but the reality is the economics for these technologies have not been proven. They've not been forward. The technologies we're using are so expensive that they can't move forward without large government subsidies, and that was before Fukushima.

The price of natural gas is down. Electricity demand is down, and we don't have a price on carbon. Again, all of those things make nuclear more uneconomic than it is based on conventional designs, never mind cutting-edge ones.

CONAN: And, Jim Fallows, one of the interesting parts about your article in The Atlantic in December was the fact that you were talking about coal, but I think this covers another - other technologies as well. The experimentation is in China, where they are building so many plants. They can afford to experiment. It takes 10 years to get a design approve here.

(Soundbite of laughter)

Mr. FALLOWS: Indeed. And I think that that as individuals and as a political system, we all have a hard time dealing, sanely, with risk. For example, the whole airport security system of the last 10 years is very, very hard to justify in any kind of cost benefit basis et cetera, but the idea of, you know, the disaster of 10 years ago makes it hard to ever dismantle it.

So too, when it comes to nuclear power and other kinds of power, a - the purely rational response to Fukushima, in my view, would be to move ahead as quickly as we could with new kinds of designs to replace some of these more dangerous older plants, and that is much easier for China to do both because of their political system which can just ramrod things through, but also because of the huge just construction worksite of everything that's going on there.

So if you want to see new plants for coal or for nuclear or for anything, that's where you see how they're done. You see what works and what doesn't.

CONAN: James Fallows, thanks very much for your time today, and we apologize -we - the radio sometimes doesn't work. I think you're perfectly safe, though.

(Soundbite of laughter)

Mr. FALLOWS: Oh, thank you very much.

CONAN: Jim Fallows joined us from his home in - here in Washington D.C. He's national correspondent for The Atlantic.

Ellen Vancko, at no risk whatsoever, here in Studio 3-A. She is nuclear energy and climate change project manager for the Union of Concerned Scientists.

Thanks very much for your time.

Ms. VANCKO: Thank you for having me.

CONAN: Up next is, gay marriage a civil rights issue? We'll talk with a filmmaker behind a new documentary called "Marriage Equality." Stay with us. I'm Neal Conan. It's the TALK OF THE NATION from NPR News.

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## **Frank Munger: ORNL Cyber Attack: Email Break 'Almost Heaven' (KNOXNS)**

By Frank Munger

Knoxville News Sentinel (TN), April 27, 2011

The folks at Oak Ridge National Laboratory have dealt with the ramifications of a serious cyber attack on the lab's networks in a variety of ways.

The Information Technology staff members - and experts brought to Oak Ridge to help with the investigation and response - have worked virtually around the clock trying to cleanse the systems of any traces of the intrusive malware and get things back to normal as soon as possible.

It hasn't been easy.

External email resumed within a few days, but ORNL's Internet connectivity remained shut down while the fix-it team tried to make sure there were no creepy-crawlies lurking in the far reaches of the system just waiting to come out at a future, inopportune time.

Meanwhile, laboratory employees have altered their work routines or adjusted to the changes as best they can.

Some declared the temporary break from email a blessing and even put a good face on the loss of Internet access, using the time to do focused work without the usual distractions or conduct physical cleanup or reorganization of files, etc.

Ian Anderson, ORNL's associate lab director of neutron sciences and director of the Spallation Neutron Source, said the internal systems at the laboratory were working well and that researchers at the SNS were "beaver away on their experiments"

He added: "The break from the Internet is almost heaven - more time to concentrate on important things."

Lots of folks have suggested that the cyber attack/invasion of Oak Ridge National Laboratory is an embarrassment to an institution that is considered perhaps the world's leading center for scientific computing.

I asked ORNL Director Thom Mason about that last week after the cyber attack - described as an Advanced Persistent Threat - was revealed.

Mason noted that other institutions such as Google and RSA, a computer security firm, have been targeted by these attacks that use sophisticated means to steal high-priority technical information.

He responded: "We've got information that people want. If Oak Ridge didn't have any information that people wanted, I'd be more embarrassed."

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**FLOOD OF MONEY:** The government's Oak Ridge facilities have generously contributed to the Second Harvest Food Bank in Knoxville, particularly following the devastating Feb. 28 flood that destroyed supplies in the Second Harvest warehouse.

ORNL recently presented a check for nearly \$9,500 to the food bank.

The money, which included donations from lab employees and a \$5,000 corporate gift from UT-Battelle (the lab's contractor); will be used in a relief account to help the food bank recover from the flood damages.

The Y-12 National Security Complex in Oak Ridge earlier made a gift of \$12,000 to Second Harvest to help during a difficult time.

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**CASL OPENING:** The grand opening of the Consortium for Advanced Simulation of Lightwater Reactors is set for May 3 at Oak Ridge National Laboratory, and the party list apparently won't include Energy Secretary Steven Chu.

The project clearly has the support of the President Barack Obama's administration, as evidenced by Obama's mention of the work in his State of the Union Address earlier this year.

From what I understand, the lab had hoped Chu would attend and even shifted the date of the ceremony to help make that happen. But it seems that's not going to work out this time around.

## **NSA Director: Defense Not Enough In Cyber Security (TULSA)**

By Robert Evatt

Tulsa World, April 26, 2011

Gen. Keith B. Alexander, commander of the US Cyber Command, director of the National Security Agency and chief of the Central Security Service, says at least 5,000 new bits of malicious code show up on the Internet every day.

Alexander, who spoke Monday at the University of Tulsa, said these constant new threats mean that simply throwing up a computer firewall and fixing things when they break isn't good enough.

"We can no longer depend on a static defense," he said.

And it's not just individual computers or companies that could be vulnerable. Alexander noted that as utilities such as electricity and water systems grow increasingly computerized and interconnected, they too could be brought down by a cyber attack.

Already some utilities have experienced outages because of computerization. Alexander pointed out that the electric grid in the Northeast went down in 2003 because of software anomalies, and the Sayano-Shushenskaya hydroelectric dam in Russia suffered a catastrophic turbine failure in 2009 that killed 75 people because its stability software was down.

Alexander said protecting US infrastructure is a priority, though the fragmented nature of the various technologies used by different utility companies make the effort challenging.

"If we only protect the military networks and not the infrastructure, then we'll have a great network that won't be able to talk to anyone," he said.

Worries about civil liberties often come up in discussions about computer security, and Alexander said he and his team are concerned about it, too. He added that the NSA "doesn't go through people's emails."

"We're not asking for one over the other; we should have both civil liberties and protection," he said. "As Americans, we should demand it."

Alexander said his agency's cyber activities are both defensive and offensive in nature, though he said he could not elaborate on particular offensive operations. He did note that the rules of computerized warfare are still being determined, such as what happens when an attack is routed through a hostile nation, a neutral country or the United States itself.

"These are issues we have to work our way through, because the laws and boundaries aren't clear," he said.

Some of those working in computerized defense under Alexander are graduates of TU, which he called a leader in the cyber security field.

"When I talk to people at the NSA, they have great things to say about the University of Tulsa," Alexander said.

Original Print Headline: Proactive measures needed in cyber fight

Read more from this Tulsa World article at [http://www.tulsaworld.com/business/article.aspx?subjectid=52&articleid=20110426\\_52\\_E1\\_CUTLIN111008](http://www.tulsaworld.com/business/article.aspx?subjectid=52&articleid=20110426_52_E1_CUTLIN111008)

## Cyber Command Chief Speaks In Tulsa (OK)

By Robert Evatt

Oklahoman, April 27, 2011

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Read more: <http://newsok.com/cyber-command-chief-speaks-in-tulsa/article/3562036#ixzz1Ki6fmhil>

## **INTERNATIONAL NUCLEAR NEWS:**

### **Culture Of Complicity Tied To Stricken Nuclear Plant (NYT)**

By Norimitsu Onishi And Ken Belson

New York Times, April 27, 2011

TOKYO — Given the fierce insularity of Japan’s nuclear industry, it was perhaps fitting that an outsider exposed the most serious safety cover-up in the history of Japanese nuclear power. It took place at Fukushima Daiichi, the plant that Japan has been struggling to get under control since last month’s earthquake and tsunami.

In 2000, Kei Sugaoka, a Japanese-American nuclear inspector who had done work for General Electric at Daiichi, told Japan’s main nuclear regulator about a cracked steam dryer that he believed was being concealed. If exposed, the revelations could have forced the operator, Tokyo Electric Power, to do what utilities least want to do: undertake costly repairs.

What happened next was an example, critics have since said, of the collusive ties that bind the nation’s nuclear power companies, regulators and politicians.

Despite a new law shielding whistle-blowers, the regulator, the Nuclear and Industrial Safety Agency, divulged Mr. Sugaoka’s identity to Tokyo Electric, effectively blackballing him from the industry. Instead of immediately deploying its own investigators to Daiichi, the agency instructed the company to inspect its own reactors. Regulators allowed the company to keep operating its reactors for the next two years even though, an investigation ultimately revealed, its executives had actually hidden other, far more serious problems, including cracks in the shrouds that cover reactor cores.

Investigators may take months or years to decide to what extent safety problems or weak regulation contributed to the disaster at Daiichi, the worst of its kind since Chernobyl. But as troubles at the plant and fears over radiation continue to rattle the nation, the Japanese are increasingly raising the possibility that a culture of complicity made the plant especially vulnerable to the natural disaster that struck the country on March 11.

Already, many Japanese and Western experts argue that inconsistent, nonexistent or unenforced regulations played a role in the accident — especially the low seawalls that failed to protect the plant against the tsunami and the decision to place backup diesel generators that power the reactors’ cooling system at ground level, which made them highly susceptible to flooding.

A 10-year extension for the oldest of Daiichi’s reactors suggests that the regulatory system was allowed to remain lax by politicians, bureaucrats and industry executives single-mindedly focused on expanding nuclear power. Regulators approved the extension beyond the reactor’s 40-year statutory limit just weeks before the tsunami despite warnings about its safety and subsequent admissions by Tokyo Electric, often called Tepco, that it had failed to carry out proper inspections of critical equipment.

The mild punishment meted out for past safety infractions has reinforced the belief that nuclear power’s main players are more interested in protecting their interests than increasing safety. In 2002, after Tepco’s cover-ups finally became public, its chairman and president resigned, only to be given advisory posts at the company. Other executives were demoted, but later took jobs at companies that do business with Tepco. Still others received tiny pay cuts for their role in the cover-up. And after a temporary shutdown and repairs at Daiichi, Tepco resumed operating the plant.

In a telephone interview from his home in the San Francisco Bay Area, Mr. Sugaoka said, “I support nuclear power, but I want to see complete transparency.”

Revolving Door

In Japan, the web of connections between the nuclear industry and government officials is now popularly referred to as the “nuclear power village.” The expression connotes the nontransparent, collusive interests that underlie the establishment’s push to increase nuclear power despite the discovery of active fault lines under plants, new projections about the size of tsunamis and a long history of cover-ups of safety problems.

Just as in any Japanese village, the like-minded — nuclear industry officials, bureaucrats, politicians and scientists — have prospered by rewarding one another with construction projects, lucrative positions, and political, financial and regulatory support. The few openly skeptical of nuclear power’s safety become village outcasts, losing out on promotions and backing.

Until recently, it had been considered political suicide to even discuss the need to reform an industry that appeared less concerned with safety than maximizing profits, said Kusuo Oshima, one of the few governing Democratic Party lawmakers who have long been critical of the nuclear industry.

"Everyone considered that a taboo, so nobody wanted to touch it," said Mr. Oshima, adding that he could speak freely because he was backed not by a nuclear-affiliated group, but by Rissho Kosei-Kai, one of Japan's largest lay Buddhist movements.

"It's all about money," he added.

At Fukushima Daiichi and elsewhere, critics say that safety problems have stemmed from a common source: a watchdog that is a member of the nuclear power village.

Though it is charged with oversight, the Nuclear and Industrial Safety Agency is part of the Ministry of Trade, Economy and Industry, the bureaucracy charged with promoting the use of nuclear power. Over a long career, officials are often transferred repeatedly between oversight and promotion divisions, blurring the lines between supporting and policing the industry.

Influential bureaucrats tend to side with the nuclear industry — and the promotion of it — because of a practice known as amakudari, or descent from heaven. Widely practiced in Japan's main industries, amakudari allows senior bureaucrats, usually in their 50s, to land cushy jobs at the companies they once oversaw.

According to data compiled by the Communist Party, one of the fiercest critics of the nuclear industry, generations of high-ranking officials from the ministry have landed senior positions at the country's 10 utilities since Japan's first nuclear plants were designed in the 1960s. In a pattern reflective of the clear hierarchy in Japan's ministries and utilities, the ministry's most senior officials went to work at Tepco, while those of lower ranks ended up at smaller utilities.

At Tepco, from 1959 to 2010, four former top-ranking ministry officials successively served as vice presidents at the company. When one retired from Tepco, his junior from the ministry took over what is known as the ministry's "reserved seat" of vice president at the company.

In the most recent case, a director general of the ministry's Natural Resources and Energy Agency, Toru Ishida, left the ministry last year and joined Tepco early this year as an adviser. Prime Minister Naoto Kan's government initially defended the appointment but reversed itself after the Communist Party publicized the extent of amakudari appointments since the 1960s. Mr. Ishida, who would have normally become vice president later this year, was forced to step down last week.

Kazuhiro Hasegawa, a spokesman for Tepco, denied that it was an amakudari appointment, adding that the company simply hired the best people. The company declined to make an executive available for an interview about the company's links with bureaucrats and politicians.

Lower-ranking officials also end up at similar, though less lucrative, jobs at the countless companies affiliated with the power companies, as well as advisory bodies with close links to the ministry and utilities.

"Because of this collusion, the Nuclear and Industrial Safety Agency ends up becoming a member of the community seeking profits from nuclear power," said Hidekatsu Yoshii, a Communist Party lawmaker and nuclear engineer who has long followed the nuclear industry.

Collusion flows the other way, too, in a lesser-known practice known as amaagari, or ascent to heaven. Because the regulatory panels meant to backstop the Nuclear and Industrial Safety Agency lack full-time technical experts, they depend largely on retired or active engineers from nuclear-industry-related companies. They are unlikely to criticize the companies that employ them.

Even academics who challenge the industry may find themselves shunned. As Japan has begun looking into the problems surrounding collusion since March 11, the Japanese news media has highlighted the discrimination faced by academics who raised questions about the safety of nuclear power.

In Japan, research into nuclear power is financed by the government or nuclear power-related companies. Unable to conduct research, skeptics, especially a group of six at Kyoto University, languished for decades as assistant professors.

One, Hiroaki Koide, a nuclear reactor expert who has held a position equivalent to assistant professor for 37 years at Kyoto University, said he applied unsuccessfully for research funds when he was younger.

"They're not handed out to outsiders like me," he said.

In the United States, the Nuclear Regulatory Commission, the main regulatory agency for the nuclear power industry, can choose from a pool of engineers unaffiliated with a utility or manufacturer, including those who learned their trade in the Navy or at research institutes like Brookhaven or Oak Ridge.

As a result, the N.R.C. does not rely on the industry itself to develop proposals and rules. In Japan, however, the Nuclear and Industrial Safety Agency lacks the technical firepower to draw up comprehensive regulations and tends to turn to industry experts to provide that expertise.

The agency “has the legal authority to regulate the utilities, but significantly lacks the technical capability to independently evaluate what they propose,” said Satoshi Sato, who has nearly 30 years’ experience working in the nuclear industry in the United States and Japan. “Naturally, the regulators tend to avoid any risk by proposing their own ideas.”

Inspections are not rigorous, Mr. Sato said, because agency inspectors are not trained thoroughly, and safety standards are watered down to meet levels that the utilities can financially bear, he and others said.

#### Dominion in Parliament

The political establishment, one of the great beneficiaries of the nuclear power industry, has shown little interest in bolstering safety. In fact, critics say, lax oversight serves their interests. Costly renovations get in the way of building new plants, which create construction projects, jobs and generous subsidies to host communities.

The Liberal Democrats, who governed Japan nearly without interruption from 1955 to 2009, have close ties to the management of nuclear-industry-related companies. The Democratic Party, which has governed since, is backed by labor unions, which, in Japan, tend to be close to management.

“Both parties are captive to the power companies, and they follow what the power companies want to do,” said Taro Kono, a Liberal Democratic lawmaker with a reputation as a reformer.

Under Japan’s electoral system, in which a significant percentage of legislators is chosen indirectly, parties reward institutional backers with seats in Parliament. In 1998, the Liberal Democrats selected Tokio Kano, a former vice president at Tepco, for one of these seats.

Backed by Keidanren — Japan’s biggest business lobby, of which Tepco is one of the biggest members — Mr. Kano served two six-year terms in the upper house of Parliament until 2010. In a move that has raised eyebrows even in a world of cross-fertilizing interests, he has returned to Tepco as an adviser.

While in office, Mr. Kano led a campaign to reshape the country’s energy policy by putting nuclear power at its center. He held leadership positions on energy committees that recommended policies long sought by the nuclear industry, like the use of a fuel called mixed oxide, or mox, in fast-breeder reactors. He also opposed the deregulation of the power industry.

In 1999, Mr. Kano even complained in Parliament that nuclear power was portrayed unfairly in government-endorsed school textbooks. “Everything written about solar energy is positive, but only negative things are written about nuclear power,” he said, according to parliamentary records.

Most important, in 2003, on the strength of Mr. Kano’s leadership, Japan adopted a national basic energy plan calling for the growth of nuclear energy as a way to achieve greater energy independence and to reduce Japan’s emission of greenhouses gases. The plan and subsequent versions mentioned only in broad terms the importance of safety at the nation’s nuclear plants despite the 2002 disclosure of cover-ups at Fukushima Daiichi and a 1999 accident at a plant northeast of Tokyo in which high levels of radiation were spewed into the air.

Mr. Kano’s legislative activities drew criticism even from some members of his own party.

“He rewrote everything in favor of the power companies,” Mr. Kono said.

In an interview at a Tepco office here, accompanied by a company spokesman, Mr. Kano said he had served in Parliament out of “conviction.”

“It’s disgusting to be thought of as a politician who was a company errand boy just because I was supported by a power company and the business community,” Mr. Kano said.

#### Taking on a Leviathan

So entrenched is the nuclear power village that it easily survived postwar Japan’s biggest political shake-up. When the Democratic Party came to power 20 months ago, it pledged to reform the nuclear industry and strengthen the Nuclear and Industrial Safety Agency.

Hearings on reforming the agency were held starting in 2009 at the Ministry of Economy, Trade and Industry, said Yosuke Kondo, a lawmaker of the governing Democratic Party who was the ministry’s deputy minister at the time. But they fizzled out, he said, after a new minister was appointed in September 2010.

The new minister, Akihiro Ohata, was a former engineer at Hitachi’s nuclear division and one of the most influential advocates of nuclear power in the Democratic Party. He had successfully lobbied his party to change its official designation of nuclear power from a “transitional” to “main” source of energy. An aide to Mr. Ohata, who became Minister of Land, Infrastructure, Transport and Tourism in January, said he was unavailable for an interview.

As moves to strengthen oversight were put on the back burner, the new government dusted off the energy plan designed by Mr. Kano, the Tepco adviser and former lawmaker. It added fresh details, including plans to build 14 new reactors by 2030 and raise the share of electricity generated by nuclear power and minor sources of clean energy to 70 percent from 34 percent.

What is more, Japan would make the sale of nuclear reactors and technology the central component of a long-term export strategy to energy-hungry developing nations. A new company, the International Nuclear Energy Development of Japan, was created to do just that. Its shareholders were made up of the country's nine main nuclear plant operators, three manufacturers of nuclear reactors and the government itself.

The nuclear power village was going global with the new company. The government took a 10 percent stake. Tepco took the biggest, with 20 percent, and one of its top executives was named the company's first president.

## **Radiation Readings At Fukushima Plant Rise To Highest In Crisis (BSWK)**

By Tsuyoshi Inajima And Michio Nakayama

BusinessWeek, April 27, 2011

Radiation readings at Japan's Fukushima Dai-Ichi station rose to the highest since an earthquake and tsunami knocked out cooling systems, impeding efforts to contain the worst nuclear crisis since Chernobyl.

Two robots sent into the reactor No. 1 building at the plant yesterday took readings as high as 1,120 millisieverts of radiation per hour, Junichi Matsumoto, a general manager at Tokyo Electric Power Co., said today. That's more than four times the annual dose permitted to nuclear workers at the stricken plant.

Radiation from the station, where four of six reactors have been damaged by explosions, has forced the evacuation of tens of thousands of people and contaminated farmland and drinking water. A plan to flood the containment vessel of reactor No. 1 with more water to speed up emergency cooling efforts announced yesterday by the utility known as Tepco may not be possible now.

"Tepco must figure out the source of high radiation," said Hironobu Unesaki, a nuclear engineering professor at Kyoto University. "If it's from contaminated water leaking from inside the reactor, Tepco's so-called water tomb may be jeopardized because flooding the containment vessel will result in more radiation in the building."

The cores in reactors 1, 2 and 3 and the spent fuel rods in reactor 4 have been damaged. Tepco has been using fire trucks, concrete pumps and other emergency measures for nearly seven weeks to pour millions of liters of water to cool the units after the accident.

Packpots Go In

Tepco shares fell 3.3 percent to 412 yen today in Tokyo. The shares are down about 80 percent since the quake and tsunami struck on March 11, leaving almost 26,000 people dead or missing.

Reactors 1 and 2 are less damaged than estimated, Tepco said in a statement today.

As much as 55 percent of the No. 1 reactor core at the Fukushima Dai-Ichi station was damaged after the March 11 earthquake and tsunami, compared with its earlier estimate of 70 percent.

The assessment for the No. 2 reactor was cut to 25 percent from 35 percent, while that for the No. 3 unit was raised to 30 percent from 25 percent.

"We revised the core damage data because some readings on the containment vessel monitors were wrong," Matsumoto said when asked about the reassessment. "There was also a recording mistake. We are investigating why this happened."

Radiation in Tokyo's water supply fell to undetectable levels for the first time since March 18, the capital's public health institute said today.

The level of iodine-131 in tap water fell to zero yesterday, and Cesium-134 and cesium-137 also weren't detected, the Tokyo Metropolitan Institute of Public Health said today.

Tokyo residents were told on March 23 that the city's water was unsafe for infants after iodine and cesium levels exceeded guidelines.

## **Leaks Probed As Japan Moves To Cool Reactors (WSJ)**

By Mitsuru Obe

Wall Street Journal, April 27, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **High Concentration Of Radioactive Water Found In Fukushima's No. 4 Reactor (MAINDN)**

Mainichi Daily News, April 27, 2011

A concentration of radioactive water in the basement of the No. 4 reactor's turbine building at the crippled Fukushima No. 1 Nuclear Power Plant became abnormally high, reaching a maximum of 250 times normal monthly levels, according to Tokyo Electric Power Co. (TEPCO) on April 26.

Radioactive water may be leaking from the basement of the nearby No. 3 reactor's turbine building and the water level there is on the rise, TEPCO sources say, as the ongoing crisis at the power plant continues following heavy damage by the March 11 earthquake and tsunami and subsequent explosions.

The concentration of radioactive water in the No. 4 turbine building is lower than that in the No. 1, 2 and 3 reactors, but TEPCO has been unable to secure a place to move the contaminated water.

TEPCO separately announced on April 26 that it will start preparatory work to decide if it will fill the No. 1 reactor's containment vessel with water to stabilize its reactor core, a procedure known as a "water tomb."

On April 21, TEPCO took samples of residual water in the basement of the No. 4 reactor's turbine building to check the concentration of radioactive materials per square centimeter.

The utility found that the samples contained 8,100 becquerels of cesium-137 (half-life about 30 years) and 7,800 becquerels of cesium-134 (half-life about 2 years), up about 250 times from the previous survey on March 24. Also found in the fresh samples were 4,300 becquerels of iodine-131 (half-life about 8 days), about 12 times higher than the March probe.

The depth of water as of 7 a.m. on April 26 stood at 1.15 meters, up 25 centimeters from April 13.

The turbine buildings of the No. 3 and 4 reactors are connected through an electric product room, where power panels and other equipment are located, leading TEPCO officials to speculate that water being pumped into the No. 3 unit is believed to be leaking into the No. 4 unit through a cable gap and other reasons.

"We haven't detected any leak of water into the outside of the No. 4 turbine building but we need to quickly secure a place to transport it," a TEPCO official said.

As for the plan to conduct a water tomb in the No. 1 reactor, TEPCO said on April 26 it will send a robot to the reactor building to check damage to the containment vessel.

From April 27, TEPCO will pump about 14 square meters of water per hour, or about 2.3 times the level so far, into the reactor to gauge pressure and the water level to decide whether or not it should give the go-ahead for the water-tomb plan.

The water-tomb plan is one of the measures to be taken in the first three months of a road map to bring the nuclear crisis under control. Water about 6 meters deep is believed to be in the containment vessel.

## **Atmospheric Radiation Leak Underestimated (YOMIURI)**

Yomiuri Shimbun (Japan), April 27, 2011

Data released by the government indicates radioactive material was leaking into the atmosphere from the Fukushima No. 1 nuclear power plant in early April in greater quantities than previously estimated.

Radioactive material was being released into the atmosphere from the plant at an estimated rate of 154 terabecquerels per day as of April 5, according to data released by the Cabinet Office's Nuclear Safety Commission on Saturday.

The NSC previously estimated radiation leakage on April 5 at "less than 1 terabecquerel per hour."

Iodine-131 and cesium-137 were released into the atmosphere that day at the estimated rates of 0.69 terabecquerel per hour and 0.14 terabecquerel per hour, respectively, the NSC said.

Emissions are converted into iodine-131 equivalents for assessment on the international nuclear event scale (INES), to arrive at the total 154 terabecquerels per day, the nuclear safety watchdog said.

One terabecquerel equals 1 trillion becquerels.

On April 17, plant operator Tokyo Electric Power Co. said in its plan for stabilization of the crippled reactors it would not start to get radiation leakage under control until the plan's fourth month of implementation.

This would mean 10,000 terabecquerels of radioactive substances would be released into the atmosphere from the plant during the coming three months, according to simple calculations based on the estimated emission rate as of April 5.

Emissions in that three-month period alone would therefore exceed the level necessary for a Level 6 severity rating on the INES, the globally accepted measure for evaluating nuclear accidents.

The ongoing crisis at the Fukushima plant has been rated a maximum Level 7 on the scale, which was established by the International Atomic Energy Agency and the Organization for Economic Cooperation and Development in 1992.

The total amount of radioactive material discharged from the plant from March 11 to early April was estimated between 370,000 and 630,000 terabecquerels, according to government sources.

The commission, however, said the figures were estimates only, "with a considerable margin of error." Radiation levels around the six-reactor complex have been slowly falling, it said.

## **Chernobyl Anniversary Evokes Memorials And Comparisons (EPOCH)**

Epoch Times, April 27, 2011

Environmental activists and militant groups lights candles at the Peace Bell in Quezon City Memorial, east of Manila on April 26, 2011. (Noel Celis/AFP/Getty Images)

On the 25th anniversary of the April 26, 1986, Chernobyl nuclear disaster, Ukrainian president Viktor Yanukovich and Russian President Dmitry Medvedev laid flowers at a memorial to those who sacrificed their lives working at the plant to end the catastrophe.

The memory of those “who worked to mitigate the consequences of the Chernobyl disaster, will live in generations. It will live in the memory of grateful men,” said Ukrainian President Viktor Yanukovich in a published statement.

Twenty-eight of the firemen and emergency cleanup workers who helped get the disaster under control died from acute radiation sickness (one of cardiac arrest) within three months of the accident.

The fires and leaking radioactive materials from the Chernobyl disaster forced the evacuation of hundreds of thousands of people.

Ukrainian President Viktor Yanukovich drew parallels to the recent Fukushima disaster, saying that such nuclear disasters go beyond borders. “A bitter proof of that is the Fukushima Daiichi accident. Today, the world knows: No country can deal with such disasters alone.”

Japanese officials, however, are trying hard to draw a clear line between the two, saying the crisis they are still trying to manage is quite different from the one that befell Ukraine, a Soviet Republic at the time.

Both accidents are the only ones to ever receive the maximum level seven on the International Nuclear and Radiological Event Scale. But Japanese and Ukrainian officials say the Fukushima incident is not as severe.

“The nature of the accident per se is fundamentally different; this needs to be fully taken into account,” Chief Cabinet Secretary Yukio Edano said of Fukushima, when asked Tuesday at a press briefing of lessons from Chernobyl that had been learned and applied to Japan’s nuclear crisis.

“In terms of the volume of the radioactive substances, it is up to about 1/10 the level of Chernobyl, however explosion within the nuclear reactor containment has not taken place,” he said.

“Although we have greatly inconvenienced the citizens in the peripheral area ... as a result of that there is no citizen who was exposed to a high level of radiation right after the accident,” Edano added. He also noted that none of the emergency workers at the plant have died from exposure to radiation.

Edano said that since Chernobyl research has provided insight into how a society can deal with the after effects of a nuclear disaster.

## **25 Years After Chernobyl, Europe Debates Nuclear Power's Future (CSM)**

**In Germany, phasing out nuclear energy is not a question of if, but when. France, however, has seen only minor expressions of dissent about its reactors.**

By Michael Steininger

Christian Science Monitor, April 27, 2011

Berlin

It took two days before the Geiger counters outside Ukraine started to buzz: On April 28, 1986, the instruments at the Swedish nuclear power station Forsmark registered soaring radiation levels. Fearing a malfunction of their plant, the engineers were puzzled to find that the radiation was much higher on the outside rather than inside the reactor halls.

The cloud of radioactive particles that emanated from the world’s worst nuclear accident at Chernobyl on April 26 had reached the rest of Europe, raising fears, confusion, and starting a sometimes-fierce debate about the future of nuclear energy.

Even though the disaster that occurred 25 years ago today caused Europe to reconsider atomic energy, nuclear plants still power much of the Continent. But the recent events at the Fukushima plant in Japan have strengthened the case of the opposition. That growing unease was on display Monday when 120,000 people demonstrated against nuclear energy in Germany, while in France several thousand gathered at the power plants in Fessenheim and Cattenom.

Nowhere is the scope of the European debate more apparent than in these two countries.

Chernobyl disaster: four ways it continues to have an impact

“The French are discussing their energy mix,” says Thibault Madelin, who writes on energy issues for the French business daily *Les Echos*. “But given that almost 80 percent of France’s electricity is provided by nuclear power, I can’t see that anyone apart from the Green Party is asking for the country to get rid of nuclear energy altogether.”

Both the governing center-right UMP party of President Nicholas Sarkozy and the main opposition, the Socialists, are keen to show their commitment to nuclear power. About 200,000 French jobs depend on the industry.

The picture could not be more different across the border in Germany. Here, phasing out nuclear energy generation is not a question of if, but when.

Chancellor Angela Merkel is using the term “Energiewende” (energy turning point) as if it had been one of her election campaign issues. But it was Mrs. Merkel's nuclear-friendly coalition government as late as in 2010 had decreed a 12-year delay of the plan to shut down all nuclear reactors by 2022.

The Fukushima incident has practically silenced all debate in Germany about prolonging the use of nuclear power, which provides 25 percent of the country's electricity, and put pressure on Merkel to end nuclear power.

“Germany is probably the only major economy in the world where all political parties agree on phasing out nuclear energy,” says Prof. Claudia Kemfert, energy expert at the Berlin-based German Institute for Economic Research (DIW). “That fact even outshines the ambitious German target of reaching 80 percent renewable energy by 2050.”

Critics accuse Merkel of trying to earn green credentials for switching off German reactors while still importing cheap nuclear energy from France and the Czech Republic. But the fact remains that politically in Germany you cannot win by supporting nuclear energy. In France, politicians cannot win by backing away from it.

“It's to do with Chernobyl,” says Thibault Madelin. “That cloud never arrived in France. We were told the fallout would not cross our borders and we believed it. In Germany, people got scared. And it changed everything, even if the scare wasn't real.”

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IN PICTURES: Chernobyl 25th anniversary

## **Ukraine Marks Chernobyl Anniversary, Eyes Fukushima (Reuter)**

By Pavel Polityuk

Reuters, April 27, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **In Ukraine, Scars Of Chernobyl Disaster Remain Raw (NPR)**

NPR, April 27, 2011

In the Ukrainian capital of Kiev, a bell rang 25 times Tuesday morning, marking each year that has passed since the world's worst nuclear disaster. Many people who lived through the 1986 Chernobyl accident are still suffering the after-effects, and the new nuclear crisis unfolding in Japan serves as another reminder of just how long recovery can take.

A short drive away from the Chernobyl plant stands a police checkpoint that guards the restricted area. Outside, it's a beautiful part of Ukraine, with forests and fields. Inside, it's still largely a wasteland.

Back in 1986, thousands of people crossed this very point on the road that leads toward the plant, ordered by the Soviet government to respond to the disaster that would spew radiation into the air and across Europe. They headed in — and were exposed.

Former firefighter Anatoly Kotlyar, 59, remembers driving to the plant like it was yesterday. Today, we call people like him first responders. At the time, the Soviet government called them liquidators. They fought fires, cleaned up and provided security.

Kotlyar led 19 men toward the crippled nuclear reactor as it burned.

We didn't know where we were going. We didn't know anything about it. But we were proud to do something, because our motherland gave us an order, ordered us, and we were proud to fulfill this order.

- Anatoly Kotlyar, a firefighter who responded to Ukraine's 1986 Chernobyl disaster

"We didn't know where we were going. We didn't know anything about it. But we were proud to do something, because our motherland gave us an order, ordered us, and we were proud to fulfill this order," he says.

A quarter-century later, no one knows what their heroism cost. It isn't clear how many deaths and illnesses among liquidators can truly be linked to radiation exposure. Of the 20 men in Kotlyar's fire brigade, four have died. One man had a brain tumor, another leukemia. Kotlyar is convinced at least that those two died because of radiation.

His fellow liquidator, 58-year-old Alexander Zenchenko, spent two weeks providing security at Chernobyl following the accident. He remembers doctors telling him it could take 25 years for radiation poisoning to show symptoms.

"When we first went to the hospital, they told us it would get worse and worse, and little by little it has," he says. Zenchenko says he has a blood disease that requires frequent transfusions. Like so many other liquidators, he has been fighting his government for years to provide more money for his health care.

Photo Gallery: The Price Of Chernobyl

This graphic requires version 9 or higher of the Adobe Flash Player. Get the latest Flash Player.

Chernobyl, 25 years later

Certainly, from the start, the Chernobyl accident was downplayed. When fire broke out the morning of April 26, 1986, the Soviet government was gearing up for annual May holidays that celebrate workers and mark victory in World War II. It was a patriotic time that was not to be interrupted. And news coverage of Chernobyl suggested that things weren't so bad.

Official government news reports downplayed the crisis, saying levels of radioactivity at the power station and in its immediate vicinity had been stabilized and that victims were receiving medical help.

But in the ensuing weeks, it became clear that the accident had altered the way of life in central Ukraine. Families would live forever with unanswered questions about their health.

In the summer of 1986, Alla Pugacheva, an iconic Soviet pop singer, visited Chernobyl and told people — for better or worse — that the nuclear facility would always be part of their world. She lifted spirits with her song "Sto Druzay," about how everyone has a hundred faithful friends.

Challenges Loom Large, 25 Years After Chernobyl

The accident at the nuclear power plant left a radioactive stain Ukraine still struggles with today.

That message has always echoed here. There is not much mobility in post-Soviet Ukraine. People still live in houses they built in Soviet times, so neighbors who lived through Chernobyl remain together today. They've all been watching news coverage of the nuclear accidents in Japan, and it has reopened some wounds.

Alexander's wife, Yelena Zenchenko, says she has been struck by the Japanese government's response to the crisis.

"They'll find a way to protect their people," she says. "Not like in our country, where people had nothing but their own resources. I do hope people in Japan overcome this sooner than we have."

Related NPR Stories

Photos: The Price Of Chernobyl April 26, 2011

Challenges Loom Large, 25 Years After Chernobyl April 26, 2011

Special Series: Japan In Crisis April 22, 2011

## **Chernobyl Disaster: Four Ways It Continues To Have An Impact (CSM)**

By Ariel Zirulnick

Christian Science Monitor, April 27, 2011

Twenty-five years ago April 26, nuclear reactor No. 4 at the Chernobyl power plant exploded, sending waves of radiation across Ukraine and into neighboring countries. The disaster, which remains the world's worst nuclear accident, continues to have an effect today. Here are four ways:

After the 1986 explosion, workers constructed a sarcophagus around the damaged No. 4 reactor to contain the spread of radiation. Today, that cover, which protects the fuel rods from the reactor, is crumbling. If it deteriorates enough to collapse, radiation could contaminate the air around the plant, according to Time Magazine.

Ukraine is \$300 million short of the \$1.1 billion needed to replace the sarcophagus and has asked for international help funding the project. Meanwhile, workers still come to the plant daily to maintain the container – a process that will continue for decades.

Chernobyl's blast released 400 times more radiation than the atomic bomb the US dropped on Hiroshima, according to the Associated Press, and hundreds of thousands of locals were diagnosed with radiation sickness after the explosion. New diagnoses stemming from Chernobyl are still emerging and health organizations are worried about abnormal rates of cancer in the region.

However, many health experts are more concerned about the psychological toll of the nuclear disaster, according to Time. The stress of evacuation and rapid relocation, as well as the lack of clarity surrounding lingering concerns about long-term health effects, has taken a toll on the mental and emotional health of evacuees. The World Health Organization has invested \$2.5 million on radiation education – specifically to bring their concerns to scale with any actual threat.

To this day, an 18.5 mile no-go zone exists around Chernobyl, filled with abandoned homes and cars. The "zone of alienation" includes the town of Pripyat that once had 50,000 residents and today is a ghost town. The entire region remains economically stagnant because businesses are reluctant to invest in the area. Ihor Gramotkin, the director of the Chernobyl power plant, said that it would be 20,000 years before the area would be inhabitable again.

According to the Guardian, 330,000 of the 500,000 people who lived within the 77,000 square mile zone deemed contaminated by the radiation were evacuated.

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## **Chernobyl: 25 Years After Chernobyl Accident, Debate Over Health Effects Remains (CHIT)**

Chicago Tribune, April 27, 2011

Twenty-five years ago Tuesday, a catastrophic explosion at the Chernobyl power plant in Ukraine spewed nuclear fuel into the air. Over 20 days, radioactive smoke and other products emanated from the plant, spreading out over parts of Russia, Ukraine and Belarus and extending, in lower concentrations, around the world.

In the immediate aftermath of the disaster, about 30 people – mostly firefighters -- died from acute radiation poisoning. A few more died of radiation poisoning over the next decade, and in 2008, a United Nations report concluded that 6,000 thyroid cancers in young people were linked to the accident, too. (Exposure to iodine-131, which was released into the atmosphere during the accident, is known to cause thyroid cancer.)

But even after decades of study, experts are still debating the long-term health effects of the disaster. While the U.N. and other investigators have determined that there is no evidence of excess cancers resulting from the accident, others -- for instance, this blogpost from the Union of Concerned Scientists -- suggest that excess cancers and cancer deaths worldwide will number in the tens of thousands, or even higher.

A comment released Monday from the journal *The Lancet* explains why it's hard to pin down a number: the research is extremely difficult to complete.

Co-authors Kirsten Moysich, Philip McCarthy and Per Hall, who participated in the U.N. study that found no evidence of excess cancers, noted that there are "considerable logistical challenges in doing epidemiological research in the countries of the former Soviet Union." Researchers have little access to good health records. Potential study subjects speak a number of languages, are culturally diverse and are spread out over a large area. Today, many don't remember details of their whereabouts clearly enough to solidly assess their exposure to radiation. What's more, sufficient funding to put together a well-crafted study would be hard to secure, the authors wrote.

There's a silver lining, of sorts: the recent accident at the Fukushima Daiichi nuclear plant, the authors added, "sadly...offer[s] another opportunity to study the cancer consequences of accidents at nuclear power plants." Unlike countries of the former Soviet Union, Japan has studied the epidemiology of radiation for decades and should be able to put together new, scientifically sound investigations relative quickly, they wrote.

RELATED: The Los Angeles Times reports on life in the Chernobyl disaster zone.

## **Fukushima And Chernobyl, Similar But Different (FORBES)**

Forbes, April 27, 2011

The crisis at Japan's Fukushima Daiichi nuclear power plant is strikingly similar to the terrible events at the Soviet Chernobyl plant which exploded and burned, releasing massive amounts of radioactive materials on this day, twenty-five years ago.

The twin disasters are also very different.

Similarities are the most obvious

Both are ranked as level seven accidents, the most dire rating on a scale developed by the International Atomic Energy Agency (IAEA). In fact, Fukushima and Chernobyl are the only nuclear power disasters in that category.

In both cases, the governments of Japan and the Soviet Union downplayed or simply underestimated the problem.

Early on, Japan's official Nuclear and Industrial Safety Agency (NISA) didn't think the damage at Fukushima was serious enough to be considered an "accident." Ten hours after the plant was struck by an earthquake and battered by a tsunami, NISA called the situation a "serious incident," a level 3 ranking on the IAEA scale. Even after radiation levels in the Fukushima main control room had spiked to 1,000 times normal levels, radioactive steam had been vented into the environment, and hydrogen explosions had demolished large parts of two reactor buildings, sending radioactive debris a thousand feet into the air, NISA only raised the threat assessment to level 5 — the same as the far less catastrophic accident at Three Mile Island.

Only on April 12, over a month after the crisis began, did NISA upgrade the crisis at Fukushima to level seven.

"In hindsight, their assessment of the situation was faulty," says professor emeritus of nuclear engineering, Kenji Sumita.

The Japanese government has also been slow in making data on radiation public, leading to confusion and widespread mistrust.

A Tokyo resident complained in early April, "They've been giving information far too late. I think they panicked themselves, and couldn't think straight."

#### The Chernobyl Clampdown

The Soviet police-state clampdown on information about Chernobyl was many times worse. People surrounding the area (in what is now Ukraine) were told that a nuclear power plant had experienced only a minor accident. They weren't told that plumes of intensely radioactive smoke were blowing across fields where dairy cows grazed. Unsuspecting residents gave their children milk with high levels of radioactive iodine, causing a spike in thyroid cancers starting ten years later.

Although thyroid cancer is treatable if caught early, and rarely results in death, the residents around Chernobyl were never told that they had been exposed to radiation and needed annual thyroid checkups. Many died needlessly.

One of the biggest differences between what happened at Chernobyl and the crisis at Fukushima is the amount of resources the two countries possess to minimize long-term effects. The Soviet Union was, we now know, facing financial collapse. Though it spent billions on Chernobyl, it simply abandoned vast amounts of contaminated land — making them into exclusion zones.

The situation is much different in Japan.

David Lochbaum, a trained nuclear engineer who directs the "Nuclear Safety Project" at the Union of Concerned Scientists, recently pointed out that the question of abandoning land is not a simple scientific matter.

"There's no such thing as a permanent quarantine," Lochbaum said during a March 25 press conference, "because it's ... an economic decision."

Given enough resources, Lochbaum explained, even a highly radioactive site can be decontaminated so that people who were evacuated can move back. It depends primarily on political will.

On the most important issue, it is too early to tell whether Fukushima and Chernobyl are more alike than they are different: Will the circumstances that allowed these catastrophic events to happen, be changed?

Certainly, the collapse of the Soviet Union and the evolution of the Russian nation caused myriad changes in every sector of life there.

No one knows, however, how the Fukushima disaster will force the kinds of changes that will make Japan's nuclear program safer. Demonstrators in Japan marked the 25th anniversary of Chernobyl with marches and demands for change. Some 5,000 people rallied in Shibuya, Japan, calling for an end to nuclear power and demanding that the government switch to clean, renewable sources of energy.

"I was worried nuclear plants could affect my children's or grandchildren's generation," one young woman said at the rally.

But, the idea of abandoning nuclear power faces stiff resistance in a country so reliant on imported energy sources. Japan generated 66 percent of its electricity from imported oil in 1974. After the oil shocks of that era, the country went on a nuclear spree — building 51 power plants. Today, Japan only generates 10 percent of its electricity from oil.

I asked Steve Kerekes, a spokesperson for the Nuclear Energy Institute, an industry group, what he thinks the odds are that Japan will abandon its nuclear program. "That's a decision the Japanese people need to make," he said. Kerekes, however, was willing to discuss why Japan adopted nuclear power in the first place. Those reasons, he said, include:

Nuclear reactors provide around-the-clock "base-load" power

Nuclear power is inexpensive

Japan doesn't have the landmass to support enough renewable energy for a modern economy

Nuclear power is a low-carbon source of energy

There's a lively debate over some of Kerekes' assertions, but, he's no doubt correct when he says, "Nuclear power makes sense for [Japan]."

At least it made sense to most Japanese until March 11.

Now, whether Japan can find a way to make nuclear power safe enough to ensure that another Fukushima doesn't happen again is a question of the utmost importance for that country, as it struggles to recover from this initial crisis.

It's a question that all nations possessing nuclear reactors will have to address in a post-Chernobyl, post-Fukushima future.

## **India To Set Up Nuclear Watchdog To Oversee Reactors Amid Worries Intensified By Japan Crisis (AP)**

Associated Press, April 27, 2011

India has decided to set up an independent watchdog to oversee all of its nuclear reactors in view of mounting concerns about the safety of such installations.

Those concerns have intensified since an earthquake-spawned tsunami knocked out cooling systems at a Japanese nuclear power plant, unleashing massive amounts of radiation into the environment. But discontent over the country's atomic energy has been simmering for some time: Residents of a western Indian town have complained about the safety of a plant planned for their community and demanded more compensation for moving.

V. Narayanswamy, a minister in the prime minister's office, said Tuesday, that the government is preparing a bill to be introduced in the next session of parliament to create an autonomous nuclear regulatory authority.

At a meeting chaired by Prime Minister Manmohan Singh, top government leaders also decided to go ahead with the nuclear power plant in Jaitapur.

"The government is satisfied with the safety aspects of the Jaitapur nuclear plant," Narayanswamy said.

In response to concerns of the residents of the small village in Maharashtra state, the government has decided to increase the compensation already paid and will reach out to local people to assure them of the plant's safety, said Prithviraj Chauhan, chief minister of Maharashtra.

"We have made detailed presentations on Jaitapur to all political parties. The political dialogue will continue and special efforts will be made to convince people that safety will not be compromised," Chauhan said.

Energy-starved India is making a big push for nuclear power to drive its booming economic growth. The government is promoting nuclear energy as a clean and environmentally friendly alternative to polluting coal-fired power plants.

Nuclear energy forms only 3 percent of power available in India at present. The government has announced plans to increase that share to 13 percent by 2030.

Construction is to start this year on the first two of six units at the proposed \$10 billion plant in Jaitapur, billed as one of the biggest in the world. The French company Areva is building the plant, which will generate 9,900 megawatts of power when completed. The first unit is expected to start producing power in 2019.

India's environment minister Jairam Ramesh told reporters Tuesday that each of the reactors at Jaitapur would be a stand-alone plant with its own safety system.

Jaitapur is about 260 miles (420 kilometers) south of Mumbai, India's financial hub and the Maharashtra state capital.

At Tuesday's meeting, Prime Minister Singh directed officials to make public the findings of recent safety reviews carried out at all of India's nuclear power plants in a bid to remove doubts that may have arisen.

The safety audits of India's 20 nuclear plants were conducted after the Japanese crisis.

The government also announced that it will seek help from the Vienna-based International Atomic Energy Agency to carry out future safety reviews and audits of nuclear installations.

## **India Pledges Nuclear Plant Safety Amid Japan Crisis Fears (REU)**

By C.K. Nayak

Reuters, April 27, 2011

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## **India Pledges New Nuclear Plant Will Be Safe (WP)**

By Rama Lakshmi

Washington Post, April 27, 2011

Faced with mounting opposition to a planned coastal nuclear power plant in western India, senior government officials pledged Tuesday to install stand-alone safety systems in each of the plant's six reactors and to release the results of safety audits of India's existing nuclear plants conducted after the recent tsunami-related crisis began in Japan.

Officials also said legislation is being prepared that will create an independent nuclear energy regulatory body to monitor the safety of nuclear facilities.

During the past week, dozens of anti-nuclear activists and villagers have clashed violently with police during protests against the proposed new plant in Jaitapur, in the western state of Maharashtra. Prithviraj Chavan, the state's chief minister, made clear Tuesday that the plans will not be scrapped but promised greater transparency and tightening of safety norms for the facility's reactors.

Chavan also promised higher compensation for villagers required to vacate their land for the plant, where plans call for two 2,650-megawatt reactors to be operational by 2019.

The French company Areva is participating in the Jaitapur project. Since India signed a landmark nuclear deal with the United States in 2008, it has set aside sites nationwide for new nuclear plants to be built with the assistance of US, French and Russian firms.

The government hopes to be producing 63,000 megawatts of nuclear power by 2030.

## **Jaitapur Plant To Go Ahead With Greater Compensation (TIMESIND)**

By Nitin Sethi

Times of India, April 27, 2011

NEW DELHI: Despite protests that led to police firing, the government said it will press ahead with the nuclear power project at Jaitapur on Maharashtra's Konkan coast and fielded chief minister Prithviraj Chavan, environment minister Jairam Ramesh, MoS in PMO V Narayanasamy and Department of Atomic Energy chief Srikumar Banerjee to argue the case.

The unity show came after Ramesh had said there might be a case to "pause" the project and unease within the Maharashtra government over local opposition. The joint press conference on Tuesday demonstrated the Centre's insistence that there be no dilution in the commitment to build the 10,000 mw nuclear park which will house French built reactors.

While a new law for an independent nuclear regulator, safety measures and fulsome compensation have been promised, the Centre is obviously keen to make a statement that India's civil nuclear energy programme is not going to change course after the disaster at Japan's Fukushima plant.

The press conference was preceded by a meeting of the nuclear establishment called by Prime Minister Manmohan Singh with Chavan and Ramesh also attending. The meeting assessed the progress of Jaitapur and other nuclear power issues.

A release from the PMO said, "It was noted that the Jaitapur project would be implemented in a phased manner with two 1650 MWe reactors to begin with."

Narayanasamy said a bill would be introduced in the next session of Parliament to set up an independent Nuclear Regulatory Authority of India, which would subsume the existing Atomic Energy Regulatory Board.

He added that a new compensation package was being worked out for those affected by Jaitapur power plant and the details would be announced soon.

Both Ramesh and Chavan sought to distinguish between 'local protests' and outsiders in Jaitapur and said they did not expect any reconciliation with those ideologically opposed to nuclear power. Chavan said the state government would try to resolve the concerns of the local people.

The PM's meeting also resolved to put results of the six safety studies conducted in wake of Fukushima disaster in the public domain. The action taken on previous safety reports would also be made public. The government would also invite International Atomic Energy Agency's operational safety review team to assist in safety audits.

In a bid to defuse concerns about imported reactors, the note from the PMO said, "While imported reactors have their place, indigenously-designed and developed reactors will continue to be at the very foundation of this programme." The explanation was intended to counter the criticism that the government's nuclear power policy revolves around deals with foreign suppliers.

Each of the reactors at Jaitapur and at all future sites would have standalone safety features. But announcing this as a new measure post-Fukushima was questioned as it was pointed out that each of the existing reactors already has such a safety system.

The press note said the PM underscored that safety of nuclear power plants was a matter of highest priority and that there was a need for improving public communication and outreach on the part of the Department of Atomic Energy and NPCIL. But the DAE secretary refused to be drawn into a reply on whether the questions of safety at Jaitapur were completely baseless or valid. He did say that the key questions about seismic safety, impact on fishing and biodiversity had been adequately answered.

Chavan, when queried on Anna Hazare being contacted by the protestors for support, said a while back he had received a call from Hazare supporting the nuclear power plant at Jaitapur.

## **Green Signal To Jaitapur (HINDU)**

**Bill to create independent nuclear authority soon**

The Hindu, April 27, 2011

New Delhi: On a day when the world marked the 25th anniversary of the Chernobyl nuclear disaster, India reaffirmed its commitment to an ambitious nuclear energy plan by pushing ahead with the first phase of the controversial nuclear power plant project at Jaitapur in Maharashtra with additional safety measures and a "generous new compensation package" to be announced soon.

But in a concession to heightened public awareness of the need for proper regulation and oversight, the government on Tuesday promised to introduce a bill in the next session of Parliament creating an independent and autonomous Nuclear Regulatory Authority of India that would subsume the existing Atomic Energy Regulatory Board (AERB).

The AERB has been criticised for being administratively subordinate to the very atomic energy establishment whose operations it is meant to regulate.

The decision to clear the decks for setting up two 1,650-MWe reactors at Jaitapur was taken at a meeting convened here by Prime Minister Manmohan Singh. It was attended by Maharashtra Chief Minister Prithviraj Chavan, Minister of State in the Prime Minister's Office V. Narayanasamy and Minister of State for Environment and Forests Jairam Ramesh. Among those who briefed the Prime Minister were S. Banerjee, Secretary, Department of Atomic Energy; S.K. Jain of the Nuclear Power Corporation of India that will operate the plant at Jaitapur and National Security Advisor Shivshankar Menon.

The meeting reviewed the current status of the Jaitapur project as well as safety concerns arising out of the nuclear accident at Fukushima in Japan and their impact on India's overall nuclear energy programme, Mr. Narayanasamy told reporters. All factors that led to the Fukushima disaster had been factored in, he said. "The Prime Minister was apprised of the doubts and concerns expressed by the local people in Jaitapur about the project, and the measures being taken to address these concerns," Mr Narayanasamy said.

The first two units, proposed to become operational in 2019, will have their own stand-alone safety and operational system.

Describing the ongoing protests at Jaitapur as "politically motivated," Mr. Chavan accused "outsiders" of instigating the opposition, adding that these were based on misconceptions and rumours. "We have engaged with the local community and assured them that safety will never be compromised," he said.

The meeting also decided to make public the initial results of the six safety review committees set up after the Fukushima accident, as also the action taken on previous safety reviews. The government will invite the Operational Safety Review Team of the International Atomic Energy Authority to assist in its own safety reviews and audit. All reactors and technologies, whether indigenous or imported, will, without exception, meet the safety standards that are stipulated by the regulatory authorities and there will be complete transparency in the functioning of the nuclear power programme, Mr. Ramesh said.

The meeting reiterated that India's nuclear energy needs were vast and growing and nuclear energy was an important clean energy option which would be pursued with full regard to the safety, livelihood and security of the people. Printer friendly page

## **UN's Ban To Convene Nuclear Safety Summit In Sept (CHIT)**

Chicago Tribune, April 27, 2011

U.N. Secretary-General

Ban Ki-moon said Tuesday he plans to convene a summit meeting in September to discuss nuclear safety following the crisis at Japan's earthquake-damaged Fukushima plant.

Ban told reporters after briefing the U.N. Security Council that he had used the occasion of the 25th anniversary of the world's worst nuclear accident at the Chernobyl plant in Ukraine to call for improvements in nuclear safety worldwide.

"The tragedy at the Fukushima Daiichi nuclear power plant in Japan has added further urgency to this issue," he said.

"This is a time for real global debate on the future of nuclear energy."

"With that in mind, I will convene a high-level meeting on strengthening the international nuclear safety regime when world leaders gather in New York in September," he said, referring to the annual meeting of the General Assembly.

Japan is still struggling to control reactors at the Fukushima nuclear plant, which was damaged by an earthquake and tsunami last month.

## **U.N. Chief Plans Effort To Boost Reactor Safety (GWIRE)**

By Nathaniel Gronewold

Greenwire, April 27, 2011

UNITED NATIONS -- Marking 25 years after the Chernobyl nuclear disaster, U.N. officials promised today to press for a new global agreement on nuclear safety, with the more recent Fukushima Daiichi plant disaster heavy on their minds.

In a special session of the General Assembly to commemorate the April 26, 1986, Chernobyl catastrophe, U.N. chief Ban Ki-moon repeated his call for a stronger role for the International Atomic Energy Agency (IAEA) in setting safety standards. The ongoing Japan nuclear crisis in the wake of the earthquake and tsunami last month shows it is time for nations to treat nuclear energy as seriously as they do nuclear weapons, he said.

Ban added that he planned to convene a special meeting of world leaders in September to construct a new nuclear safety regime. A reinforced IAEA and global minimum safety standards will be among the items up for debate.

"Chernobyl was not the problem for Ukraine, Belarus or Russia alone. Chernobyl was our problem, a shared challenge for the world," Ban told delegates just moments after a ceremony held on the lawn of U.N. headquarters to honor victims of the disaster.

Ban welcomed the ongoing construction in Ukraine to replace the aging concrete containment shelter, dubbed the "sarcophagus," with a reinforced steel structure designed to better contain the radiation. The new facility is expected to cost more than \$800 million and last 100 years; it will mark the beginning of further attempts by Ukraine and neighboring Belarus to rehabilitate the land surrounding the disaster zone that has been left abandoned for more than two decades.

Representatives from Belarus and Ukraine used the occasion to plead for international financial assistance for remediation efforts. Funds are needed for projects to return forestry and agriculture to the region, they said.

Today, Ban said governments could take that opportunity to assess not only how the lands surrounding that damaged plant could be returned to normal but also how affected areas around the Fukushima plant in Japan could recover. Those lessons should also be incorporated into a new international nuclear safety agreement, he said.

"The world is learning from these experiences," Ban said. "What we need now is a shell to protect our wider world, a shell forged at the United Nations."

Ban last week visited the Chernobyl disaster site and the nearby abandoned city of Pripjat, Ukraine. There, he said governments should consider a "new cost-benefit analysis of nuclear energy," one that assumes future incidents caused by natural disasters or human error.

IAEA Director-General Yukiya Amano accompanied Ban to the site and told reporters that the Chernobyl incident actually made the agency a stronger and more effective institution, but he admitted that the Fukushima incident showed that there was still a lot lacking with the international nuclear safety systems.

"It is clear that more needs to be done to reduce the risk of a future nuclear accident anywhere in the world, and to mitigate the consequences of any such accident, if it should occur," Amano said. "More than ever before our watchword must now be 'safety first.'"

The United Nations estimates that the Chernobyl accident exposed about 600,000 people to radiation, while 50 relief workers died from the exposure in the immediate aftermath. They fear that as many as 4,000 people could end up dying prematurely from the effects of the released radiation.

## **German Nuclear Exit May Boost Power Prices 30%, BDI Group Says (BLOOM)**

By Nicholas Comfort

Bloomberg News, April 27, 2011

Germany's plan to accelerate its exit from nuclear power generation may raise electricity prices by as much as 30 percent, the BDI German industry lobby said.

The permanent halt of eight reactors and the closure of the remaining plants by 2018 could boost wholesale power prices to 70 euros (\$102) a megawatt-hour that year, according to a study commissioned by the BDI and published April 24 on its website.

Germany, Europe's biggest economy and largest energy user, plans to exit nuclear power after explosions at Japanese reactors stoked safety concerns. Higher prices could threaten chemical- and metal producers while utilities lose plants that can be more profitable than fossil-fuel-fired units, RWE AG (RWE), the country's second-largest energy supplier, said last week.

The exit would generate additional costs of 33 billion euros by 2020, of which industrial and commercial energy users will pay 24 billion euros, as utilities employ more expensive power generation and demand for carbon-dioxide emission permits rises, the BDI said. The figure would rise to 51 billion euros if subsidies for developing renewable energy and the German power grid are included, the lobby group said on its website.

German Chancellor Angela Merkel said April 15 that she will put plans to boost renewable energy output, build power grids and phase out nuclear electricity to Cabinet in June. She hasn't specified a date for the exit.

The study assumes that 50 percent of the output shortfall from Germany's reactors will be plugged in the "short-term" by imports and the remainder by coal- and natural-gas-fired generators. That would raise the energy industry's CO2 emissions to 282 million metric tons in 2018, 28 percent more than the German government had planned, the BDI said.

The study was conducted by r2b energy consulting GmbH, a Cologne, Germany-based company that provides advice to the energy industry, energy users and political institutions, according to its website.

## **Nuclear Exit Wouldn't Hurt Environment, FT Deutschland Says (BLOOM)**

By Richard Weiss

Bloomberg News, April 27, 2011

Germany exiting nuclear power would not result in a burden to the environment as additional carbon dioxide emissions from coal-fired plants would be offset elsewhere, Financial Times Deutschland said in a news release previewing tomorrow's edition, citing comments by Jochen Flasbarth, president of the country's Federal Environment Agency.

In addition to exiting nuclear power, Germany should consider alternatives to building new coal-fired power plants as such plants may have to be shut off from 2030 for political reasons before they recover their investment costs, the newspaper cited Flasbarth as saying.

## **Berlusconi Talks Up Nuclear On Chernobyl Anniversary (AFP)**

AFP, April 27, 2011

Italian Prime Minister Silvio Berlusconi on Tuesday talked up nuclear power as the "safest" form of energy on the 25th anniversary of Chernobyl amid fears linked to the disaster in Japan.

"We are absolutely convinced that nuclear energy is the future for the whole world," Berlusconi said after a summit with French President Nicolas Sarkozy.

"Nuclear energy is still the safest," he told reporters.

His comments come after Italy announced a moratorium on its planned return to nuclear power following a long interruption after the Chernobyl meltdown.

The government last week scrapped legal norms on the construction of nuclear power stations planned by 2014, effectively suspending the programme.

Berlusconi said the move was carried out in order to avoid a referendum planned for June 12-13 that would have set Italy's nuclear programme back "several years" while public emotions were high in the wake of Japan.

"The government has put in place a moratorium in a responsible way in order to allow a new public opinion to form in a year or two that will see the necessity of returning to nuclear power," Berlusconi said.

Referring to nuclear agreements between Italian power giant Enel and France's EDF, Sarkozy said that Italy would have "a welcoming and friendly partner" in France when it decided to return to nuclear energy.

Italy abandoned nuclear power in 1987 after the Chernobyl disaster.

Berlusconi has promised to re-introduce nuclear power in order to cut power bills and reduce Italy's dependence on foreign energy imports.

## **Italy Plans To Reassess Nuclear Power In Few Years (REU)**

By Catherine Hornby

Reuters, April 27, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **OPG Wants To Store Nuclear Waste Underground (CBC)**

CBC News, April 27, 2011

Ontario Power Generation is seeking federal approval to build underground vaults near Lake Huron to store low- and intermediate-level radioactive nuclear waste.

The utility has submitted 12,500 pages of documents, including an environmental impact statement on the Deep Geologic Repository, to support its claim that the project "will not likely result in any significant adverse environmental or public health effects."

What little moisture there is 680 metres below the surface of the proposed site is trapped in rock so dense it doesn't move, said Albert Sweetnam, an executive vice-president at OPG who is in charge of the project.

"You actually have to crush the rock to get the moisture out of it, and when you test that moisture, it's actually from a sea hundreds of millions of years ago," said Sweetnam. "It shows you that nothing is moving down there, it's not going anywhere. That's why the safety case is a good one."

The underground vaults would be used to store everything from mops and used protective suits to irradiated core components from the refurbishment of reactors at Pickering, Darlington and Bruce. They would not be permitted to store used nuclear fuel.

OPG wants to build the storage facilities about one kilometre inland from Lake Huron near Kincardine, on the site of the existing Bruce nuclear plant.

That is too close to the Great Lakes for the New Democrats, who pointed to Japan's current nuclear crisis as proof that scientists are limited in their ability to predict what's going to go wrong.

"There are a bunch of Japanese engineers who never expected a wave big enough to come in and knock out their backup electricity for a nuclear plant," said NDP environment critic Peter Tabuns.

"All of this is really conjecture on the part of those putting together these waste holding areas, and if they go wrong right beside the lake, the consequences are very high."

The vaults, which would be capable of holding a total of 200,000 cubic metres of radioactive waste, would be built 680 metres below ground in low permeability limestone, beneath a 200-metre thick layer of low permeability shale.

"These sedimentary bedrock formations, that provide multiple natural barriers, will safely isolate and contain the low- and intermediate-level nuclear waste," OPG said in its documents.

"The tests indicate that this area has been undisturbed for over 450 million years, so we would expect that it would remain undisturbed for another 450 million years," added Sweetnam.

Earthquakes are not a big concern at the proposed site of OPG's underground vaults.

"The site is within the tectonically stable interior of the North American continent, which is a region characterized by low rates of seismicity, where large earthquakes are unlikely," said the utility.

However, Greenpeace Canada said the crisis at Japan's Fukushima plant shows scientists aren't foolproof when claiming an area is safe.

"Japan shows us that geology is not a predictive science," said Greenpeace spokesman Shawn-Patrick Stensil. "I think OPG is trying to bury its biggest public relations problem: radioactive waste."

Ontario's low- and intermediate-level nuclear waste products have been stored "on an interim basis" at the existing Bruce nuclear plant in Kincardine for 40 years. The local community asked OPG to build the underground facility as a permanent home for the materials.

OPG said the radioactivity in the low-level waste will decay within about 300 years, while the intermediate-level radioactivity will take many thousands of years to decay.

Greenpeace argues there is no safe way to store such radioactive materials.

"There is no fail-safe way of isolating these radio toxins from the environment for hundreds of thousands of years," said Stensil.

The reports submitted by OPG to the Canadian Nuclear Safety Commission are needed to secure an approved environmental assessment and a site preparation-construction licence for the repository, and will undergo a six-month review and comment period.

There will also be a public hearing into the project, expected in 2012, and OPG said the earliest the repository could begin to receive nuclear waste, if approved, would be around 2018.

Local communities near Kincardine have signed on as "willing hosts" for the repository, and OPG says there are existing examples of such facilities operating safely in Sweden, Finland and the United States.

## **China To Encourage High-tech Reactors, Uranium Exploration (REU)**

By David Stanway

Reuters, April 27, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Seoul's Nuclear Ambitions Wane (FT)**

## **Russia Backs Tougher Safety Rules After Chernobyl (AP)**

By Maria Danilova, Associated Press

Associated Press, April 27, 2011

Tough new guidelines could help prevent accidents like the massive Chernobyl meltdown, Russia's president insisted Tuesday, defending nuclear energy during solemn ceremonies commemorating the 25th anniversary of the worst nuclear accident in history.

Russian President Dmitry Medvedev and Ukrainian President Viktor Yanukovich took part in a religious service outside Chernobyl's damaged No. 4 nuclear reactor, laying the first stone of a monument to cleanup workers and placing bouquets of red roses at another monument to Chernobyl victims.

Medvedev said he has invited world leaders to work on rules for safer nuclear energy. His economic adviser, Arkady Dvorkovich, said Russia forwarded its proposals Tuesday to leaders of other Group of Eight countries, and he hoped they would be discussed at next month's summit in France.

"It's of utmost importance that we understand what kind of force humankind is dealing with so that our solutions ... meet the challenges of nuclear energy," Medvedev said.

The accident on April 26, 1986, spewed a cloud of radioactive fallout over much of Europe and forced hundreds of thousands from their homes in heavily hit areas of Ukraine, Belarus and western Russia. It has left forests and farmland still contaminated, offering a warning to the Japanese of the potential long-term effects of their own nuclear disaster at the Fukushima Dai-ichi nuclear plant.

The Chernobyl accident fostered deep mistrust among many in the affected areas, because Soviet leaders waited for days to tell people about the accident, evacuate them from contaminated areas and warn them how to reduce health risks. Medvedev called that a major mistake.

"The duty of the government is to tell its people the truth. We must admit that the government did not always behave in the right way," he said. "We must all be honest, we must give absolutely clear information about what is going on."

The Kremlin said Medvedev was calling for stricter safety standards for building and operating nuclear power plants, and increased governmental responsibilities when dealing with the consequences of possible nuclear accidents, including providing full, accurate information on any accident.

Yanukovich stressed that nuclear accidents such as Chernobyl and the nuclear explosion at Fukushima affect the whole planet, and renewed calls for donations to build a new, safer shelter over Chernobyl's damaged reactor. Ukraine must still raise some \$300 million to cover up the plant, which remains a no-go zone a quarter century after the disaster.

"The whole world has become convinced that such catastrophes have no boundaries and Fukushima-1 serves as a bitter example of that," Yanukovich said. "No nation can battle such catastrophes alone."

Despite the dangers, the three most-affected former Soviet countries continue to believe in nuclear energy. Vladislav Bochkov, spokesman for the Russian nuclear energy agency, said 11 reactors are now under construction in Russia. Ukraine is building two and Belarus is building one reactor.

The new reactor being constructed in Belarus is close to the border with Lithuania, where protests were held Tuesday by activists who believe the project is unsafe. Opposition activists in Belarus also rallied to protest the new reactor.

U.N. Secretary-General Ban Ki-moon, who visited Chernobyl last week, stressed in a statement Tuesday the importance of strengthening the global nuclear safety regime.

The Chernobyl explosion released about 400 times more radiation than the US atomic bomb dropped over Hiroshima. The U.N. World Health Organization said among the 600,000 people most heavily exposed to radiation at Chernobyl, 4,000 more cancer deaths than average are expected.

Artur Tverdokhlebov, 80, a retired subway worker, joined some 3,000 Chernobyl victims at a memorial service at a monument in Kiev.

"Chernobyl is an open wound in the soul of our people," said Tverdokhlebov, who was rushed to clean up the aftermath of Chernobyl in May 1986. "The authorities kept secret what had really happened, nobody told us anything about the danger and we ate the fish that we caught in the river."

In Moscow, hundreds gathered at a cemetery where 28 Chernobyl firefighters are buried.

Russia, Ukraine and Belarus have reduced the benefits packages for sickened cleanup workers in recent years and the memorial events were overshadowed by their complaints for more aid.

Belarusian President Alexander Lukashenko, who has been blacklisted by the European Union after a violent crackdown on protesters alleging voting fraud last year, did not take part in the memorials in Ukraine. He suggested that he had not been invited.

"Ask Yanukovich that question — why isn't the Belarusian president present at their events? Ask them that," Lukashenko told reporters on a visit to Chernobyl-contaminated regions in Belarus. "Unfortunately, the current Ukrainian leadership is really lousy."

Some observers believe that Ukraine wanted to mark the Chernobyl anniversary without Lukashenko to please Brussels as it seeks EU membership.

Lukashenko also had harsh words for European Commission head Jose Manuel Barroso, referring to him as a "goat," one of the most offensive words in the Russian language.

The European Commission last week pledged another euro110 million (\$156 million) to programs to liquidate the consequences of the Chernobyl explosion.

Lukashenko said Belarus was also in need of Western help but had no intention of asking.

In past years on the Chernobyl anniversary, the Belarusian opposition has led a protest march through the capital, Minsk, channeling anger toward Lukashenko's authoritarian government and fears that it is hiding the truth about the consequences of the nuclear disaster.

This year, the march was banned and an evening rally to protest the construction of Belarus' new nuclear power plant was relegated to a park on the capital's outskirts.

Several hundred activists took part, and each of them had to pass a security check and be photographed by security agents before being allowed to join the demonstration.

They held posters saying, "Yesterday Chernobyl, today Fukushima, tomorrow the Ostrovetskaya nuclear power plant. No thank you!"

## **Russia To Propose Nuclear Plan At G8: Medvedev (AFP)**

AFP, April 27, 2011

Russia is to propose a plan to boost safety at the world's nuclear power plants at the G8 summit in May, President Dmitry Medvedev said Tuesday on the 25th anniversary of the Chernobyl catastrophe.

"In May of this year Russia will come forward with a concrete initiative on increasing security of nuclear power stations at the Group of Eight summit," the Kremlin quoted Medvedev as saying in a statement.

"They will be related to increasing responsibility of the countries using nuclear energy," Medvedev said.

Among other things, the countries should bear responsibility for reacting to nuclear accidents in a timely and efficient way, Medvedev said.

"We also believe that additional security requirements are needed for the construction and maintenance of nuclear power plants."

Those rules, the Kremlin chief said, should be spelled out in international legal documents and made obligatory for all states.

He added that international organisations including the International Atomic Energy Agency should be tasked with enforcing those rules.

He said "principles of information openness and absolute transparency (should) become the norm for the work of all nuclear power stations in the world."

The Soviet Union famously stayed silent on the Chernobyl disaster for three days, with the official news agency TASS only reporting an accident there on April 28, after the Forsmark nuclear plant in Sweden recorded unusually high radiation.

The operator of Japan's stricken Fukushima nuclear plant, Tokyo Electrical Power Co. (TEPCO), has also come under fire over its information policy after the accident triggered by a killer quake this year.

Speaking at a forum on China's southern Hainan island earlier this month, Medvedev said he would soon hand over to Russia's partners proposals on the development of peaceful nuclear energy "taking into account the Japanese tragedy."

The nuclear crisis in Japan sparked global concern about the viability of nuclear energy, and prompted some countries to carry out inspections at their atomic facilities.

Medvedev said in China that ongoing nuclear crisis in Japan should not hinder the development of atomic energy and stop "human progress."

## **Medvedev Urges Worldwide Nuclear Safety As Japan Stirs Fears (BLOOM)**

By Anna Shiryaevskaya

Bloomberg News, April 27, 2011

President Dmitry Medvedev called for international nuclear safety standards while visiting Chernobyl today on the 25th anniversary of the world's worst nuclear disaster, as Japan's reactor crisis raises concerns about Russia's resurgent atomic industry.

Russia will help develop new safety standards for nuclear energy after a devastating earthquake and tsunami damaged the Fukushima Dai-Ichi power plant in Japan last month, Medvedev said before the trip to Ukraine to commemorate the explosion at Chernobyl's No. 4 reactor.

"We need to understand what force people are dealing with," the Russian president said today in Chernobyl city, where he and his Ukrainian counterpart Viktor Yanukovich unveiled a monument.

The Chernobyl disaster killed at least 31 plant workers and firefighters in three months and forced the evacuation of a quarter of a million people. That accident released at least 100 times more radiation than the atomic bombs dropped on Nagasaki and Hiroshima. Particles scattered as far as the U.K., while Ukraine, Belarus and parts of Russia bore the worst of the contamination.

Russia's proposals to improve international nuclear safety regulations were today sent to the Group of Eight nations, as well as to BRICS countries, the Commonwealth of Independent States and the International Atomic Energy Agency, Arkady Dvorkovich, Medvedev's aide, said in a Kremlin statement e-mailed today.

The plant, covered by a makeshift shelter, still leaks radiation, as Ukraine seeks to collect funds globally to build a new confinement. Even with radiation leaks, Chernobyl has become a tourist destination.

A quarter of a century later, workers are battling to contain radiation leaks at Fukushima after the March 11 earthquake and tsunami, while countries such as Germany said they will revise plans for the development of nuclear energy.

Japan's government ranked the Fukushima crisis as a level 7 accident, the highest severity rating on an international scale, matching that of the Chernobyl disaster.

"Fukushima is 10 percent of what happened at Chernobyl," Ukraine's Ambassador to Japan Mykola Kulinich said today in Tokyo, referring to the damage to people and the environment.

Medvedev and Yanukovich met to discuss nuclear safety today, as some European governments review plans for atomic energy. In Germany, Chancellor Angela Merkel last month ordered the seven oldest plants idled pending industrywide safety checks after the Japanese reactors leaked radiation, triggering protests against nuclear power across Europe.

"The recent events reminded humankind that we shouldn't relax," Medvedev said yesterday at a meeting with liquidators, as people who battled the Chernobyl meltdown are known. Russia's safety standards are now higher than in many other advanced countries, he said.

The Fukushima accident shouldn't stop development of nuclear energy, Medvedev said on April 15.

Rosatom Corp., Russia's nuclear holding company, plans to at least triple sales to \$50 billion by 2030, as China and India order more reactors and fuel, Chief Executive Officer Sergei Kiriyenko said in September.

Nuclear energy accounts for 16 percent of Russia's total power generation, while the country plans to increase that to as much as 30 percent in the long term, Prime Minister Vladimir Putin said last year.

More than half of Russians believe a nuclear disaster similar to that in Japan could happen in Russia "in the next few years," according to a survey of 1,600 people conducted by the state-run All-Russian Center for the Study of Public Opinion, or VTsIOM, on March 26 and 27. About 9 percent would opt for a shift away from nuclear power and a ban on new power plants, VTsIOM said on its website.

Radiation levels near the Chernobyl reactor are currently about 300 times more than normal in the center of Kiev, the Ukrainian capital 150 kilometers (93 miles) away, said the site's chief engineer, Andrii Savin.

The area 30 kilometers around Chernobyl "is a dead zone," Kulinich said. "It is not a Disneyland."

The site draws travelers, especially after the Fukushima accident.

"There is a lot of demand," Dmitry Chernov, project coordinator of Tour2Kiev, which organizes trips to Chernobyl, said by phone from Kiev. "Now it is linked to the situation at Fukushima."

One-day excursions for English-speaking tourists from the Ukrainian capital into the exclusion zone and a visit to the power plant cost \$150 to \$160, according to the agency's website. Radiation absorbed during the trip doesn't exceed that on a transatlantic flight, the agency said.

"Tourists from the European Union, the Germans, Dutch, French, Scandinavians, are the most frequent guests," Chernov said. "Europeans are better informed about the situation in the zone than Russian and Ukrainian citizens."

## Kremlin Head Wants New Nuclear Rules Post-Chernobyl (NYT/REU)

By Reuters

New York Times, April 27, 2011

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## Japan Nuclear Crisis Raises Doubts In France (NPR)

NPR, April 27, 2011

Nuclear energy is the backbone of France's energy policy. The country gets 80 percent of its electricity from nuclear power. Up until now, nuclear has had broad support. But events in Japan are prompting a rethink — at least by the public and media.

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MELISSA BLOCK, host:

The nuclear crisis in Japan is also raising questions in France. The country gets nearly 80 percent of its electricity from nuclear power. That makes it the most nuclear-energy-dependent nation in the world.

And until now, nuclear power had broad public support in France. Eleanor Beardsley reports.

Unidentified Woman #1: (Speaking foreign language).

ELEANOR BEARDSLEY: Since the earthquake and tsunami that damaged the Fukushima Dai-ichi plant, the French public has watched in disbelief as frightening scenes of the destroyed reactor fill the nightly news.

A recent poll now shows that 57 percent of French people say they believe the country should end its reliance on nuclear energy. And for the first time ever, the French nuclear safety watchdog said that nobody can guarantee that there will never be a nuclear accident in France.

That is an amazing change of tone for the French nuclear industry, says Yves Cochet, a parliamentarian with the Green Party.

Mr. YVES COCHET (Member of Parliament, France): (Through translator) For 30 years we have been hearing how France is the world nuclear champion and there couldn't possibly be a serious accident. Now they admit it's possible. They seem a little less arrogant, and it's about time.

BEARDSLEY: The French nuclear industry dates back to the 1950s, a legacy of President Charles de Gaulle. After building atomic bombs, France turned its attentions toward nuclear energy.

For decades, politicians from across the political mainstream have supported nuclear power. And that's why it has been so difficult for the French to be against nuclear energy, says Bernard Laponche, a nuclear physicist who once worked on French reactors.

Mr. BERNARD LAPONCHE (Nuclear Physicist): We have so much nuclear, they feel that it's impossible to do something different. And also, the government pretended for half a century that it was independence, French independence of energy, which is totally wrong because we are very much dependent on oil.

BEARDSLEY: President Nicolas Sarkozy promised France would draw the necessary lessons from the Japanese disaster.

President NICOLAS SARKOZY (France): (Speaking foreign language).

BEARDSLEY: He called for stress tests at all 58 of the country's nuclear reactors. But Sarkozy said France would continue to rely on nuclear energy, calling it a pillar of the country's energy policy.

Mr. BERTRAND BARRE: Is nuclear power safe? There is no answer to that blunt question.

BEARDSLEY: That's Bertrand Barre, a consultant with French nuclear reactor builder Areva.

Mr. BARRE: Are we doing what's needed to make nuclear power safe? And the answer is: Indeed, when moving from generation two to generation three, we are increasing a lot the safety of nuclear plants.

BEARDSLEY: Barre says third-generation reactors are much safer than current ones and will be able to withstand natural disasters and terrorist attacks.

But nuclear physicist Laponche says you don't need a serious accident to have a disaster. Just take the nuclear plant in Nogent sur Seine, he says.

The sleepy town of Nogent sur Seine lies along the banks of the Seine River. Two giant cooling towers seem out of place in this bucolic setting. Laponche says even a mild accident at this plant could be devastating because Nogent sur Seine lies 50 miles upriver from the city of Paris and its 12 million inhabitants.

Many people in Nogent sur Seine, like Arlette Mayer, say the plant has been good for the town, providing jobs and income.

Ms. ARLETTE MAYER: (Speaking foreign language)

BEARDSLEY: And we need nuclear for electricity, says Mayer. I'm not a bit worried. I have total confidence in the authorities.

Unidentified Man #2: (Speaking foreign language)

BEARDSLEY: Still, since the accident in Japan, others say they're not so sure anymore. Three retirees sit on a bench in the shade. Some of us are scared now, they admit.

Laponche says that while attitudes at the state level have not changed, the French people, the media and some political parties are beginning to truly question France's nuclear dependence.

For NPR news, I'm Eleanor Beardsley in Paris.



# NUCLEAR REGULATORY COMMISSION NEWS CLIPS

THURSDAY, APRIL 28, 2011 7:00 AM EDT

[WWW.BULLETTINNEWS.COM/NRC](http://WWW.BULLETTINNEWS.COM/NRC)

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## **NRC NEWS:**

### **Ohio's Perry Nuclear Power Plant Near Cleveland Evacuated Because Of High Radiation Levels (NYDN)**

By Lukas I. Alpert

New York Daily News, April 28, 2011

Officials evacuated an Ohio nuclear power plant after alarmingly high radiation levels were detected there, the US Nuclear Regulatory Commission said Wednesday.

The episode at the Perry Nuclear Power Plant outside of Cleveland on April 22 has prompted a special inspection by federal regulators.

No one was hurt, and officials say none of the four workers at the plant then were exposed to radiation levels "in excess of NRC limits."

The radiation readings spiked while the plant was shutting down for refueling, and workers removed a monitor that measures nuclear reactions during start-up and shutdown.

A spokesman for FirstEnergy, which owns the plant, said the highest radiation exposure to any of workers was equivalent to two or three chest X-rays.

The unsettling episode comes as the world marked the 25th anniversary of the Chernobyl nuclear disaster and as experts in Japan struggle to bring a leaking nuclear plant back under control.

### **High Radiation Found At Ohio Nuclear Plant (COLUMBIZ)**

Columbus (OH) Business First, April 28, 2011

The US Nuclear Regulatory Commission is inspecting a nuclear reactor in northeast Ohio that recently has turned up high levels of radiation, the Associated Press reports.

The Perry Nuclear Power Plant, owned by FirstEnergy Corp. (NYSE:FE) of Akron, is northeast of Cleveland. The commission said workers evacuated the plant last week when radiation levels rose amid a refueling shutdown, the news service reported.

Officials said the plant is safe and it's unlikely workers were exposed to any radiation levels that exceeded federal standards.

## **Radiation Scare At Ohio Nuclear Plant (WFRVTV)**

WFRV-TV Green Bay, WI, April 27, 2011

(WFRV)-- A radiation scare at a nuclear power plant in Perry, Ohio has the town on edge.

Workers at the plant were apparently exposed to low levels of radiation.

But, the company who runs the plant says the public shouldn't worry.

The US Nuclear Regulatory Commission is doing a special inspection.

Workers noticed the spike in radiation when a range monitor measuring nuclear reactions was being removed.

## **High Radiation Levels At OH Nuclear Reactor (AP)**

Associated Press, April 28, 2011

High radiation levels recorded at a nuclear reactor in northeast Ohio have prompted a special inspection by the US Nuclear Regulatory Commission.

The NRC says workers at the Perry Nuclear Power Plant immediately evacuated the plant April 22 when radiation levels rose while the plant was in the process of shutting down for a refueling outage. The commission says the plant is safe and that officials don't believe workers were exposed to radiation levels that exceeded federal limits.

The commission says radiation levels rose when workers were removing a monitor that measures nuclear reactions during start-up and shutdown.

The nuclear reactor, owned by Akron-based FirstEnergy Corp., is about 35 miles northeast of Cleveland. A FirstEnergy spokesman did not immediately return a request for comment after business hours Tuesday.

## **NRC Schedules Meeting On Honeywell Plant Safety (SOILL)**

The Southern Illinoisan, April 28, 2011

METROPOLIS - The Nuclear Regulatory Commission will be hosting a public meeting May 9 to discuss its latest evaluation of safety performance at the Honeywell Specialty Chemicals plant in Metropolis.

The meeting is scheduled for 7 p.m. at the Massac County Courthouse. The public will be able to ask questions of NRC staff after the business portion of the meeting is finished.

The Honeywell plant processes uranium for use in commercial nuclear power plant fuel.

The NRC's latest evaluation of Honeywell covered a period beginning Jan. 7, 2010, and ending Dec. 31, 2010. The review covered performance at the plant in the areas of safety operations, safeguards, radiological controls, facility support and special topics.

Officials say the review reports Honeywell continued to operate safely and securely and did not identify any areas in need of specific improvement. However, the NRC said that the agency plans to perform some additional inspection activities beyond those required by the plant's core inspection program. The NRC will also conduct the next review over a 12-month period, officials report.

More than 200 United Steelworker employees have been locked out of the uranium conversion facility since June 2010, when their contract with Honeywell expired. Bargaining teams are currently negotiating terms of a new contract.

The NRC letter to Honeywell discussing the performance review is available by going to the NRC web site at [www.nrc.gov/reading-rm/adams/web-based.html](http://www.nrc.gov/reading-rm/adams/web-based.html) and entering the document number ML110660054.

## **As Many As 300,000 Homes Without Power After Browns Ferry Damaged (WAAY)**

WAAY-TV Huntsville, AL, April 28, 2011

Athens, AL - The Tennessee Valley Authority is reporting that Wednesday's storms have badly damaged parts of the Brown's Ferry Nuclear Power plant. All three units at the plant were knocked offline. In addition, 11 high voltage power lines were damaged.

The TVA announced as many as 300,000 homes are affected. There is no word when the issue will be resolved.

Huntsville Utilities released the following statement on Wednesday night :

Damage to TVA's system, along with damage to Huntsville Utilities' facilities, has resulted in a large power outage that is expected to last several days. At this time TVA is unable to supply Huntsville Utilities with any power. TVA and Huntsville Utilities are working together to restore power to the Huntsville Utilities system.

Customers should be prepared to be without power for 4 to 5 days. Consideration should be given to food as well as comfort.

Customers are encouraged to take necessary steps to conserve or reduce their water use until power has been restored.

A joint news conference with city and county officials and Huntsville Utilities representatives to give an update on the status of power restoration will be held Thursday morning, April 28th at 320 Fountain Circle.

There will be no more information available until that time.

## **Storms Knock Out TVA Nuclear Units And Power Lines (REU)**

By Eileen O'Grady

Reuters, April 28, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Deadly Tornadoes Devastate Alabama Cities (MSNBC)**

MSNBC, April 28, 2011

BIRMINGHAM, Ala. — Tornadoes killed dozens of people in Alabama on Wednesday afternoon and evening, part of a violent storm system that left destruction and death across a large swath of the South.

Two major cities, Tuscaloosa and Birmingham, were hit hard by one huge tornado. President Barack Obama declared an emergency in Alabama, and Gov. Robert Bentley mobilized 1,400 National Guardsmen to help in rescue operations.

The system of heavy winds, rain and tornadoes began late Tuesday and by Wednesday morning had left at least 17 dead in Arkansas, Tennessee, Louisiana and Mississippi.

Then the latest round of storms hit Alabama on Wednesday afternoon and evening, pushing the death toll much higher. The Associated Press said the toll in Alabama was at least 58. A count by msnbc.com that included county-by-county numbers from The Weather Channel and NBC station WAFF of Huntsville showed at least 62 dead.

The storm system was predicted to move on through the Carolinas.

A giant tornado touched down near the Mississippi state line, then spent more than two hours on the ground tracking northeast. Local TV channels showed the black wedge cloud, estimated at a mile wide, moving through Tuscaloosa, then along Interstate 59 through Birmingham's northern suburbs and just missing the airport.

The system then tracked into northwest Georgia. At least four people were killed there, said Crystal Paulk-Buchanan with the state emergency management agency. Two of those were in Ringgold, where up to 200 people were reported injured.

Tuscaloosa's mayor said at least 16 people were killed there and "well over 100" injured. Get the latest updates on the tornadoes at [breakingnews.com](http://breakingnews.com)

At least 11 people were confirmed dead in the towns of Concord and Pleasant Grove near Birmingham, according to Jefferson County Emergency Management officials. Injuries and structural damage were widespread there and in other suburbs of Birmingham, which has a metro population of 1 million.

In Tuscaloosa, home to the University of Alabama, cars were tossed along a commercial street and dozens of stores were destroyed or damaged. Ambulances were seen rushing to the area after the storm passed. Video taken at the university showed a massive funnel cloud (on this page) flinging huge pieces of debris through the air.

News footage showed paramedics lifting a child out of a flattened home there, with many neighboring buildings in the city of more than 77,000 also reduced to rubble.

"It looks like somebody came through with a huge ax and cut the top off of everything. Just a big blade through that whole area," resident David Ikard was quoted as saying by Alabama Live. "That area is just total devastation."

Another resident, Phil Owen, said only one store was left standing at a shopping center. "Big Lots, Full Moon Barbecue. Piles of garbage where those places were," he said. "Shell gas station across the street — all that's standing is the frame of the store."

"Please pray for us," Tuscaloosa Mayor Walter Maddox said on The Weather Channel as crews fanned out to search for victims in the city of nearly 100,000.

As the night progressed, more tornadoes and severe thunderstorms were tracking northeast, roughly paralleling the line of the most devastating storm.

Damage from storms throughout the day was reported from Huntsville in the northern part of the state, south to Montgomery.

Earlier, an area of northwest Alabama near the Mississippi state line was hit especially hard.

In the town of Phil Campbell, 12 people were reported dead or missing, [TimesDaily.com](http://TimesDaily.com) reported, citing Police Chief Merrell Potter.

NBC station WAFF of Huntsville reported that dozens of people were unaccounted for in the small town of Red Bay. WAFF said that at least six people had been killed in the small town of Arab.

Just to the east in Cullman, Ala., which is north of the track of the tornado that hit Tuscaloosa and Birmingham, officials said they saw a twister tear through the downtown area, destroying or damaging most buildings along the main street, including the courthouse and a church. One person was reported killed in the area.

People inside City Hall took shelter in a vault, Mayor Max Towson said. Crews were out looking for any victims and surveying the damage, he added.

Three nuclear reactors at the Browns Ferry plant west of Huntsville, Ala., were shut down Wednesday after losing power, and 11 high-voltage power lines were knocked out by the storms, the Tennessee Valley Authority and regulators said. Northern Alabama was facing power outages that would last for days, WAFF reported.

At least six people had been reported killed in Alabama by early Wednesday.

The president and first lady Michelle Obama offered condolences to families affected by the storms and commended "the heroic efforts of those who have been working tirelessly to respond to this disaster."

The White House declaration authorizes the Federal Emergency Management Agency to coordinate disaster relief efforts in Alabama.

The National Weather Service there was a high risk for severe weather into Wednesday night. The greatest threat for new tornadoes was in northern Alabama, northwest Georgia, eastern Mississippi and southern Tennessee, weather.com reported.

The overall system also reportedly spawned a tornado in Quantico, Va., Wednesday evening.

Below is a look at other states hit by the severe weather overnight and into Wednesday morning.

Mississippi: The Mississippi Emergency Management Agency said the state's death toll is now 11.

Jeff Rent, a spokesman for the agency, confirmed the number Wednesday night and said there have been more than 40 injuries.

Authorities said a possible tornado heavily damaged much of the town of Smithville in Monroe County.

"The same areas keep getting hit over and over again," Rent said.

A police officer on a camping trip was killed while shielding his daughter when the storm ripped through a state park in northern Mississippi. The victim, from Covington, La., was not immediately identified.

"He covered his daughter with his body when the storm came through to protect her. A tree limb fell and hit him in the head, killing him. The daughter was not hurt. She was still at the campground waiting for family to arrive," Choctaw County Coroner Keith Coleman said.

Video: Twister rips through Mississippi scrap yard (on this page)

Another man was crushed in his mobile home when a tree fell during the storm, and a truck driver died after hitting a downed tree on a state highway.

A worker was killed Wednesday in Yazoo County while removing a tree from a roadway.

Arkansas: One person died in a storm in Sharp County late Tuesday.

Dozens of tornado warnings were issued in Arkansas throughout the night. Strong winds peeled part of the roof off of a medical building next to a hospital in West Memphis, near the Tennessee border, but no one was inside.

Louisiana: Police said they believed two people found dead in Monroe had drowned during heavy flooding Wednesday.

Thunderstorms with high winds and possible tornadoes caused tree and power line damage from Bastrop to Tishomingo County in northeastern Mississippi late Tuesday night and early Wednesday morning.

Officials reported minor injuries in northwestern Louisiana when a trailer at an oil drilling site turned over in high winds in Bossier Parish.

Tennessee: In eastern Tennessee, what appeared to be a tornado struck just outside Chattanooga in Tiftonia, at the base of the tourist peak Lookout Mountain. One person was reported killed by falling trees in her trailer in Chattanooga.

Angela Milchack had just dropped off her son at school. Students took cover and none were hurt.

"It just sounded like the wind was blowing really, really hard," she said.

Texas: At least one person was injured when a storm slammed through the tiny town of EDOM some 75 miles east of Dallas late Tuesday. Witnesses described seeing what they thought was a tornado rolling the woman's mobile home with her inside.

A video shot by the Tyler Morning Telegraph showed emergency responders covering the injured woman to shield her from rain and hail. Her mobile home was reduced to a pile of debris in the road.

"We have multiple houses damaged or destroyed," said Chuck Allen, Van Zandt County emergency management spokesman. He said he would survey the area by helicopter Wednesday to get an accurate count.

Georgia: Severe storms in northwest Georgia downed trees, blew out windows in a hospital and tore off part of a school roof. Two people were reported killed in the earlier storms.

This article contains reporting from The Associated Press, Reuters, NBC News and msnbc.com.

## **Fatality Recorded In East Tennessee After Series Of Severe Storms; Flooding A Concern :: The Republic (AP)**

Associated Press, April 28, 2011

MEMPHIS, Tenn. — Powerful thunderstorms with strong winds, heavy rain, hail and possible tornadoes lashed Tennessee on Wednesday, killing one person in a mobile home park in Chattanooga. High rain totals and rising creek and river levels were leading officials in counties throughout the state to prepare for flooding.

The storms crossed the Mississippi River and pounded West Tennessee on Tuesday night and Wednesday morning, then barreled through Middle and East Tennessee. The storms downed power lines, flooded some residential streets, felled trees that blocked roads, and damaged buildings.

Thousands of customers were left without power. The Tennessee Valley Authority said the storm caused serious damage to the utility's transmission system, with power outages and high voltage lines down in Alabama, Tennessee, Kentucky and Mississippi.

Flash flood warnings were in effect Wednesday afternoon for many areas. Tennessee Gov. Bill Haslam has declared a state of emergency as a precaution.

The Hamilton County Sheriff's Office reports the Chattanooga woman, identified as 41-year-old Mai Crumley, was killed Wednesday when a tree fell on her trailer.

Local governments did have reports of storm-related injuries, but a definitive number was not immediately available.

Rainfall totals were heavy in West Tennessee, with 6 inches falling along the Interstate 40 corridor, said National Weather Service meteorologist John Sirmon. Reports also have come in with double digit rainfall totals over the past three days in some counties, Sirmon said.

The weather service was looking into numerous reports of tornado damage, but it was still too early to confirm any touchdowns, Rose said.

"I would call this event unprecedented because we're dealing with so many threats," Sirmon said.

Stormy weather also moved into the Knoxville area, with residents of Blount and Monroe counties reporting funnel clouds in the sky Wednesday evening, and golfball-size hail pounded downtown Knoxville.

Memphis, workers at the Pyramid — the former home of the city's college and pro basketball teams — filled and stacked sandbags to prepare for flooding from the bulging Mississippi River. Shelby County officials also were getting ready for possible flooding in neighborhoods near the Loosahatchie River and Nonconnah Creek.

Several roads in the Memphis area were inundated. Shelby County officials said four roads in and near Lakeland were blocked off due to high water Wednesday afternoon.

Meanwhile, downpours forced the evacuation of some personnel at a naval installation at Millington. About 220 people were moved to hotels from housing at the Naval Support Activity Mid-South after a stream came out of its banks in a low-lying area of the base, which was previously the Millington Naval Air Station. The facility is north of Memphis.

In East Tennessee, tornado warnings were being issued on Wednesday afternoon as the storms headed into Chattanooga and Knoxville.

The storms that passed through Chattanooga and Hamilton County earlier in the day caused several people to be injured and transported to area hospitals, said Bruce Garner of the Chattanooga Fire Department. Garner said many trees landed on houses and vehicles, roads were blocked and high winds damaged a playground in Lookout Valley.

What appeared to be a tornado struck just outside Chattanooga in Tiftonia, at the base of Lookout Mountain.

Angela Milchack, 29, had just dropped off her son at Lookout Valley Elementary School. Students took cover and none were hurt.

"It just sounded like the wind was blowing really, really hard," she said.

Her husband Eric Milchack, a police officer, was asleep when the storm struck. A tree fell on the couple's car and the city police cruiser he had driven home. Damage to their home was extensive.

Weather officials in East Tennessee were investigating possible tornadoes near Lookout Mountain and other locations. The Red Cross opened a shelter in Chattanooga for displaced residents.

Lookout Valley Elementary School principal Regina Brock said the school's 320 youngsters were all moved into the hallway before the winds howled outside.

"They were wonderful," Brock said. "They did exactly what they have been told to do."

In Nashville, more than 2 inches of rain had fallen since Tuesday morning, National Weather Service meteorologist Mark Rose said. Weather damage assessment teams were going out to investigate possible tornadoes in Murfreesboro and Morrison.

The city's Office of Emergency Management said Whites Creek, Mill Creek and the Harpeth River in the Nashville area were anticipated to slightly exceed flood stage. These creeks will likely come out of their banks and into yards, but were not expected to threaten homes, officials said.

Six resource staging areas with boats, buses, public works trucks and vehicles carrying sandbags were established along the area tributaries as a precautionary measure, officials said.

In Clarksville, officials and residents were closely watching the Cumberland River and the Red River for possible flooding.

Meanwhile, a GNCC off-road racing event this weekend at the Loretta Lynn Dude Ranch 60 miles southwest of Nashville was postponed until May 14-15 because the course and parking area at the site are under water.

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Associated Press writers Bill Poovey in Chattanooga and Randall Dickerson in Nashville contributed to this report.

[View the discussion thread.](#)

## **Alabama Tornadoes: More Than 40 Die In North Alabama Tornadoes, Several People Still Missing (CHIT)**

Chicago Tribune, April 28, 2011

TENNESSEE VALLEY, AL—

The death toll is staggering, and it keeps rising. Currently, more than 40 people are confirmed dead from multiple tornadoes that hit north Alabama on Wednesday in several rounds of severe storms.

There are deaths and significant damage in most north Alabama counties. We've outlined the situation below.

Jackson County

Coroner John David Jordan confirms there are eight deaths in Jackson County. One is a 12-year-old boy who lived in Bridgeport. He and his mother were leaving their mobile home to get in a car and drive to safety when they were hit. Both were thrown from the car. He died there; she was rushed by ambulance to Erlanger Hospital in Chattanooga, where she is in serious condition.

A woman died in a mobile home on County Road 359 earlier in the day, in Pisgah. Kathy Gray Haney, 45, was crushed by a piano. Her husband, Wayne Haney, was also inside the trailer and was seriously hurt. He was rushed to Highlands Medical Center in Scottsboro.

An elderly couple also died in the same area of Pisgah, but in a different storm. Herbert and Anne Satterfield died when their home on County Road 369 was blown away.

In Higdon, four people died when their home on County Road 95 was blown away. The four people are related; Coroner Jordan said none of the dead in Higdon were children.

There is also a woman missing in the Higdon area. Jackson County Sheriff's Office and the Volunteer Fire Department are searching areas along County Road 95 for her.

Franklin County

WHNT NEWS 19's Shoals Team is in Phil Campbell, where the situation is dire. There is currently one confirmed death, but Phil Campbell Police Chief Merrell Potter says 12 people are missing. A triage center is set up at the Phil Campbell Rescue Squad office on Broad Street. Several people are coming by the truckload, with injuries to be treated.

A number of downtown businesses, along Broad Street, are almost leveled. These include Nix's Furniture and Appliances, Allen's Auto Parts and Fitts Service and Repair Shop.

Phil Campbell High School also has damage. Part of the roof is on the ground, and trees are down on the campus. Some windows are also damaged. Lawrence County

There are at least 12 deaths in Lawrence County. Three are in the Mount Hope community and one is in Moulton.

Marshall County

Five deaths have been confirmed in the Ruth community, north of Arab in Marshall County. All were killed in the Rhodes Trailer Court, near Ruth and Cranford Roads. Arab Fire Chief Ricky Phillips says a six-year-old boy is among those who died. There is also a 20-year-old man who is missing. Additionally, 15 people were injured in that same area, and were taken to local hospitals for treatment. That storm hit late Wednesday afternoon.

In Marshall County, power lines and trees are down in several areas, including several parts of Guntersville. There is extensive tree damage inside Lake Guntersville State Park. Several trees fell on campers, destroying them, but no serious injuries have been reported.

Winds ripped the front wall off of National Plaza, a small shopping center in Guntersville. The building houses Sun Loans and Mattress King. The damage happened before either store opened, so no employees or customers were inside.

Buck Island, in Guntersville, was also hit pretty hard. WHNT NEWS 19's Robert Reeves says the storm came across below Arab, traveled across Gunter Mountain, and then hit Henryville and Claysville and then hit Buck Island. There are a lot of trees down, and some homes were hit as well. There is one site where firefighters had to walk into an area where a special needs child lives, to get him out. The child is fine. Crews are working in many areas to clear downed trees. Power is out through most of this area. There was also a natural gas leak on Buck Island, but now the gas is turned off.

There is also some damage to Preston Island, which was hit in 2010.

In Langston, witnesses report damage to an RV campsite, where dozens of trees are uprooted and snapped. There is also structural damage reported to several homes.

There are numerous reports of trees and power lines down in Guntersville. One area is Highway 79, south of Highway 431. There is also significant damage to Lake Guntersville State Park. Madison County

Six people are confirmed dead in the Harvest area, according to Madison County Sheriff Blake Dorning. One of the people who died is a young girl. Several homes were taken off their foundations on Orville Smith Road. She was in one of them. Her father was also critically hurt. Dozens more were injured in that area, as well as on Lockhart Road. Huntsville Hospital is treating approximately 50 people in the emergency room. The majority are critical, according to spokesperson Cheryl Davis.

Throughout Madison County, Huntsville Utilities crews are working to restore the feed from the TVA. Currently, that feed is out, meaning all customers are without power. Before this, main transmission feeds and sub-station feeds had already taken a hit, according to Huntsville Utilities spokesperson Bill Yell. There are also power lines down all over the county.

The Madison County EMA says this is the worst storm we've seen in several years, due to damage being all over the county and not in one specific area. Trees are reported down in several areas, one of the being Moores Mill. A viewer reports multiple trees down on Moores Mill Road, across from the Moores Mill Volunteer Fire Department. Also, trees are down and mobile homes are turned over on Schooner Lane, off Mount Lebanon Road. Flooding is reported at Highway 53 and Blake Bottom Road. Traffic lights are out in several areas, and Huntsville Utilities is working to restore power as quickly as possible. The EMA says the National Weather Service is checking to see if tornadoes hit in Monrovia and New Hope. There is also damage at Buckhorn High School, but no one was injured.

## **Storms Affecting TVA Service Region (CHATNOOG)**

The Chattanooga (TN), April 28, 2011

Severe weather in the area served by the Tennessee Valley Authority caused serious damage to the utility's transmission system on Wednesday, with power outages and high voltage lines down in Alabama, Tennessee, Kentucky and Mississippi.

11 high-voltage transmission lines were out of service Wednesday afternoon and TVA crews are working to restore service. Only one local power company, Cullman Electric Cooperative in Cullman, Ala., was directly affected by the TVA transmission outage. Several other power companies sustained damage.

Additional severe weather, including high winds and possible tornadoes, was expected later Wednesday. Strong storms could damage transmission lines and structures and cause power outages. TVA's service region includes most of Tennessee; southwestern Kentucky; the northern areas in Mississippi, Alabama, and Georgia and parts of western North Carolina and southwest Virginia.

Rainfall in the western portion of the TVA service area was four to seven inches from Tuesday to Wednesday. Eight of the nine dams on the Tennessee River were generating at full power to move water through the river system and help control flooding.

"The unusually strong storms we're experiencing have caused damage resulting in power outages," said Rob Manning, TVA executive vice president of Power System Operations, who also urged caution around damaged electrical equipment.

"Never approach power lines or transmission structures that are lying on the ground," Mr. Manning advised. "An energized power line on the ground causes electricity to fan out and anyone walking or running nearby could be electrocuted. Call your local power company to report downed power lines."

TVA maintains 16,000 miles of high voltage power transmission lines that serve 155 local power companies and 56 large industrial customers and government facilities.

The Tennessee Valley Authority, a corporation owned by the US government, provides electricity for utility and business customers in most of Tennessee and parts of Alabama, Mississippi, Kentucky, Georgia, North Carolina and Virginia – an area of 80,000 square miles with a population of 9 million. TVA operates 29 hydroelectric dams, 11 coal-fired power plants, three nuclear plants and 11 natural gas-fired power facilities that can produce about 34,000 megawatts of electricity, delivered over 16,000 miles of high-voltage power lines. TVA also provides flood control, navigation, land management and recreation for the Tennessee River system and works with local utilities and state and local governments to promote economic development across the region. TVA, which makes no profits and receives no taxpayer money, is funded by sales of electricity to its customers. Electricity prices in TVA's service territory are below the national average.

## **UPDATE: TVA: Power Could Be Out In Area At Least Until Morning (COLCD)**

Columbus (MS) Commercial Dispatch, April 28, 2011

11:00 PM UPDATE: TVA released a statement Wednesday evening that stated, "We have never experienced such a major weather event in our history." The release states that at least 90 transmission lines, including 25 major 500 kilovolt lines, are currently down. In the interest of safety, TVA is waiting until Thursday morning to assess much of the damage. The release also states that the Widows Creek Fossil Plant in northern Alabama and the Browns Ferry Nuclear Plant in Athens, AL were both down. The nuclear plant shut down safely.

Power could remain down in Starkville and Columbus at least until tomorrow morning, a TVA spokeswoman said, as the power provider surveys the extent of damage to its grid in the wake of severe storms.

Power went down across the Golden Triangle as tornadoes touched down to the north and south of Columbus. Power was out in Starkville, Columbus and West Point.

Emergency officials said that TVA was conducting an assessment, and it was unclear when power would return.<>

Officials said many areas in TVA's service area from Amory south to Philadelphia were without power.

Widespread damage was reported from tornadoes in Smithville, Wren, Amory and Okolona in north Mississippi.

A TVA transmission line serving north Mississippi, or equipment at a TVA substation, were damaged during the storms. A TVA spokeswoman said confirmed that several transmission lines were down, but the extent of the damage would remain unclear until Thursday morning.

## **Refueling Starts Soon At Prairie Island Nuclear Plant (MINNPOST)**

By Joe Kimball

MinnPost, April 27, 2011

The Prairie Island Nuclear Plant will shut down soon for refueling and maintenance work at its site along the Mississippi River in Red Wing.

The routine outage is set to begin by the end of the month and will last from four to five weeks, reports the Red Wing Republican Eagle.

Refueling outages occur every 18 months, and hundreds of extra maintenance workers are brought in during that time to do work that can't be done while the plant is running.

Xcel Energy customers won't notice the shutdown, said spokesperson Mary Sandok.

"It's not going to be affecting anybody other than the people who are working there. (Customers) would not even know that we have the plant down other than we tell them we do," she said. "Their lights won't even flicker."

## **Questions About Pilgrim Nuclear Power Station Must Be Sent By May 3 (QPL)**

By Brian Badzmierowski

Quincy (MA) Patriot Ledger, April 27, 2011

Plymouth residents have until next Tuesday to submit questions about the operation of Pilgrim Nuclear Power Station before a May 10 public public forum.

Entergy Corp., the nuclear plant's owner, will be sending Manager of Government Relations Jack Alexander to the forum to answer questions about the plant's safety.

Concerns have been raised, most notably by Duxbury resident Mary Lampert and her citizen group Pilgrim Watch, about the similarities between the structure of Pilgrim and the Fukushima Daiichi plant in Japan, which has been leaking radiation since it was heavily damaged in the March 11 earthquake/tsunami.

The two major concerns are backup power supplies and the storage of spent fuel assemblies.

Pilgrim has been waiting for the US Nuclear Regulatory Commission to grant it a 20-year license renewal for the past six years, about three times the length of a normal review.

Local residents have grown more concerned about Pilgrim since the Japanese accident.

The Pilgrim Nuclear Power Station is 38 years old and is one of the six out of 104 active nuclear reactors in the US that uses the same General Electric Mark 1 reactors as Fukushima.

The public forum May 10 will be a chance for residents to express their concerns and ask questions.

It will start at 7 p.m. at the Plymouth North High School auditorium.

Send questions by May 3 to: Plymouth Board of Selectmen, attention Tiffany Park, 11 Lincoln St., Plymouth, 02360.

## **June 6 Hearing Set For Proposed Payette Nuke Reactor (BOISEWE)**

By George Prentice

Boise Weekly, April 27, 2011

A hearing has been set for what Alternate Energy Holdings Inc. says would be "the final approval by the state of Idaho" to build a nuclear reactor in Payette County.

On June 6, Payette County Commissioners will consider AEHI's request to rezone 5,300 rural acres from agricultural to industrial. Payette's Planning and Zoning Commissioners recommended approval of the rezone at a December 2010 meeting. The mayor and City Council of New Plymouth have written to county commissioners supporting the project.

With promises of thousands of jobs and an increasing tax base, AEHI CEO Don Gillispie said he wants to build a \$10 billion reactor near New Plymouth. Last December, the Securities and Exchange Commission accused Gillispie of a "pump and dump" scheme, misleading investors with fraudulent press releases and then selling the stock at inflated prices. But in February, US Judge Edward Lodge unfroze the company's assets, putting AEHI back in business. As of this morning, AEHI stock was trading at 11 cents a share.

## **Americas Nuclear Nightmare (ROLLSTN)**

**The US has 31 reactors just like Japan's — but regulators are ignoring the risks and boosting industry profits**

By Jeff Goodell

Rolling Stone, April 28, 2011

Five days after a massive earthquake and tsunami struck Japan, triggering the worst nuclear disaster since Chernobyl, America's leading nuclear regulator came before Congress bearing good news: Don't worry, it can't happen here. In the aftermath of the Japanese catastrophe, officials in Germany moved swiftly to shut down old plants for inspection, and China put licensing of new plants on hold. But Gregory Jaczko, the chairman of the Nuclear Regulatory Commission, reassured lawmakers that nothing at the Fukushima Daiichi reactors warranted any immediate changes at US nuclear plants. Indeed, 10 days after the earthquake in Japan, the NRC extended the license of the 40-year-old Vermont Yankee nuclear reactor — a virtual twin of Fukushima — for another two decades. The license renewal was granted even though the reactor's cooling tower had literally fallen down, and the plant had repeatedly leaked radioactive fluid.

Photo Gallery: See America's Worst Nuclear Plants

Perhaps Jaczko was simply trying to prevent a full-scale panic about the dangers of US nuclear plants. After all, there are now 104 reactors scattered across the country, generating 20 percent of America's power. All of them were designed in the 1960s and '70s, and are nearing the end of their planned life expectancy. But there was one problem with Jaczko's testimony, according to Dave Lochbaum, a senior adviser at the Union of Concerned Scientists: Key elements of what the NRC chief told Congress were "a baldfaced lie."

This article appears in the May 12, 2011 issue of Rolling Stone. The issue is available now on newsstands and will appear in the online archive April 29.

Lochbaum, a nuclear engineer, says that Jaczko knows full well that what the NRC calls "defense in depth" at US reactors has been seriously compromised over the years. In some places, highly radioactive spent fuel is stockpiled in what amounts to swimming pools located beside reactors. In other places, changes in the cooling systems at reactors have made them more vulnerable to a core meltdown if something goes wrong. A few weeks before Fukushima, Lochbaum authored a widely circulated report that underscored the NRC's haphazard performance, describing 14 serious "near-miss" events at nuclear plants last year alone. At the Indian Point reactor just north of New York City, federal inspectors discovered a water-containment system that had been leaking for 16 years.

Read Jeff Goodell on the Gulf oil spill, one year later

As head of the NRC, Jaczko is the top cop on the nuclear beat, the guy charged with keeping the nation's fleet of aging nukes running safely. A balding, 40-year-old Democrat with big ears and the air of a brilliant high school physics teacher, Jaczko oversees a 4,000-person agency with a budget of \$1 billion. But the NRC has long served as little more than a lap dog to the

nuclear industry, unwilling to crack down on unsafe reactors. "The agency is a wholly owned subsidiary of the nuclear power industry," says Victor Gilinsky, who served on the commission during the Three Mile Island meltdown in 1979. Even President Obama denounced the NRC during the 2008 campaign, calling it a "moribund agency that needs to be revamped and has become captive of the industries that it regulates."

In the years ahead, nuclear experts warn, the consequences of the agency's inaction could be dire. "The NRC has consistently put industry profits above public safety," says Arnie Gundersen, a former nuclear executive turned whistle-blower. "Consequently, we have a dozen Fukushimas waiting to happen in America."

Read Rolling Stone's full political coverage

The meltdown in Japan couldn't have happened at a worse time for the industry. In recent years, nuclear power has been hyped as the only energy source that could replace coal quickly enough to slow the pace of global warming. Some 60 new nukes are currently in the works worldwide, prompting the industry to boast of a "nuclear renaissance." In his 2012 budget, President Obama included \$54 billion in federal loan guarantees for new reactors — far more than the \$18 billion available for renewable energy.

Without such taxpayer support, no new reactors would ever be built. Since the Manhattan Project was created to develop the atomic bomb back in the 1940s, the dream of a nuclear future has been fueled almost entirely by Big Government. America's current fleet of reactors exists only because Congress passed the Price-Anderson Act in 1957, limiting the liability of nuclear plant operators in case of disaster. And even with taxpayers assuming most of the risk, Wall Street still won't finance nuclear reactors without direct federal assistance, in part because construction costs are so high (up to \$20 billion per plant) and in part because nukes are the only energy investment that can be rendered worthless in a matter of hours. "In a free market, where real risks and costs are accounted for, nuclear power doesn't exist," says Amory Lovins, a leading energy expert at the Rocky Mountain Institute. Nuclear plants "are a creation of government policy and intervention."

They are also a creation of lobbying and campaign contributions. Over the past decade, the nuclear industry has contributed more than \$4.6 million to members of Congress — and last year alone, it spent \$1.7 million on federal lobbying. Given the generous flow of nuclear money, the NRC is essentially rigged to operate in the industry's favor. The agency has plenty of skilled engineers and scientists at the staff level, but the five commissioners who oversee it often have close ties to the industry they are supposed to regulate. "They are vetted by the industry," says Robert Alvarez, a former senior policy adviser at the Energy Department. "It's the typical revolving-door story — many are coming in or out of jobs with the nuclear power industry. You don't get a lot of skeptics appointed to this job."

Jeffrey Merrifield, a former NRC commissioner who left the agency in 2007, is a case in point. When Merrifield was ready to exit public service, he simply called up the CEO of Exelon, the country's largest nuclear operator, and asked him for a job recommendation. Given his friends in high places, he wound up taking a top job at the Shaw Group, a construction firm that builds nuclear reactors — and he's done his best to return the favor. During the Fukushima disaster, Merrifield appeared on Fox News, as well as in videos for the Nuclear Energy Institute, the industry's lobbying group. In one video — titled "Former NRC Commissioner Confident That Building of New US Nuclear Plants Should Continue" — Merrifield reassures viewers that the meltdown in Japan is no big deal. "We should continue to move forward with building those new plants," he says, "because it's the right thing for our nation and it's the right thing for our future."

Such cozy relationships between regulators and the industry are nothing new. The NRC and the utilities it oversees have engaged in an unholy alliance since 1974, when the agency rose from the ashes of the old Atomic Energy Commission, whose mandate was to promote nuclear power. "For political reasons, the US wanted to show something good could come out of splitting the atom," says Robert Duffy, a political scientist at Colorado State University who has written widely about the history of nuclear power. "There was great pressure on the industry to get nuclear plants built quickly." With no effective oversight by the government, the industry repeatedly cut corners on the design and construction of reactors. At the Diablo Canyon plant in California, engineers actually installed vital cooling pipes backward, only to have to tear them out and reinstall them.

But even the lax oversight provided by the NRC was more than the industry could bear. In 1996, in one of the most aggressive enforcement moves in the agency's history, the NRC launched an investigation into design flaws at a host of reactors and handed out significant fines. When the industry complained to Sen. Pete Domenici of New Mexico, a powerful nuclear ally, he confronted the head of the NRC in his office and threatened to cut its funding by a third unless the agency backed off. "So the NRC folded their tent and went away," says Lochbaum. "And they've been away pretty much ever since."

The Japanese disaster should have been a wake-up call for boosters of nuclear power. America has 31 aging reactors just like Fukushima, and it wouldn't take an earthquake or tsunami to push many of them to the brink of meltdown. A natural disaster may have triggered the crisis in Japan, but the real problem was that the plant lost power and was unable to keep its cooling systems running — a condition known as "station blackout." At US reactors, power failures have been caused by culprits as

mundane as squirrels playing on power lines. In the event of a blackout, operators have only a few hours to restore power before a meltdown begins. All nukes are equipped with backup diesel generators, as well as batteries. But at Fukushima, the diesel generators were swamped by floodwaters, and the batteries lasted a mere eight hours — not nearly long enough to get power restored and avert catastrophe. NRC standards do virtually nothing to prevent such a crisis here at home. Only 11 of America's nuclear reactors have batteries designed to supply power for up to eight hours, while the other 93 have batteries that last half that long.

And that's just the beginning of the danger. Aging reactors are a gold mine for the power companies that own them. Nuclear plants are expensive to build but cheap to operate, meaning the longer they run, the more profitable they become. The NRC has done its part to boost profitability by allowing companies to "uprate" old nukes — modifying them to run harder — without requiring additional safety improvements. Vermont Yankee, for example, was permitted to boost its output by 20 percent, eroding the reactor's ability to cool itself in the event of an emergency. The NRC's own advisory committee on reactor safety was vehemently opposed to allowing such modifications, but the agency ultimately allowed the industry to trade safety for profit. "The NRC put millions of Americans at elevated risk," says Lochbaum.

Indeed, the NRC's "safety-last" attitude recalls the industry-friendly approach to regulation that resulted in the BP disaster in the Gulf of Mexico last year. Nuclear reactors were built to last only 40 years, but the NRC has repeatedly greenlighted industry requests to keep the aging nukes running for another two decades: Of the 63 applications the NRC has received for license extensions, it has approved all 63. In some cases, according to the agency's own Office of the Inspector General, NRC inspectors failed to verify the authenticity of safety information submitted by the industry, opting to simply cut and paste sections of the applications into their own safety reviews. That's particularly frightening given that some of America's most troubled reactors — including Davis-Besse in Ohio, where a football-size hole overlooked by NRC inspectors nearly caused a catastrophe in 2002 — are now pushing for extensions. "If history is any judge, the NRC is likely to grant them," says Gundersen, the former nuclear executive.

Even after a reactor is found to be at higher risk because of new information about earthquake zones — as is the case at Indian Point, located only 38 miles from New York City — the NRC has done little to bolster safety requirements. The agency's current risk estimate of potential core damage at the Pilgrim reactor in Plymouth, Massachusetts, is eight times higher than its earlier 1989 estimate — yet it has done little to require the plant to prepare for an earthquake, beyond adding a few more fire hoses and other emergency gear. The Diablo Canyon plant in California, which sits near one of the most active seismic zones in the world, is supposedly engineered to withstand a 7.5 earthquake. There's only one problem: Two nearby faults are capable of producing quakes of 7.7 or higher. Should it be shut down? "That's the kind of big question the NRC should be capable of answering," says Gilinsky, the former NRC commissioner. "Unfortunately, they are not."

The biggest safety issue the NRC faces with old nukes is what to do about the nuclear waste. At Fukushima, the largest release of radioactivity apparently came from the concrete pools where spent fuel rods, clad with a special alloy, are placed to cool down after they are used in the reactor. These spent rods are extremely hot — up to 2,000 degrees Fahrenheit — and need a constant circulation of water to keep them from burning up. But in America, most plants have no way of keeping the water circulating in the event of a power failure. Nor are the pools themselves typically housed in secure bunkers, because the NRC long considered it virtually impossible for the special alloy to catch fire. Fukushima proved them wrong. The earthquake damaged the systems that cooled the spent rods, allowing the water to drain out. The rods then heated up and the cladding caught fire, releasing cesium-137 and other radioactive particles. The rods were eventually cooled with seawater fired from water cannons and pumped in by firetrucks, but not before a significant amount of radiation had been released.

In theory, pools in the US were only supposed to hold spent fuel rods for a short time, until they could be moved to a permanent disposal site at Yucca Mountain in Nevada. But the site has remained unfeasible despite two decades and \$7 billion in research, prompting President Obama to finally pull the plug on it last year. That means tens of thousands of tons of irradiated fuel continue to sit in spent fuel pools at reactors across the country — America's largest repository of radioactive material. A release of just one-tenth of the radioactive material at the Vermont Yankee reactor could kill thousands and render much of New England uninhabitable for centuries. "Yet the NRC has ignored the risk for decades," says Alvarez, the former Energy Department adviser.

According to a 2003 study, it would cost as much as \$7 billion to move the spent fuel out of the pools and into more secure containers known as dry-cask storage. So why hasn't the NRC required such a precaution? "Power companies don't want to pay for it," says Alvarez. "They would rather let the public take the risk." Gilinsky offers another explanation. "After insisting for years that spent fuel pools were not a problem," he says, "the NRC doesn't want to admit what everyone knows after Fukushima: They were wrong."

As chairman of the NRC, Gregory Jaczko was supposed to reform the agency. He formerly served as science adviser to Sen. Harry Reid of Nevada, and won his seat on the commission in 2005 over protests from the industry. Under his leadership, however, the NRC has displayed an alarming lack of urgency in the wake of Fukushima. The agency says it is currently taking a quick look for immediate problems at US reactors, and promises to follow up with a more in-depth review later. But it's an indication of how little respect the agency commands that no one expects much to change. Indeed, ever since the terrorist attacks in 2001, the NRC has become increasingly secretive. "The agency has used national security as an excuse to withhold information," says Diane Curran, an attorney who specializes in nuclear safety.

Some critics argue that it's time for an outside agency, such as the National Academy of Sciences, to take an independent look at the safety and security of America's aging nukes. A better idea might be to simply repeal the Price-Anderson Act and force the nuclear industry to take responsibility for the risks of running these old plants, rather than laying it all off on taxpayers. The meltdown in Japan could cost Tokyo Electric some \$130 billion — roughly three times what the Deepwater Horizon spill cost BP. If nuke owners had to put their own money where their atoms are, the crumbling old reactors would get cleaned up or shut down in a heartbeat.

Instead, by allowing the industry to cut safety margins in exchange for profits, the NRC is actually putting the "nuclear renaissance" itself at risk. "It has not been protesters who have brought down the nuclear industry," said Rep. Ed Markey of Massachusetts. "It has been Wall Street." Wind and natural gas are already cheaper than nukes, and the price of solar is falling fast. And with each new Fukushima, the cost of nukes — as well as the risks — will continue to rise.

"The question is not whether we will get an earthquake or a tsunami," says Lochbaum. "The question is whether we are fully prepared for unexpected events, and whether we are doing everything we can to protect the public. I don't think we are. If and when there is a nuclear disaster, I would hate to be the one who has to stand up in front of the American people and say, 'We knew about these problems, but did nothing about them.'"

## **2 Meetings Set To Discuss Cooper Nuke Plant (AP)**

Associated Press, April 28, 2011

BROWNVILLE, Neb. (AP) — Federal authorities have scheduled two meetings with Nebraska Public Power District to discuss operations and a recent problem at the district's Cooper nuclear power plant in Brownville.

The first hearing is scheduled for Wednesday at the Nuclear Regulatory Commission office in Arlington, Texas. An NRC news release says the discussion will center on backup procedures to operate valves that are part of the emergency core cooling system. The NRC was concerned that the procedures may not have worked in a fire.

The second meeting is set for May 5 at the Brownville Concert Hall. The NRC describes it as an annual assessment of safety performance. Officials say the meeting is not connected to the recent radiation exposure of three maintenance workers at the plant.

## **NRC To Host Nuke Assessment Meeting (OSWEGOPT)**

By Aaron Curtis

Oswego (NY) Palladium-Times, April 28, 2011

acurtis@palltimes.com The Nuclear Regulatory Commission (NRC) has announced that a meeting will be held next month to discuss the annual assessment of the operations at the Scriba-based nuclear power plants.

The meeting is scheduled to take place at 6 p.m., May 4, at the Town of Scriba Justice Center, located at 45 Creamery Road. According to staff of the NRC, the public will be given an opportunity to ask questions of the commission regarding the plant's operations, as well as the agency's oversight of the units.

"Our annual assessment reviews allow us to step back and gauge whether the nuclear power plants we regulate are on the right track in terms of performance and adhering to the highest levels of safety," said Bill Dean, NRC Region I administrator. "Once we've completed these evaluations, we reach out to the public to share that information and to receive their feedback at a location near each plant. We welcome and value these exchanges."

In a press release, the NRC noted that overall, Nine Mile Point Nuclear Station units 1 and 2 and the James A. FitzPatrick Nuclear Power Plant operated safely during 2010, as there were no inspection findings other than a "green" finding for the Nine Mile Point units and a "greater than green" finding at the FitzPatrick plant. The green finding represents a safety issue of very low safety significance. The greater than green inspection finding in the area of security for the FitzPatrick was considered sensitive information and was therefore not released to the public. The issue was "finalized" on Nov. 4, according to the NRC.

## **Vermont Yankee Nuclear Power Plant Power Purchase Agreement Rejected (POWGENWLD)**

Power-Gen Worldwide, April 28, 2011

The Vermont Electric Co-op rejected a contract to buy power generated from the Vermont Yankee nuclear power plant, according to Reuters.

The board of directors at co-op voted nine to one to reject the 20-year offer to buy power at below market prices, the article stated.

The plant is scheduled to shut down in 2012 unless the state allows it to operate longer. Parent company Entergy sued the state of Vermont to keep the plant open, saying a 2002 agreement to notify state regulators if it sought a license extension was breached when the General Assembly passed a law in 2006, excusing the requirement that they seek state approval. The US Nuclear Regulatory Commission extended the plant's license for 20 years in March.

## **Utility Rejects Contract To Buy Vermont Yankee Power (REU)**

By Scott DiSavino

Reuters, April 28, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Nevada Delegation To Lawmakers Touring Yucca Mountain: Go Away (LVS)**

By Karoun Demirjian

Las Vegas Sun, April 28, 2011

Nevada is usually chomping at the bit to have lawmakers come to spend time exploring the Las Vegas area. Not so much this week though, when a congressional delegation came to tour what they say is the "illegally closed" Yucca Mountain.

When Illinois Rep. John Shimkus led a group around the site, still officially slated to be the country's nuclear waste repository, on Tuesday, the Nevada delegation's message to them was clear: go away, and take your plans with you.

"We need to dump Yucca Mountain now and start securing fuel rods in hardened dry-cask storage containers kept at existing plant sites," said Democratic Rep. Shelley Berkley. "It is unfortunate that rather than allow representatives from the state of Nevada or Clark County to participate on his taxpayer-funded tour, Congressman Shimkus chose to slam the door in their faces. And he continues to ignore the voices of families and businesses in Nevada who oppose his efforts to turn our home into a nuclear garbage dump."

"The phrase 'Yucca Mountain is dead' apparently has not been repeated enough," said Republican Rep. Dean Heller. "Given our nation's dire financial situation it makes little sense to keep spending taxpayer dollars on this ill-conceived project. Instead of traveling to Nevada to investigate a dead project, their time would be better spent looking at the abundance of renewable energy opportunities Nevada has to offer."

About \$13 billion has been poured into the Yucca project since it was selected as the nation's pick for a nuclear dump site back in the 1980s. That barely comes close to the project total though (an estimated \$90 billion), and for the last several years, Yucca has been off the financial table – both because Senate Majority Leader Harry Reid has sought to block any budget that contains a line item for Yucca, and because the president abandoned his plans.

But Republicans in the House picked up the cause of Yucca again earlier this year in their budget bill that's come to be well-known by its bill number, H.R. 1. That legislation, in the exact opposite vein of what Heller suggests, sought to strip federal funding from the renewable energy loan guarantee programs that have gone to back some of Nevada's largest-scale projects, such as the SolarReserve plant at Tonopah, while preserving it for Yucca.

Nevada's delegation eventually went the way of most of the country: its Republican representatives all ultimately supported H.R. 1 in its entirety, and its Democratic representatives all voted against it – but not before everyone involved tried to take a swipe at knocking Yucca funding off the bill. Heller's effort to do so by amendment in the House wasn't successful, as Reid eventually stripped the riders and dollars pertaining to Yucca in negotiations with House Speaker John Boehner.

But those agreements are only as good as the fiscal year they apply to, and with all eyes looking now toward fiscal 2012, Shimkus is pressing anew for Yucca's use.

Until it's either deemed unsuitable as a site by the Nuclear Regulatory Commission or its petition is somehow rescinded -- an act that the Department of Energy tried last year, only to be told such a move would be illegal -- the fight continues to play out between nuclear waste producers and the potential recipients, competing economic analyses, and opposing experts.

But that doesn't mean it's happening on an even keel. Expert inquiries and fact-finding missions in Congress are never a purely objective matter – in any congressional hearing, for example, nine times out of 10 its the case that the majority of experts invited to testify on an issue are in agreement with the majority side's point of view.

Tuesday's fact-finding mission to Yucca had similar evidence of such swing: Shimkus' delegation turned down an offer from state agencies to send technical experts to present Nevada's point of view to the delegation.

Those experts likely would have pointed out some of the following concerns. Yucca is an active seismic zones, with dozens of earthquake fault lines crossing the site -- and while an average earthquake wouldn't likely pack enough force to cause a disaster on the order of Japan's Fukushima plant, many Nevadans are less willing to take a chance on even a fraction of that fallout with the memory fresh in mind.

There are also serious concerns about transportation of waste to and from the site. Those concerns have led Shimkus' fellow Illinoisian Dick Durbin, a former booster of Yucca who serves as Reid's whip in the Senate and also happens to hail from Shimkus' district, to call for increased attention to on-site storage and reprocessing at nuclear plants.

The era when it will make economic sense to reprocess spent fuel is likely still several decades off, according to a team of MIT scientists who released a study about nuclear storage the same day as Shimkus' delegation toured Yucca. But the idea of a repository, they argue, isn't.

MIT's Nuclear Fuel Cycle Study Advisory Committee, five members of whom sit on President Obama's Blue Ribbon Commission on nuclear waste that's exploring alternatives to Yucca, released a study Tuesday urging the adoption of a "centralized interim storage" facility -- one which would hold onto spent fuel for about 100 years, until such time as it would make sense to harvest it again for energy.

Where that would be -- since the panel isn't recommending simply storing the product at the sites themselves -- isn't clear. But the recommendation: to store waste in small dry casks that would take up less than 300 acres of space, in an area with low population density -- sounds a lot like Yucca.

The idea of an "interim" storage facility wasn't on the table when Yucca was selected as the country's nuclear destination site in 1987, and should the march of progress go along as predicted, that suggests that nuclear waste would be sitting in a centralized facility for a lot less time than the infinite timeline associated with a dumping ground.

But that doesn't take care of the transportation concerns, nor the other hurdles to re-gearing Yucca to eventually become a reprocessing facility; an avenue some Nevadans, including Republican Rep. Joe Heck, have recommended pursuing as an engine of future job creation. Most crucially: all but a handful of the reprocessing plants in the world depend on a plentiful supply of water, a resource Nevada hasn't got. While designs that rely on cooling metals instead are in the works, they are still decades off themselves; meaning any turn toward reopening Yucca, even on an interim-only, reprocessing basis, would be a deal made on far-off economic and scientific projections that may not come to fruition.

Given that harsh immediate reality, most Nevadan leaders are remaining adamant that the efforts now afoot to revive the Yucca site are pointless and spendthrift.

"As long as I am the majority leader of the United States Senate, this ill-conceived project will never see the light of day and we will never truck nuclear waste through Nevada's neighborhoods. It's time to move on and work together to find safer, more cost-effective solutions," Reid said, deriding Shimkus' visit as a "publicity stunt."

Shimkus' office did not immediately return a call Wednesday to divulge what Tuesday's fact-finding mission to Yucca mountain revealed; we'll update this blog later today when we're able to connect with his staff.

But it's highly unlikely he'll be able to convince Nevada's lawmakers he learned anything worthwhile.

"The only meaningful impact of this trip is the money these lawmakers are spending at Las Vegas hotels and restaurants," Reid said.

## **Spring Break At Yucca (LVS)**

### **A congressional junket shows the foolishness of plans for nuke waste dump**

Las Vegas Sun, April 28, 2011

As part of his "investigation" into President Barack Obama's decision to shut down the Yucca Mountain project, Rep. John Shimkus, R-Ill., led a congressional delegation to Nevada on Tuesday to tour the site.

Shimkus, chairman of a House subcommittee that oversees nuclear waste, said the administration has "illegally closed Yucca Mountain." He points to a law that pushed the nation toward building a nuclear waste dump at Yucca Mountain, 90 miles northwest of Las Vegas. The administration is trying to withdraw an application before the Nuclear Regulatory Commission, the agency tasked with determining whether a nuclear waste dump is built there.

The government has spent a quarter of a century trying to prove that Yucca Mountain is a good place to put nuclear waste, but all the site has proven to be is a money pit. After spending more than \$13 billion, all the government has is a massive hole in the ground. It would takes billions more to complete the project, and that would be a waste. Yucca Mountain is an unsuitable site and the plans to send waste there are dangerous.

Shimkus is doing the bidding of the nuclear power industry, which wants to turn Nevada into a nuclear waste dump. His complaints about the administration's actions are laughable. Should Congress really continue to support a failed project, especially in this era of budget cutting? And if he's concerned about legality, he should know that Congress recently approved a plan that zeroed out funding for Yucca Mountain. After all, he voted for it.

The trip to Yucca Mountain is nothing more than an expensive junket to Las Vegas. Democrats in Congress, including Rep. Shelley Berkley, D-Nev., urged Shimkus not to go. Rep. Henry Waxman of California, the top Democrat on the Energy and Commerce Committee, said the Energy Department estimated that the tour could cost as much as \$200,000 because of the expenses of reopening the tunnel into the mountain, as well as restarting various equipment.

In an interview with the St. Louis Post-Dispatch, Shimkus dismissed the Energy Department's calculations, saying the cost was overblown. He unbelievably said it wouldn't even be necessary to go inside the tunnel.

Shimkus and his colleagues scheduled a meeting with officials in Nye County, apparently to address what he said were "significant concerns" about the site's shutdown. There was, however, no meeting scheduled with opponents of the dump who represent the majority of Nevadans. Shimkus wouldn't want to "investigate" that, now would he?

Instead, he and others beholden to the nuclear power industry in Congress continue their foolish push to open Yucca Mountain. They say there is no evidence proving that the site isn't scientifically sound. That's only true if one listens to the nuclear power industry, which argues that Yucca Mountain is a safe and out-of-the-way place to put 77,000 tons of deadly radioactive waste.

Here's what Shimkus missed on his tour: Yucca Mountain isn't really a rock-solid mountain. It's a porous volcanic ridge in a seismically active area incapable of containing nuclear waste for a prolonged period. And if 90 miles away from Las Vegas is the middle of nowhere, why not put it in some mountain a similar distance from Washington? It would make it easier to haul the waste.

As experts have said for years, it makes more sense to leave the waste on site at nuclear power plants, where it could safely be stored in solid steel-and-concrete containers called dry casks, while the nation figures out a viable long-term plan for nuclear waste.

That would be safer and quicker than having a dump at Yucca Mountain and it would undoubtedly be cheaper. And it would save Shimkus from any further investigation.

## **Legislation Paves Way To New Iowa Nuclear Power Plant (QUADCITY)**

By Mike Wiser

Quad-City Times, April 28, 2011

The Iowa House gave the go-ahead Tuesday to legislation that helps pave the way for a new nuclear power plant in Iowa.

Whether MidAmerican Energy will decide to build a plant is not a done deal, but its ratepayers would be on the hook to help cover the cost of nearly all facets of the pre-planning and construction of a new nuclear facility, even if the plant is never built.

The legislation allows MidAmerican Energy to recover "all prudent preconstruction and construction costs incurred," regardless if it is completed.

Proponents of the legislation said without those assurances, the utility company would be hard-pressed to find investors in the project, which would leave the state behind as it moves toward energy independence.

The 68-30 vote came after 5 1/2 hours of debate. If built, the cost of construction is expected to be between \$1 billion and \$2 billion and create 500 construction jobs. Operation of the plant, if built, is expected to create 300 jobs.

"This is a huge step for Iowa, and it is a huge step if we believe we want to grow the great state of Iowa," said Rep. Chuck Soderberg, R-Le Mars, chairman of the House's commerce committee and floor manager of the bill. "If Iowans, if businesses are expected to stay here, we need to provide them with power."

The legislation was controversial at the start, but became more so after the March earthquake and tsunami in Japan which damaged the reactors at the Fukushima Daiichi nuclear plant.

On the heels of that disaster, several lawmakers pushed for at least a year of study before moving forward with a bill that sets the stage for a new nuclear facility in Iowa.

House members tried the same tactic Tuesday, offering several amendments that called for outside studies and independent reviews of the state's power needs and the potential facility. House members also pointed to legislation passed that year that called for a three-year study of the state's power needs, which has not been turned in.

"Why are we going forward without the information we need?" said Rep. Mary Mascher, D-Iowa City. "The irony that this is the 25th anniversary of the Chernobyl tragedy is not lost on me."

Pocketbook issues also dominated Tuesday's debate. Soderberg stressed that the bill doesn't allow the utility to raise rates. Those decisions are still made, he said, by the Iowa Utilities Board.

That assurance wasn't enough for all House members. Rep. Anesa Kajtazovic, D-Waterloo, moved an amendment that would cap rate increases at 1 percent per year by MidAmerican.

"I know there are people back home that support nuclear energy as part of a comprehensive plan," Kajtazovic said. "But they don't support an open checkbook." The amendment failed on a largely party-line vote.

Ahead of the debate, Friends of the Earth released a SurveyUSA poll showing 75 percent of Iowans oppose the legislation to permit the electricity rates of MidAmerican Energy customers to be increased now to pay for future construction of a nuclear reactor.

"The results are clear, Iowans simply do not want their rates increased by MidAmerican to finance nuclear reactors," said Damon Moglen, climate and energy director at Friends of the Earth. "Iowans have not been duped — they're not going to pay for MidAmerican's boondoggle. On top of being dangerous for the public and for the environment, nuclear reactors are just too costly and risky an investment."

Soderberg responded saying "I know what the survey said, I would have liked it to continue and have asked 'How many Iowans would like to spend \$800 million on old, outdated (coal) plants?' " he said. "Not many, I don't think."

AARP also opposed the legislation, citing the potential cost to its members, older Iowans, many who live on fixed incomes.

"AARP is concerned about this legislation, not because of the question of nuclear power, but because we oppose raising rates for consumers already struggling to afford their utility bills for a plant yet to be built, where we don't know the actual cost to build, and may or may not even be built in Iowa," the organization said in a statement.

The results of SurveyUSA's poll of 600 Iowans are available at:

[www.surveyusa.com/client/PollReport.aspx?g5c522d85-fd2e-47da-8719-fdac0b296cb6](http://www.surveyusa.com/client/PollReport.aspx?g5c522d85-fd2e-47da-8719-fdac0b296cb6)

The legislation now moves on to the Senate.

## **No More Nukes Demo In Menlo Park, CA : Indybay (INDYMEDIA)**

By Mei Bo Chan

[Bay Area \(CA\) Indymedia](#), April 28, 2011

Activist older women performed street theater called: "New Trends in Nuclear Radiation Wear for SF Bay Area Fashionistas" with a catwalk of "nuclear radiation protection wear". The theme of their vignette: nuclear "protection" wear doesn't protect anything!

They were joined by community members living in or near Menlo Park, some of whom read about the anti-nuke demo on indybay while others found about it via the Nuclear Information Resource Center website (see link here). One local resident came by to hold a no-nuke sign who had heard about the demo on corporate TV news this morning.

Menlo Park is home to the USGS Science Facility and the Raging Grannies say: listen to the REAL scientists at USGS—their literature is peer-reviewed. The scientists at the US Geological Survey know: the severity of earthquakes can NOT be safely predicted as PG&E would have us believe!

The Grannies spoke and sang for camera and video to remind the public to help get the message to the US Nuclear Regulatory Commission: PG&E owns the nuclear facility at Diablo Canyon and its motive is PROFIT, not safety. Don't forget that PG&E is the same company that brought us the San Bruno disaster! Last month the Grannies talked to some USGS employees; they are unhappy that PG&E is spewing BS statistics the way Fukushima is spewing radiation.

## **"No Nukes" Street Theater/Fashion Show On Anniversary Of Chernobyl (INDYMEDIA)**

By Sophie T. Hans

[Bay Area \(CA\) Indymedia](#), April 28, 2011

On the 25th anniversary of the Chernobyl nuclear disaster, the Raging Grannies performed street theater called: "New Trends in Nuclear Radiation Wear for SF Bay Area Fashionistas" with a catwalk of "nuclear radiation protection wear". The theme of their vignette: nuclear "protection" wear doesn't protect a thing!

The Raging Grannies performed on a beachside stage at the SHUT DOWN DIABLO NUCLEAR PLANT rally earlier this month in San Luis Obispo County.

Starting shortly after the Fukushima catastrophe, the Grannies were on the streets demanding that the Nuclear Regulatory Commission wake up to reality.

Today's action in Menlo Park, California was not the first Raging Granny response to the Japan disaster, and it won't be the last. Today the Grannies remembered the victims of nuclear energy in Chernobyl, in Fukushima, and around the world.

Twenty-five years after the Chernobyl nuclear disaster, lessons are still being learned about the long-term physical and psychological effects of that accident. According to the Union of Concerned Scientists the number of excess cancer deaths worldwide will be in the tens of thousands. Yesterday's event in Menlo Park was playful and fun, with a fashion show that drew the attention of a cafe lunchtime crowd, yet at the same time the message was serious. Granny Elyn O'Toole expressed Raging Granny sentiment when she sent an amplified message to the gathered crowd. She called upon people to remember the victims of the nuclear industry from Hiroshima to Fukushima ... and to work for a nuclear-free future.

## **25 YEARS AFTER CHERNOBYL, CHILDREN PAY A TRAGIC PRICE (ECMCA)**

By Miriam Raftery

East County (CA) Magazine, April 28, 2011

They are the tiniest victims of the world's worst nuclear disaster: the children of Chernobyl. Yet few have seen their photos or heard their story, even as the world marks the 25th anniversary of the Chernobyl crisis this week. If you haven't seen these shocking images, view them here: <http://inmotion.magnumphotos.com/essay/chernobyl>.

Now imagine this happening to the children of San Diego, which lies within 50 miles of the San Onofre nuclear power plant. Or having our city evacuated for our lifetime and beyond, as residents near the Fukushima, Japan, reactors are now enduring.

These children have been hidden away from the world in an institution, horribly deformed, unable to care for themselves. Media reports on Chernobyl's impacts focus almost always on deaths from radiation. But the living hell these young victims have been left in merits concern from us all.

This week marks the 25th anniversary of the Chernobyl nuclear disaster in the former Soviet Union. It comes on the heels of the Fukushima nuclear crisis in Japan, recently upgraded to a level 7, the worst rating given on an international scale and the same level as Chernobyl.

Granted, there are key differences in reactor designs that prevented the sort of massive explosion that occurred at Chernobyl, spreading radioactivity across much of Europe. But Fukushima has six reactors, not two. Fukushima's reactors are on the coast, and no way of stopping radiation from leaking into the sea has yet been found. Amid recent safety concerns raised over San Onofre reactors north of San Diego, the question must be asked: Could a disaster on the level of Chernobyl or Fukushima ever happen here?

Chernobyl cast fallout for 10 days over 77,220 square miles, the Washington Post has reported. It released 400 times more radiation than the atomic bomb dropped on Hiroshima. A New York Times piece indicates 6 million people were impacted. Washington Post reports that 350,000 were displaced forever from their homes, contaminated for centuries by radiation. Another 5 million are still living in areas covered by radiation. Thirty-one workers at the plant died immediately battling the fire and another 29 soon after of radiation poisoning and burns. But the United Nations estimates 9,300 would die of cancers caused by radiation. Greenpeace estimates the real toll is 200,000 and accused the U.N. of whitewashing long-term affects to restore trust in the nuclear industry.

The highest estimate, however—985,000 excess deaths between 1986 and 2004 from radioactive contamination— comes not from an environmental activist group but rather a respected American scientific journal; the report, *Chernobyl: Consequences of the Catastrophe for People and the Environment*, was published in the *Annals of the New York Academy of Sciences*.

As of 2006, over 6,000 cases of thyroid cancer in children exposed during the Chernobyl accident had been reported. Other health problems have included increased levels of Downs syndrome, chromosomal aberrations, neural tube defects, anencephalics and other severe and sometimes bizarre birth defects. There are also lower life expectancies for adults and impacts on fertility in areas severely impacted.

No one knows what the long-term consequences will be for the people of Japan. Though likely less severe than Chernobyl, the 50-mile radius exclusion zone means many people will never be able to go home. Thyroid cancers are likely to occur, experts agree. The impacts of radiation exposure on pregnant women and their unborn babies cannot yet be known, nor can the long-term impacts of exposure such as cancers over time.

The operator of San Onofre maintains that it is safe and that a nuclear disaster is unlikely to occur due to engineering standards that supposedly will withstand a 7.2 quake and 30-foot tsunami. But there are spent fuel rods on site – as in Japan— raising the prospect of not only leaking reactors in a crisis, but release of deadly plutonium from the fuel rods.

Japan's reactors were supposed to be engineered to prevent a catastrophe from occurring, but those plans failed.

The best engineers in one of the most technologically advanced nations on earth failed to plan reactors to withstand a 9.0 quake and tsunami several stories high. So some skepticism of pledges made by plant designers and operators is clearly reasonable.

Employees of California's nuclear reactors, Diablo Canyon and San Onofre, have come forward to say they were fired or threatened into silence after complaining of safety violations. Close calls have already occurred. Recently, California Senator Dianne Feinstein called for a new safety investigation after visiting San Onofre—and observing some disturbing issues.

How severe would a nuclear accident at San Onofre's aging reactors potentially be?

Even an accident on the scale of Fukushima left a 50-mile radius contaminated and likely uninhabitable for a century or more. A 50-mile contamination zone around San Onofre would turn most of San Diego into a nuclear wasteland—along with large swaths of Orange County and Riverside County. That includes many places in East County, too. It would destroy our tourism and our economy, apart from the massive health consequences.

Are the risks too high?

Some say yes. Protesters are planning to turn out at an April 28 hearing in San Juan Capistrano, where the Nuclear Regulatory Commission will release a report with new safety findings on the facility at San Onofre.

San Onofre's operator, Southern California Edison, has applied for renewal of the license. Those with concerns about a nuclear facility on an earthquake fault in a heavily populated area contend that state regulators should consider the worst-case scenario and reject the application. Proponents of nuclear contend the power is needed and insist the facility won't fail.

While challenges in shifting away from nuclear power remain, California's Legislature just enacted legislation signed by Governor Brown to require utilities to obtain larger portions of their energy in the future from clean, renewable sources such as solar, wind and geothermal. Thus a shift to energy sources with less long-term potential for harm is in the works, and once such sources are operational, shifting away from nuclear power may be feasible without reducing total power usage.

While no technology is without drawbacks, such as cost or environmental impacts, the negative consequences from other energy sources long-term are far less than from a nuclear disaster which could turn our region into a nuclear wasteland.

## **Riverland Speaker Finds Similarities In Nuclear Disasters (POSTBULLET)**

Post Bulletin, April 28, 2011

Twenty-five years ago today, an explosion and fire at the Chernobyl nuclear power plant released huge quantities of radioactive contamination into the atmosphere.

A routine test, performed about 1:30 that morning, resulted in a power surge, which apparently caused an increase in fuel temperature and massive steam buildup, leading to a rapid increase in steam pressure.

Already identified as an unstable reactor because of its low energy levels and lack of a containment vessel, an explosion was imminent. A second, more powerful explosion occurred about two or three seconds after the first.

Perhaps most troubling of all, though, was the government's response: silence.

Russian officials denied any trouble when nuclear workers in Sweden questioned them. Atmospheric detectors were picking up increased levels of radiation.

Finally, three days later, a four-sentence statement was issued by a newscaster on behalf of the Soviet Council of Ministers.

Therein may lie the difference between the Chernobyl disaster and the Fukushima Dai-Ichi nuclear incident following the earthquake and tsunami March 11 in Japan.

Alan Bode, an associate professor and radiography program director from St. Catherine University, spoke Monday at Riverland Community College, sharing information and experiences from his trip to the Chernobyl site in 2006.

In this age of instant information, the news of the disaster in Japan was out immediately.

Despite that, Bode said, "there's still so much bad information out there in Japan."

Sandy Nauman, director of Riverland's radiography program, has Bode visit every other year or so, she said.

"We study radiation biology and the effects of radiation," she said of the students in her program, many of whom will go on to perform MRIs, X-rays, sonograms and CT scans.

Sitting in on the presentation Monday was a student in Riverland's collision repair program.

His name is Vadym Bezkrvnyi, and he was born in Ukraine 24 years ago. Though his family was a seven-hour drive away from the Chernobyl site, it was — and still is — an ever-present part of their lives.

"I heard about it all the time," he said. "My mom told me that lots of women were really afraid they'd give birth to something strange."

Now, Bezkrvnyi said, "there's not great fear." Still, he goes on to say, his family has a Geiger counter within arm's reach.

"If you want to consume something, you wash it thoroughly," he said of fresh fruits and vegetables.

His family remains in Ukraine; Bezkrvnyi came to the United States for an education two years ago. He hopes to obtain a work permit and stay here.

He agrees with Bode that the worst may be yet to come for the Japanese people, that some areas near the nuclear site may never be repopulated, that the effects will continue for decades. The radiation contamination depended on which way the wind blew; radiation levels were not shared with the public.

Construction of a new safe confinement zone in Chernobyl is still at least five years away, at a cost of more than \$1 billion. The disaster cost Ukraine both economically and environmentally, not to mention the human toll.

"It reminds me of the same situation we had," Bezkrivnyi said about the Fukushima accident, "of the government trying to hide something.

"The people in my country are really sorry for them."

## **Board To Rule On UniStar Issue (SOMD)**

By Meghan Russell

Southern Maryland Newspapers, April 28, 2011

The three-judge Atomic Safety and Licensing Board panel conducting the proceeding on the Calvert Cliffs Nuclear Power Plant's third reactor application issued an order last week regarding the issue of foreign ownership.

In a report released by the ASLB, the US Nuclear Regulatory Commission's judicial panel, the judges ask both UniStar Nuclear Energy, the company hoping to obtain a license for CC3, and environmental activists who oppose UniStar's application to show cause by May 9 why the panel should not grant summary disposition on the contention involving the foreign ownership issue, deny the authorization to issue the license and terminate the proceeding. After that, the parties have until May 23 to respond to the arguments contained in each other's filings, and from there the ASLB will determine whether a hearing on the issue would be appropriate.

In other words, NRC spokesman Neil Sheehan said, "ASLB judges are asking the parties to show cause why the panel should not rule in favor of the intervenors who have raised the foreign ownership question. The judges have indicated they are considering summary disposition, which is essentially dismissal of UniStar's arguments outlining why the proposed corporate structure would satisfy our requirements on foreign ownership."

Currently, UniStar is 100 percent owned by French utility corporation Electricite de France, which is 85 percent owned by the French government. The NRC, which prohibits foreign entities from owning, dominating or controlling US reactors, already stated last month that UniStar's proposed structural plan to negate the foreign ownership issue is unsatisfactory, even though the commission continues to review the other components of the reactor license application.

The issue of foreign ownership is not a factor for Calvert Cliffs' first two reactors as those still are owned and operated by Constellation Energy Nuclear Group, whose parent company, Constellation, was the original other half of UniStar before EDF bought its share last fall.

A spokesperson for UniStar said the ASLB order was triggered by the NRC's statement that the company would have to keep searching for a US partner in order to proceed with obtaining a license for CC3.

"With respect to ASLB, we will respond by May 9 as requested," the spokesperson said.

Michael Mariotte, executive director of the Nuclear Information and Research Service, the group that has filed to intervene in UniStar's license application process with the NRC on the basis of the foreign ownership issue, said this is basically UniStar's "last chance to try to convince [the ASLB] not to rule in our favor" and sees the order as an indication that the ASLB is leaning in favor of the NIRS.

"There would be no grounds for us to appeal the decision either way; a ruling 'in favor' of the company would not dismiss the issue, it would simply leave it for a later hearing as currently scheduled," Mariotte said. "And obviously we would not appeal a decision to deny UniStar a license and end the proceeding. ... To get over this hurdle, UniStar will have to have some sort of ace up its sleeve," preferably a sudden new US partner. Without one, "I don't know what UniStar can do at this point," he said.

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## **Earthquakes And Nuclear Power | Storm Team 8 | WTNH.com Connecticut (WTNH)**

By Darren Kramer And Janet Lopes

WTNH-TV Hartford (CT), April 28, 2011

The crippled Fukushima Daiichi nuclear plant in Japan has re-awakened the controversy at home surrounding the development and use of nuclear power. Nuclear power is often touted as one of the keys to our energy future, but is this energy resource worth the perceived risk?

In 2006, the Connecticut Coalition Against Millstone was vocal in its belief that Millstone Nuclear Power Plant posed a serious threat. Now five years later that argument continues to this day, spawned by the recent events across the globe.

Nancy Burton heads the Coalition and believes Millstone is just as vulnerable as Japan's broken facility.

"I'm here today to talk about Fukushima and whether or not it could happen here at Millstone in Southeastern Connecticut and I am sad to say the answer is very definitely yes," she said at a March 18th news conference. "We at the Connecticut Coalition Against Millstone advocate immediate shutdown of Millstone."

The Dominion-owned plant located at the mouth of Niantic Bay opened in the 1970's. It generates enough electricity to power half a million homes. And when it was built, a power plant spokesperson says they prepared for the worst.

"All kinds of destructive natural phenomenon were looked at including tornadoes, hurricanes, earthquakes," Millstone spokesman Kenneth Holt said. "They looked at historical highs or worst cases for the area and the plants were not only designed to withstand those worst cases, but they have some margins built in so they can withstand some of the worst of the worst cases."

One of those worst cases includes a 6.2 magnitude earthquake. The state's largest recorded quake was a 5.9.

But Millstone detractors point to other concerns, namely Unit 1 which, although decommissioned, is similar to that of Japan's plant.

"Its spent fuel pool is elevated just as the reactors at Fukushima," Burton said. "They are elevated above the reactor and there's no containment separating them from the environment."

"That reactor hasn't operated for more than 15 years so that fuel is very cool right now relatively speaking," Holt said. "As long as we maintain that equipment and keep it cool we would not see problems like we see in Japan right now."

In March of 1979 the Northeast had its very own scare at Three-Mile-Island. A cooling malfunction at the Pennsylvania plant caused a partial meltdown. During those first few days no one was sure what to expect.

"It was scary," Storm Team 8 Meteorologist Dr. Mel Goldstein said. "I was special aid to Gov. Ella Grasso at the time, and it was a Thursday and there was concern at least on the part of her staff, what if Three Mile Island melted down? What would happen in Connecticut?"

Dr. Mel's expertise was called upon to help determine what a meltdown would do to the state.

"A lot of people can predict the weather but to understand the atmosphere is to understand the science of geophysics and our whole environment, and deal with something like Three Mile Island or other nuclear plants really requires all your knowledge.

Everything was considered, even the possibility of a food quarantine, but luckily the situation soon stabilized.

"Fortunately what occurred the water being poured into the reactor was bleeding out some of the hydrogen that was potentially explosive," said Dr. Mel. "Almost in the nick of time we were saved from having a disaster."

32 years later, Gov. Dannel Malloy said he also takes the safety of Connecticut's residents seriously. "I think every reasonable precaution has been taken, and if we set a new standard and something falls into that category of reasonable that will be taken to make sure these nuclear facilities are as safe as they possibly can be," he said.

It's a proactive approach.

"You have to check your systems, you have to drill, you have to be aware of risks," Malloy said.

No matter what mother nature sends our way.

"The (Millstone) facility itself has been built to withstand reasonable challenges that might come at it, for instance a hurricane."

And if Japan's facility is any lesson, "I'm convinced based on everything I've learned thus far that the facility in Connecticut meets a standard well beyond that was previously met by the facilities in Japan."

For those living within view of the plant they aren't leaving anything up for chance, stocking up on potassium iodide pills just in case.

"Oh, we've seen a huge increase," East Lyme First Selectman Paul Formica said. Formica said the day before News 8 spoke with him "there were 200 pills that we gave out - which is probably much more than what we gave out in the last number of years."

## **Thiele Grilled Over Tax Cap (SAGHARBR)**

By Kathryn G. Menu

Sag Harbor (NY) Express, April 28, 2011

A town-hall style meeting convened by New York State Assemblyman Fred W. Thiele, Jr. at Rogers Memorial Library in Southampton last week was meant to cover a number of issues including the state budget, the MTA payroll tax, the future of Southampton College and the safety of the Millstone Nuclear Power Station.

However, with nearly half the two-dozen people in attendance members of various school boards and administrations, the conversation quickly became focused on a proposed two-percent tax levy cap – a cap that Thiele said will likely be approved in some form this year and that school districts and local governments alike need to begin preparing for.

The proposed cap currently in front of the state legislature has the full support of Governor Andrew Cuomo, who has made it one of his top priorities in his inaugural year. The state senate has already approved it.

The law would cap the amount of money – not the tax rate, individual tax bills, or spending – that any school district or local government can collect in property taxes at two percent or the rate of inflation, whichever is less.

“Which means this year if you collected \$100, all you could collect next year would be \$102,” explained Thiele.

School districts and libraries – the two entities affected by the cap which require voter approval for their budgets – can ask voters to override the cap, said Thiele, but would need a 60 percent vote in favor of any spending plan that would increase the tax levy by more than two percent.

If they fail to gain support after two budget votes, they are then limited to a zero-percent increase in the amount of taxes they collect from their district.

On the town or village level, said Thiele, an override can occur if four of five board members approve it.

If adopted the tax levy cap would take effect in 2012.

Thiele said while the assembly is debating the bill, it has a good chance of being approved, in part, because a majority – many from New York City – appear willing to strike a bargain allowing a cap in return for the continuance of rent control in the city.

“There are those of us, including myself, who feel the governor’s proposal needs some work,” said Thiele.

Thiele said he would like to see the cap tied to a provision that state school aid is increased each year based on the rate of increases in personal income and that no new unfunded state mandates on school districts be allowed once the cap is in place. Thiele said he also will look to cap the cost of existing unfunded mandates, with the state having to pick up the bill on anything beyond that cap.

Thiele added he would like to see school districts able to override the vote with a simple majority, or 51 percent.

“To create a situation where 40 percent of the population can veto what the majority wants is absurd,” said Springs School Board President Chris Kelley.

Kelley added he believes the cap is being proposed as an alternative to the state dealing with the teachers’ union.

“Rather than deal with the true costs, you are telling school districts, ‘You deal with it,’” he said.

“Given the undeniable damage the tax cap will have on East End schools and students, how can you support the tax cap,” asked Walter Tice, a former president of the Sag Harbor Board of Education.

Thiele said he would only support a measure that would institute the cap along with the promise of increased state aid and decreased unfunded mandates, and a return to a simple majority override of the cap.

“We already have a system where the majority approves our budgets,” said Sag Harbor School Board member Chris Tice, questioning why the cap is needed at all if a majority of voters can limit the spending of a school district.

“People support education, but they don’t necessarily support the use of property taxes as a way to fund quality education,” said Thiele.

Thiele added the downturn in the economy has only made it worse and he is looking for a way to continue to provide quality education, but to keep property taxes more stable.

“The property tax cap is a blunt instrument,” he allowed.

Thiele said if he “ruled the world” he would prefer a system where the state provides a basic, quality education to all of its school districts with each district responsible for funding anything additional. However, he said, that scenario is not currently on the table.

Chris Tice said one of the concerns she has is the sense amongst the populace, evidenced by the Governor’s own speeches, that the tax cap will not be as painful for school districts because they have large reserves on hand.

She added the school district has worked hard at becoming more efficient, moving its transportation in-house to save money among other initiatives. To say school districts are not being efficient enough is “insulting,” said Tice.

Thiele agreed that any concept of using reserve monies to offset the tax levy is shortsighted and not advisable as it only provides relief for one year, leaving a school district back at square one the next year.

“In Sag Harbor, we don’t have a large reserve,” said Chris Tice. “We look to build between two and four percent as the state recommends.”

Popularity: 1% [?]

## **Editorial: Nuclear Energy’s Still Cleanest (PIERCWIS)**

Pierce (WI) County Herald, April 28, 2011

We all sympathize with the victims of the recent earthquake in Japan. The earthquake, and following tsunami, was devastating. What may mostly impact our country, state and region is how Americans react to the nuclear power problems facing the Japanese.

While those of us in Wisconsin will not be directly affected by radiation from Japan, the disaster has again opened the nuclear power debate.

The truth of the matter is—nuclear power is a very clean, efficient and cost-effective source of energy. As we discovered from the earthquake, nuclear power facilities, however, are not foolproof; things can, and do, go wrong.

According to most experts, however, the modern nuclear facility is about as safe as anything available. Of more concern might be some of the older facilities throughout the United States. Those sites may need some upgrades.

We would hate to see nuclear power, however, taken off the table because of the situation in Japan. After many years of nuclear power being ignored, the energy source has again been gaining favor in both conservative and liberal camps. For environmentalists, it is the clear answer to cutting carbon emissions.

The Obama administration has designated \$36 billion in loans available for new reactors in the 2012 budget proposal.

Wisconsin has had a nuclear moratorium since 1983. That came about after the 1979 accident at Three Mile Island. Wisconsin has two nuclear power plants, near Kewaunee and Point Beach on the eastern side of the state. They provide about 19 percent of the state's electricity.

In Pierce County, we are actually closest to a couple of Minnesota facilities—Prairie Island, near Red Wing, and Monticello, just west of Minneapolis.

In Wisconsin, there has been a growing movement to bring nuclear energy back into the picture as an energy option.

With Republicans in charge in Madison, it was expected there could be a movement to lift the statewide ban. Concerns over the Japanese situation, however, will make that job more difficult.

Hopefully, we can learn from the Japanese disaster. When it comes to nuclear energy, we should be able to correct the mistakes that were made in the relatively old facilities in Japan—in fact, most of those changes have already been made in newer nuclear facilities.

Unless we can perfect wind and solar energy quickly, nuclear energy is by far the cleanest and most environmentally friendly, especially when compared to oil, coal and other so-called “dirty” sources.

Tags: opinion, editorials, energy, wisconsin

## **Balgord: Tragedy In Japan (RICHTD)**

By William D. Balgord

Richmond (VA) Times-Dispatch, April 28, 2011

Japan's disaster unfolded in eerie sequence:

- 9.0 earthquake strikes Japan.
- 30-50 foot waves smash inland along the northeast coast.
- Fukushima's reactors flood, beginning a nuclear crisis.

Immediately at onset, carbon control rods dropped into the reactor cores and stopped the fission process. Tsunami waters disrupted diesel-operated pumps sending cooling water to the shut-down reactors that contained radioactive byproducts. Backup battery-operated pumps soon became exhausted. As heat from radioactivity boiled off the water in the containment vessels, bared rods converted steam to hydrogen gas. Escaping gases containing hydrogen caught fire, exploded and blew the roofs off two reactor buildings.

Radioactive waste escaping from a pool holding spent fuel rods spread to the surroundings. Monitoring devices detected minor amounts of radiation as far away as Tokyo, and days later — at barely detectable levels — in North America. Well away from the site, radiation poses no imminent danger, according to Japanese and US agencies. Investigations continue of contamination into the bay from overflow water used to cool the exposed reactor cores.

Despite official assurances, TV networks featured Fukushima as the lead story for nearly two weeks, feeding hysteria among Japanese and US citizens. Within days stocks of potassium iodide disappeared from drug stores on the US West Coast, purchased by consumers expecting a radioactive cloud that never arrived.

Saturation coverage confused viewers with footage showing devastation from the earlier earthquake and tsunami. That coverage seemed to connect Tokyo Electric Power Corp. (TEPCO), the operating utility, with thousands of deaths and damage into the billions caused during the primary event — which was simply not true.

How will the Japanese tragedy affect the United States? Nuclear safety is again being questioned by critics — and politicians. Older plants may be abruptly shut down despite the fact nuclear power currently accounts for more than 20 percent of

our electricity, which cannot be replaced quickly. Advanced nuclear technology stands ready but may be forestalled by federal policy. New designs operate water-free, preclude hydrogen explosions and limit potential escape of radioactive materials, if containment were breached in a terrorist attack.

There are fundamental differences in safety standards between nuclear plants in Japan and the United States. Of 104 facilities in the US, only two on the Pacific coast are considered vulnerable to tsunamis. By contrast, Japanese plants are located on tectonically unstable land. Most US plants, like those in Virginia's Louisa and Surry counties, are built on underpinnings having very low seismic risk, according to the NRC.

The electric utility industry bends to those who advocate for "renewable energy" then find fault with every alternative. Neither wind power nor solar is immune to the vagaries of weather and season. Each must be backed up with coal-, gas-fired or nuclear plants. Over-dependence on renewables is unacceptable because of the potential for brownouts and blackouts during peak demands of winter and summer.

The media equate "reactor meltdown" with worst-case core melting that might penetrate the containment vessel and contaminate the environs — as portrayed in the movie "China Syndrome." Postmortems after the Three Mile Island (TMI) event — the inspiration for the film — showed corrosion had proceeded barely 5/8 of an inch into the 6-inch-thick steel wall of the inner containment vessel. The partially molten core never breached the steel or touched the outer 6-foot concrete barrier. No deaths of plant workers or nearby residents could be attributed to the release of radiation from the facility, despite adverse publicity.

Chernobyl contrasts starkly with TMI. The Soviet-built nuclear facility featured an inherently faulty design (lacking containment buildings) that, abetted by operator error, led to catastrophic failure. Chernobyl used a graphite design that resulted in fires that contaminated a wide area of the Ukraine. Engineers later described Chernobyl as "inherently unstable," a plant designed to fail "un-safely."

US reactors, updated routinely for safety, are two basic types: (1) older boiling-water reactors, and (2) later-designed pressurized water reactors (North Anna and Surry). Both shut down automatically in fail-safe mode.

But objections continue to pour in from anti-nuclear activists. They would delay or prevent replacement of aging plants with new generations of inherently safer and more efficient reactors. If wind and solar power are ever to contribute more than their current 1.5-2 percent to the US grid, safe and dependable nuclear power will be needed for wherever — and whenever — the wind doesn't blow and the sun doesn't shine.

## **Lawmakers Drop Millstone Reactor Tax, But Alternative Still Would Hit Company Hard (HARTC)**

Hartford Courant, April 28, 2011

Facing pressure from opponents, lawmakers dropped a controversial tax plan Wednesday that would have led to a levy of an estimated \$330 million on the two Millstone nuclear reactors.

Instead, leaders of the legislature's energy and technology committee, which had approved the tax in a divided vote last month, unveiled a proposal that would tax generators of electricity at different rates — with Millstone still by far the biggest payer.

The energy committee's co-chairs, Rep. Vickie Nardello, D-Prospect, and Sen. John Fonfara, D-Hartford, said their proposed tax would not lead to higher electric rates — a position the industry said was dead wrong.

Power generated by coal plants, oil and natural gas would pay progressively lower rates, in that order. Overall, the tax could raise between \$72 million and \$150 million, the committee's co-chairs said Wednesday — far less than the original tax.

"It's up to the leadership in the governor's office to determine which proposal they choose," Nardello said.

Dominion Resources, the Millstone owner, would pay more than 90 percent of the tax, although Millstone accounts for about half of the power generated in Connecticut.

The reason: The cost of generating electricity with nuclear power is much less than other fuel sources, and does not fluctuate, Fonfara said. The nuclear plants should pay a higher tax rate, he and Nardello said, because their profits are very high under the restructured generation system in place in the region.

Dominion lambasted the committee's new proposal and said the tax "is nothing more than a regurgitation" of the previous plan.

"Dominion has invested more than \$600 million into Millstone since purchasing the station in 2001, improving the reliability and overall margin of safety," said Daniel A. Weekley, Dominion's vice president of government affairs "This is a strange way for these legislators to treat a company that has grown its business."

Dominion had threatened to close the Millstone plant under the previous plan.

The tax stems from a "windfall tax" proposal pushed by then-Attorney General, now US Sen. Richard Blumenthal, two years ago.

Sen. Andrea Stillman, D-Waterford, an opponent of the original plan, panned the committee's latest offering. "They would still burden one company doing business in Connecticut with an unfair share of a generation tax and simultaneously create an untenable risk of having that tax passed along to Connecticut ratepayers," Stillman said.

Gov. Dannel P. Malloy has his own plan, a two-year levy that would tax all sources of electric generation at the same rate. The tax would expire in 2013 and raise about \$72 million a year. Malloy had said he would veto the earlier energy committee plan, and in response to their new proposal, Malloy thanked Nardello and Fonfara for their ideas, but said "he remains committed to the proposal agreed upon with leadership last week."

But Fonfara said Malloy's flat tax "will be passed on to electric ratepayers, unintended as that will be ... Out of the \$72 million tax, \$50 million will be paid by Connecticut ratepayers."

"Our proposal is structured differently. It limits the tax to oil, coal and nuclear generation facilities, which — because of the existing market rules — cannot pass the tax on to consumers," Nardello and Fonfara wrote in a recent Courant editorial.

Weekley added, "As the governor has stated and we agree: An energy tax policy that is more uniform, where any increase is shared by all generators, is the right policy."

## **Energy Co-chairs Try To Revive Tiered Electric Generation Tax (CONNEMIR)**

By Jacqueline Rabe

Connecticut Mirror, April 28, 2011

The co-chairs of the legislature's Energy Committee Wednesday introduced a scaled-back version of their plan to tax electricity producers on the basis of how the power is generated, but their new proposal drew little enthusiasm from legislative leaders and the Malloy Administration.

Gov. Dannel P. Malloy and Democratic leaders already have agreed on a budget that includes an across-the-board flat tax on energy generated through nuclear, natural, coal and oil. It is expected to bring in \$72 million a year in new revenue.

"We thought that it was fair and would likely stand [legal and legislative] challenge and an appropriate way to tax the industry. Obviously there are those that disagree; that is why they are proposing alternatives," said Ben Barnes, Malloy's budget director. He said the administration is committed to passing the agreed upon budget.

Sen. John Fonfara and Rep. Vicki Nardello: 'We are hopeful that they will understand why we feel so strongly about this'

Rep. Vickie O. Nardello and Sen. John Fonfara, co-chairs of the Energy Committee, have been pushing for more than a month for a bill to create a tiered tax structure based on the source of energy production. They say that because nuclear plants produce power more cheaply than other generators but charge comparable prices, nuclear production should bear the brunt of the generation tax.

Their revised proposal released Wednesday would raise between \$67 million to \$134 million from a nuclear generation tax, while the other energy sources would be taxed no more than \$10.4 million a year.

"We believe a flat tax.. will cause electric rates to rise," said Nardello.

At one point the room in which she was explaining the proposal went dark. Nardello said she's not taking that as a sign of her proposals prospects.

"I think that there will be the opportunity to change this if there's a consensus built around it," said Nardello. "We are hopeful that [leaders and administration officials] will understand why we feel so strongly about this."

But Senate and House majority leaders were reluctant Wednesday to commit to making such a major change to the tax package without the support from the Malloy Administration.

"We are in agreement with the governor's office with the budget we have right now any substantial chances like this would require more discussions with his office," said House Majority Leader Brendan Sharkey, D-Hamden. "That particular conversation about changing the energy tax has not happened... What is out of the committee is the status quo right now and what we are hoping to pass."

"Obviously we came to a meeting of the minds with the governor last week so I don't know if the possibility of revising that part of it," said Senate Majority Leader Martin M. Looney, D-New Haven, said during an interview. "When you come to an agreement, obviously all parties need to come to an agreement to any changes."

Lt. Gov. Nancy Wyman also was non-committal to whether the Energy Committee leaders' proposed changes have a chance of making it into the budget.

"I have not seen that at all," she said, adding she is confident legislators will be moving forward with the agreed upon budget soon.

Dominion, which owns the Millstone Power Station, has threatened to close the nuclear plant if a tax targeting the nuclear industry pass, and said it would result in increased bills for their customers. Dominion is the largest generator in the state, with 63,505 customers, or 14 percent of the market.

"An energy tax policy that is more uniform, where any increase is shared by all generators, is the right policy," said Daniel A. Weekley, a spokesman for Dominion said. "It's disappointing that a few legislators continue to pursue these attempts without really focusing on core energy issues in the state such as why Connecticut consumers pay 20 percent more for electricity than other New England states."

The state's largest business group also are critical of the tax.

"Why are we talking about taxing energy when we are all in agreement it's too expensive to begin with? Our members are extremely concerned about the cost of energy," said Eric Brown, with the Connecticut Business and Industry Association.

## **Malloy Sticking With Energy-tax Plan (NLDAY)**

New London (CT) Day, April 28, 2011

Hartford

- Gov. Dannel P. Malloy stood firm Wednesday on his plan for a new flat tax on all major forms of electricity generation, despite claims by fellow Democrats that his approach would hurt ratepayers and fail to generate the money expected.

The temporary, two-year energy-generation tax in Malloy's budget is projected to collect \$72 million annually by applying a flat tax - 0.0025 cents a kilowatt hour - on energy from nuclear, coal, natural gas and oil sources. About \$40 million would come from just the Millstone Power Station in Waterford, the sole operational nuclear facility in Connecticut. Millstone says it is willing to absorb the cost.

However, the co-chairs of the legislature's energy committee say they know a better way to tax the generators.

State Rep. Vickie Nardello,

D-Cheshire, and Sen. John Fonfara, D-Hartford, presented their alternative plan at a news conference Wednesday morning and urged the governor and General Assembly leaders to support it.

They said their proposal, which offers a choice of three tiered levels of taxation, would raise more revenue for the state than the tax in Malloy's budget and, most crucially, wouldn't pass the higher costs along to ratepayers.

The co-chairs claimed that if Malloy doesn't change how his tax is structured, \$50 million of the \$72 million tax would get passed on to ratepayers, costing the average household \$1.50 more per month.

Malloy's tax would also raise nearly \$25 million less than projected for state coffers because "the generators will not run as often, and therefore that revenue will be lost," Fonfara said.

Malloy thanked the co-chairs for their efforts but said through his spokeswoman that he prefers the plan that's already in his budget proposal.

"The governor has asked and been very forthright about the shared sacrifice he is asking of everyone," Colleen Flanagan, Malloy's spokeswoman, said of the potential rate increase. "He needs to make the tough decisions to get our state back on track."

Nardello was not happy with the governor's stance.

"I would ask the governor to reconsider his position, since their proposal would require electricity rates to rise," she said.

While laying out the details of their alternative proposal earlier in the day, Nardello and Fonfara suggested that one must momentarily ignore the principles of Econ 101 to grasp how energy markets work in Connecticut.

"Energy markets are unlike any other markets. ... They do not follow the normal rules of supply and demand," Nardello said, continuing later, "This is an artificial market and therefore is subject to rules that you and I and John and everyone standing here never dreamed of."

That said, the two legislators argued that the problem with Malloy's flat-tax approach is that it's too costly for energy generated from natural gas. Because the price of natural-gas energy determines the rate set for all energy generators in Connecticut, too high a rate on natural gas could lift all prices to a higher threshold.

"If you tax the generator that sets the price, then the tax will be passed on to the ratepayer," Nardello said.

Yet if one goes easy on natural gas - as their proposal does - hundreds of millions of dollars can then be extracted from competing generators, such as from Millstone, without prompting an increase in rates.

There are three options in Nardello and Fonfara's alternative scheme. One raises \$72 million in annual revenue, the second \$100 million and the third \$150 million. Nuclear generation would be taxed at the highest rate in each of the three options, followed by coal and then oil-generated electricity. Natural gas would be taxed at the lowest rate.

State Sen. Andrea Stillman, D-Waterford, said in a statement that the co-chairs' plan was "an anti-business initiative that unduly targets the Dominion Millstone Power Station."

Fonfara said he considers dead the energy committee's earlier tax proposal that would have raised about \$340 million a year from generators, of which \$332 million would come from Millstone. That proposal prompted Millstone's owner, Dominion, to say that it might shut down one or both of the running reactors for economic reasons.

A Dominion spokesman said the lowest tier in the co-chairs' new proposal would increase the firm's annual tax payment to \$68 million, or \$18 million more than what is in the governor's budget.

"Dominion has invested more than \$600 million into Millstone since purchasing the station in 2001, improving the reliability and overall margin of safety. This is a strange way for these legislators to treat a company that has grown its business," the spokesman, Jim Norvelle, said.

State Rep. Betsy Ritter, D-Waterford, said the co-chairs' latest proposal is as unfair to Dominion as their first.

"This is really a slap on the head to what is for us a mainstay of the economy, and it's really sad to go after (Dominion) like that," Ritter said.

Shares of Dominion, the parent company of Dominion Nuclear Connecticut, which owns Millstone, was up 31 cents Wednesday, closing at 46.06.

j.reindl@theday.com

## **Energy Tax Raises Spectre Of Higher Bills For Ratepayers (NLDAY)**

By JC Reindl

New London (CT) Day, April 28, 2011

This is certain: There will be a new state tax on energy generation.

The only debate now is how that tax should be structured, and whether it would be passed on to consumers as higher electric rates.

"A decision about a tax has already been made," state Rep. Vickie Nardello, D-Cheshire, co-chairman of the legislature's Energy Committee, said Tuesday. "The question is what exactly that tax will look like."

The tax in Gov. Dannel P. Malloy's budget is expected to generate \$72 million a year in revenue by taxing nearly all of Connecticut's electricity producers at the same rate, whether they're nuclear, coal, oil, or natural gas. Solar and other renewable energy sources would be exempt under the temporary, two-year tax.

But some lawmakers and consumer advocates fear that the framework of the governor's tax - an across-the-board tax on all major forms of generation - would result in eventual rate increases.

This is because the price of energy produced from oil or natural gas typically determines the rate set for all energy generators. So if Connecticut were to levy higher taxes that affect electric generation from natural gas, it could lift all prices to a higher threshold.

"We do not believe the (\$72 million) that's accounted for in the governor's budget is the way to go because we do believe that will get passed along to the ratepayers," John Erlingheuser, AARP Connecticut advocacy director, said at a news conference Tuesday on the topic of electric rates.

An alternative and more controversial proposal, backed by Nardello and fellow co-chairman Sen. John Fonfara, D-Hartford, has passed their energy panel but isn't in the latest version of the governor's budget.

That measure would generate \$340 million by taxing nuclear, oil and coal generation, though leaning heavily on nuclear. The Millstone Power Station in Waterford, the state's sole operating nuclear facility, would have to pay \$332 million annually. Dominion, Millstone's owner, has said the tax would force the company to shut down the plant.

Nardello also said Tuesday that she hopes a small, separate and unrelated surcharge tax on electric ratepayers can be eliminated from next year's budget.

Both Nardello and Fonfara indicated Tuesday they are flexible regarding the size of an energy generation tax but want it to be structured to avoid consumer rate increases. The governor's tax, despite its smaller size, would precipitate rate increases because it taxes generation from natural gas, they said.

"It's not the amount, but the method," Fonfara said.

Dominion says it is willing to absorb the roughly \$40 million annual cost to Millstone of the Malloy tax. The Malloy tax would cost electric generation from natural gas about \$29 million annually, a sum that could get passed to consumers because of the role of natural gas in the auction system.

"The \$29 million on natural gas, that's going to hurt," said Joseph Rosenthal, principal attorney for the state consumer counsel.

Fonfara said he and others hope to soon offer a proposal that would make adjustments to the generation tax in the governor's budget.

A spokeswoman for the governor issued the following response to concerns about his tax proposal: "Governor Malloy is acutely aware of the shared sacrifice he is asking of everyone in the state. There are no easy answers. But he believes that his proposal is the most equitable and fair and will help stabilize our state's economy and put people back to work."

## **Malloy Sticking With Power Tax Proposal (NLDAY)**

New London (CT) Day, April 28, 2011

Hartford - Gov. Dannel P. Malloy turned down a request Wednesday by the Democrat co-chairs of the legislature's energy committee that he back their alternative proposal for taxing energy generation in the state.

State Rep. Vickie Nardello of Cheshire and Sen. John Fonfara of Hartford presented their plan at a morning news conference, asking the governor and General Assembly leaders for support. The chairmen said their proposal would raise more revenue for the state than the generator tax in the latest version of Malloy's budget, and most crucially, wouldn't pass the higher costs along to ratepayers.

But the governor isn't interested.

"He remains committed to the agreement forged last week with legislative leaders," Malloy's spokeswoman, Colleen Flanagan, said Wednesday afternoon, adding that the governor nonetheless appreciates the co-chairs' efforts.

The temporary, two-year energy generation tax in Malloy's budget is to generate \$72 million annually by applying a 0.0025 cents a kilowatt hour tax to energy from nuclear, coal, natural gas, and oil sources.

Nardello and Fonfara said that if Malloy doesn't change how that tax is structured, it would get passed along as a \$1.50 per month rate hike for the average household.

Asked about the potential rate increase, Malloy's spokeswoman said "the governor has asked and been very forthright about the shared sacrifice he is asking of everyone. He needs to make the tough decisions to get our state back on track."

## **CT Legislators Offer New Nuclear Taxes (HARTBZ)**

By Brad Kane

Hartford Business, April 28, 2011

Connecticut legislators unveiled a trio of proposed taxes on nuclear power Wednesday after previous incarnations of their plan were rebuked by the energy industry and the governor.

Sen. John Fonfara, D-Hartford, and Rep. Vickie Nardello, D-Prospect - co-chairs of the Energy & Technology Committee - offered three versions of their proposed tax on electricity generation for legislators to choose, raising \$72 million, \$100 million or \$150 million. Their original proposal generated \$340 million in tax.

Fonfara and Nardello said the new proposals are specifically designed so the electric generators cannot pass the tax onto ratepayers, a main argument against their previous proposals.

Dominion - operator of the nuclear Millstone Power Station in Waterford, which generates more than half of the state's power - bitterly opposes the tax since most of it comes from nuclear.

In the \$340 million proposal, 98 percent of the tax came from Dominion. Under the three new proposals, between 87-93 percent of the tax would come from Dominion.

"Dominion has invested more than \$600 million into Millstone since purchasing the station in 2001, improving the reliability and overall margin of safety," said Daniel Weekley, Dominion vice president for Government Affairs. "This is a strange way for these legislators to treat a company that has grown its business."

If the state adopts the tax, Dominion has threatened to close the Millstone plant.

Gov. Dannel Malloy opposed the \$340 million tax, saying it disproportionately went after nuclear power. In his proposed budget, Malloy includes a \$72 million tax on electricity generators, although more spread out throughout the industry with Dominion paying 55 percent of the tax.

In a press conference on Wednesday announcing their new proposals, Nardello and Fonfara said their tax proposals go after nuclear power because it is cheaper than other sources of fuel.

Even though operating costs at power plants vary throughout Connecticut, federal law dictates that each power generator must be paid the same price. Therefore, cheaper fuel sources such as nuclear receive greater profits from operations than more expensive fuel sources, such as natural gas.

"By taxing generators who have low costs, and minimizing taxes on the natural gas generators who set the price of electricity, we enable ratepayers to be held harmless," Nardello said.

Nardello and Fonfara were supported Wednesday by six other Democrat legislators, the Office of Consumer Council, the Connecticut AARP, the Connecticut Citizen Action Group, Better Choices Connecticut and SEIU.

Weekley said raising taxes on electricity generation - especially the cheap sources of generation such as nuclear - only adds to Connecticut's problems of having the second highest electricity rates in the nation.

"It's disappointing that a few legislators continue to pursue these attempts without really focusing on core energy issues in the state such as why Connecticut consumers pay 20 percent more for electricity than other New England states," Weekley said.

## **New Electric Tax Plan (WTNHTV)**

By Mark Davis

WTNH-TV Hartford, CT, April 28, 2011

Hartford, Conn. (WTNH) - The battle at the State Capitol over taxing electricity got another jolt today. The people who own the Millstone Nuclear Power Complex were probably popping champagne corks last Monday, when during an exclusive edition of 'Ask the Governor' here on News 8, Governor Malloy virtually killed a proposal that would have imposed a \$330 million a year tax on them.

"That's not my tax, It's not a tax that I have supported nor is it a tax that I think is going to come out of the legislature," Malloy said.

Today the two lawmakers who were pushing that tax said that Malloy's flat tax plan on the electric companies is a mistake.

"We project, out of the 72 million, I believe this tax will generate to cover the budget hole; 50 million of it will be paid by Connecticut rate payers," said Sen. John Fonfara (D-Energy and Technology Committee).

They proposed a graduated energy tax and once again, the biggest payer would be the Dominion owned Millstone Nuclear Power Complex. They say that's only fair because nuclear is the cheapest energy right now and they are making the biggest profits.

"It's a horrible public policy statement for the state to be making or endorsing to punitively pursue not just one particular company or particular generator, but the cleanest that we have in the state," said Rep. Betsy Ritter (D-Quaker Hill).

Dominion also pounced saying, "This is nothing more than a regurgitation of Senate Bill 1176, which these two legislators tried to get through the legislature and onto the backs of Connecticut consumers earlier this month."

The Governor has almost insured that some form of an energy tax will be in the final state budget. The big question is: can anyone really insure it won't just be passed on to you in higher rates?

## **Lawmakers Look To Revamp State Power Tax (WFSBTV)**

WFSB-TV New Haven, CT, April 28, 2011

Leaders of the General Assembly's Energy Committee are trying to persuade the governor and legislative leaders to change the latest version of a proposed tax on electric generators, predicting the extra expense will be passed on to consumers and businesses.

The lawmakers, which included state Sen. John Fonfara and state Rep. Vickie Nardello, said Wednesday that the proposed flat energy tax, a compromise reached between Gov. Dannel P. Malloy and the majority Democratic leaders, will have the unintended consequence of raising rates. They've suggested three alternative proposals that create a graduated tax system.

Time is running out to change the tax bill. Malloy is urging the full House and Senate to vote quickly.

The compromise \$72 million energy tax plan replaced an earlier bill that would have raised \$340 million, with \$332 million coming from the Millstone nuclear power plants.

## **Malloy Staying With Plan To Revamp Conn. Power Tax (AP)**

Associated Press, April 28, 2011

HARTFORD, Conn. (AP) — Connecticut Gov. Dannel P. Malloy is sticking with the proposed tax on electric generators he crafted with legislative leaders, despite warnings from lawmakers on Wednesday that consumers and businesses will end up footing the bill.

His spokeswoman said Malloy is thankful to the co-chairmen of the Energy and Technology Committee for offering three alternative proposals. But Colleen Flanagan said the governor "remains committed to the proposal" reached with the leaders last week which taxes generators at .0025 cents per kilowatt hour, or 25 cents per \$100.

Rep. Vickie Nardello and Sen. John Fonfara, the committee's co-chairmen, said the proposed flat energy tax will unintentionally raise people's electric rates. They've suggested three bills that would create a graduated system that taxes the various electric generators in Connecticut differently. The agreement reached between Malloy and the leaders, which would raise \$72 million in revenue, would create a flat tax.

"There is a better way. There is a more efficient way to recover the dollars that are needed for the budget," Nardello said.

The New England Power Generators Association opposes any new state tax on power-generating companies. The group said the tax would be the first of its kind in the country.

In a written statement, the group said the tax would ultimately be passed on to ratepayers. "Connecticut already pays some of the highest electric rates in the country, and people deserve lower electricity costs," the statement said.

The plan reached between the governor and legislative leaders replaces another generator tax bill that would have raised \$340 million, with \$332 million tax coming solely from the Millstone nuclear plants in Waterford. The plants' owner, Dominion Resources Inc., strongly opposed the proposal.

The revised generator tax was included in the tax package approved last week by the Finance Revenue and Bonding Committee. It is awaiting a vote in the Senate. Malloy has called on lawmakers to vote quickly on the tax and spending bills.

## **Exelon Nuclear Power Plant Open House (KWQCTV)**

KWQC-TV Davenport, IA, April 28, 2011

Exelon Nuclear's Quad Cities Generating Station will host a Community Information Night on Thursday, April 28. The event, which is free and open to the public, will be held from 5:30 – 7 p.m. at the Cordova Civic Center, Illinois Route 84, in Cordova.

Due to security restrictions, and preparations for the upcoming refuel outage at the plant, this year's Community Information Night is being held at the Civic Center. It will not include a tour at the actual generating station.

Station employees and other technical experts will be on hand to educate attendees on plant operations, spent fuel storage, safety and security, emergency planning, environment efforts and community outreach initiatives.

## **US Nuclear Production Little Changed As Reactors Adjust Output (BLOOM)**

By Colin McClelland

Bloomberg News, April 28, 2011

US nuclear-power output was little changed as reactors adjusted production amid seasonal refueling, the Nuclear Regulatory Commission said.

Power generation nationwide decreased 11 megawatts from yesterday to 72,888 megawatts, or 72 percent of capacity, according to an NRC report today and data compiled by Bloomberg. Twenty-six of the nation's 104 reactors were offline.

Exelon Corp. (EXC) slowed output from the 1,120-megawatt LaSalle 2 reactor in Illinois to 80 percent of capacity from full power yesterday. The 1,118-megawatt LaSalle 1 unit is operating at full capacity at the site, 70 miles (113 kilometers) southwest of Chicago.

Exelon increased output from the 1,164-megawatt Byron 1 reactor in Illinois to 80 percent of capacity from 65 percent yesterday after a refueling outage. Another unit at the site, the 1,136-megawatt Byron 2, is operating at full power. The plant is located 85 miles west of Chicago.

Energy Future boosted the 1,150-megawatt Comanche Peak 2 to 46 percent of capacity from 1 percent yesterday. The 1,200-megawatt Comanche Peak Unit 1 is producing at full power. The plant is 66 miles southwest of Dallas.

Constellation Nuclear Energy Group LLC, a joint venture of Constellation Energy Group Inc. (CEG) and Electricite de France SA, slowed the 621-megawatt Nine Mile Point Unit 1 in New York to 46 percent of capacity from 78 percent yesterday for repairs on one of three pumps that supply water to the reactor core, Jill Lyon, a spokeswoman for the plant, said in an e-mailed response to questions.

Another unit at the site, the 1,140-megawatt Unit 2, is at full power. The plant is 6 miles northeast of Oswego.

Vermont Yankee

Entergy Corp. (ETR) boosted output from the 620-megawatt Vermont Yankee reactor to full power from 76 percent of capacity yesterday. Output had been lowered at the request of the grid operator, ISO New England, because of the loss of a power line, Larry Smith, a spokesman for the plant, said in an e-mailed response to questions.

The plant is in Vernon, in the southeast corner of Vermont, 80 miles northwest of Boston.

Entergy slowed both units at the Arkansas Nuclear One plant at the request of the Little Rock Transmission Operating Center because a storm knocked out a 500-kilovolt line on April 25, Donna Gregory, a spokeswoman for the plant, said by telephone. The plant is expected to increase output after repairs are completed in the next few days, Gregory said.

The 843-megawatt Unit 1 and the 995-megawatt Unit 2 each dropped to 43 percent of capacity from full power on April 25. The plant is located 65 miles northwest of Little Rock.

Xcel Energy Inc. (XEL) slowed the 551-megawatt Prairie Island 1 reactor in Minnesota to 90 percent of capacity from 96 percent yesterday. The 545-megawatt Prairie Island 2, another reactor at the site about 40 miles southeast of Minneapolis, is operating at full power.

Some reactors close for maintenance and refueling during the spring and fall in the US, when demand for heating and cooling is lower. The outages can increase consumption of natural gas and coal to generate electricity.

The average US reactor refueling outage lasted 41 days in 2009, according to the Nuclear Energy Institute.

## **Indian Point: N.Y. Power-grid Chief Warns Against Closing Plant (WESTJN)**

### **N.Y. power-grid chief warns against closing plant**

By Greg Clary

Westchester Journal News, April 28, 2011

Replacing Indian Point's power if the nuclear plant is closed could present a significant challenge to the state's electrical grid, according to a new report from the grid's managers.

"The immediate outlook for New York's electric system is positive, but the sustained adequacy of power resources may be affected by a variety of emerging challenges," said Stephen G. Whitley, president of the New York Independent System Operator.

Whitley heads the Rensselaer-based nonprofit corporation responsible for operating the state's bulk electricity grid.

NYISO just released "Power Trends 2011," a report that says "planned additions" of power generation should help for the short-term. Long lead times to build power plants, however, plus an ever-changing labyrinth of regulations and laws and the possibility of Indian Point's licenses running out by 2013 and 2015 could jeopardize the future reliability of the system.

The nuclear plant has applied for 20-year extensions to licenses for the two working reactors in Buchanan. A decision is not expected until late next year. New York officials and environmental groups are fighting the extra years.

In their annual production report, "2011 Gold Book," which was also released this week, NYISO officials show that the 2,070 megawatts of power produced at Indian Point produced just under 12 percent of the state's electricity last year, a slight drop from 2009. Out of a state total of 139.4 gigawatt hours, Indian Point 2 and 3 produced 16.3 gigawatts hours.

The southeastern part of the state — New York City and the Hudson Valley — present an additional concern because of the vast amounts of electricity needed that must be transmitted through increasingly congested power lines.

Locally, the nuclear plant produces about 25 percent of the power used in this region, according to estimates from Indian Point and Consolidated Edison.

"I think those are accurate numbers," NYISO spokesman David Flanagan said Wednesday.

Statewide, the mix of fuels used to generate electricity in New York is relatively diverse and balanced among hydropower, nuclear, coal, natural gas and oil, the report found. However, fossil-fuel power generation predominates in the high-demand downstate region.

The report notes that as of the end of 2010, 60 percent of New York state's power plant capacity had been put into service before 1980 and 84 percent of the high-voltage transmission facilities statewide also had gone into service before 1980.

Officials from the New York Affordable Reliable Electricity Alliance, a business and labor group, commended NYISO' report and called on state lawmakers to encourage more sources of electricity.

"You can't have economic growth without sensible energy policy," said John Durso, the group's executive director. "While this report was largely positive, it did not escape our notice that the operator of New York's electrical grid issued an important warning against the closure of Indian Point."

Durso pointed to the grid managers' concern that closing Indian Point would lead to violations of reliability requirements as early as 2016 and a lowering of the baseline voltage necessary to transmit electricity across the state.

"This is not the way to jumpstart New York's economic recovery," he said.

## **Dorchester Prepared For Nuclear Emergency (STARDEM)**

By Katie Fitzpatrick

Star (Easton, MD) Democrat, April 28, 2011

CAMBRIDGE In the event of a disaster at the Calvert Cliffs Nuclear Power Plant, Dorchester County Emergency Management Director Wayne Robinson said the county is prepared to handle any emergency that may occur and affect county residents.

"I feel that (Dorchester County is) as prepared as we can possibly be for anything that happens at Calvert Cliffs," said Robinson. "We have the right people in place to handle whatever happens."

## **Majority Believe Nuclear Crisis Is Likely In US (2011-04-27) (WAMC)**

WAMC-TV, April 28, 2011

Since a devastating March earthquake in Japan, and the resulting crisis at a Japanese nuclear power plant, there has been plenty of debate over the safety and future of nuclear energy in the United States. A new poll takes a closer look at where the American public stands on those safety issues. WAMC's Hudson Valley Bureau Chief Greg Fry reports...

There are plenty who would celebrate the closure of the Indian Point Nuclear Power Plant in Westchester County, New York. Operating licenses for the plant's individual units expire in 2013 and 2015. However, a plan for New York City's future, unveiled by Mayor Michael Bloomberg, says that the closure of Indian Point could threaten reliability. That's a point that was backed up in a recent report by the New York Independent System Operator. President Obama has made his support for safe, nuclear energy clear.

So, with all the information back and forth on the topic of nuclear energy, what are people trying to establish a position on nuclear energy truly thinking? A new McClatchy-Marist poll takes a look at how people view the safety issues surrounding nuclear energy. The director of the Marist College Institute for Public Opinion, Lee Miringoff, says Americans are paying attention to the events at the Fukushima Daichi plant in Japan. He says 57 percent believe it's likely or very likely that an emergency at a nuclear plant like the one in Japan could happen here.

A closer look at the poll shows that 16 percent of those surveyed believe a nuclear emergency like the one in Japan is very likely, and 41 percent says it's likely. 34 percent say not very likely, nine percent say not likely at all, and two percent are unsure. Nearly two-thirds of those surveyed in an Associated Press-GFK poll from March indicated that a similar nuclear emergency was at least somewhat likely. The Marist Poll released Wednesday also tackles the issue of preparedness, in case of a nuclear emergency. Miringoff says those numbers don't show a clear decision one way or another. He says people are split 50-50, when asked if the government is prepared in the event of such a catastrophic occurrence.

When asked how a nuclear crisis would begin, 56 percent of Americans polled said it would be the result of an accident, while 40 percent believed it would be the result of a terrorist attack. Phillip Musegaas is Program Director for the environmental organization Riverkeeper. He says it's difficult to find the meaning of an individual poll, but says the results can be incorporated into the overall debate. He says if you take the Marist Poll results, and you look at them in the context of everything else that's happened since the Japanese earthquake, and the huge surge in concern, specifically in the Hudson Valley, then there are lessons to be learned, by Congress, and by President Obama.

In Vermont, more blows have been dealt to the operations Vermont Yankee Nuclear Plant. The board of the Vermont Electric Cooperative voted to reject buying power from the plant, and one state lawmaker there says he'll introduce legislation to make it a crime for the plant to operate after the expiration of its current license. Marist Poll on Nuclear Worries

## **Nuclear Power's Future - Opinion - Bnd.com (BELLEVILLE)**

Belleville (IL) News-Democrat, April 28, 2011

The following editorial appeared in the Miami Herald on Monday, April 25:

Although experts still do not understand clearly what went wrong, the disaster at the Fukushima Daiichi nuclear installation has sparked understandable fears about nuclear safety and a debate that will have significant consequences for the future of our energy needs.

Nuclear industry officials have been at pains to proclaim that the 104 US nuclear power plants are safe. One compelling piece of evidence they cite is that, globally, nuclear plants have close to 15,000 reactor-years of experience, with known severe accidents limited to five commercial power reactors - three of them in Fukushima and only one, at Three Mile Island, in the United States.

As impressive as that seems, skeptics point out that one nuclear accident is one too many. Indeed, the event at Three Mile Island was so traumatic that it froze the industry in its tracks for three decades, going on four.

Now, as a result of Fukushima, the Tennessee Valley Authority says it is considering improvements for the six nuclear reactors it operates because of "potential vulnerabilities from a chain of events." Meanwhile, power producer NRG, which was planning the largest nuclear project in the country, announced it was giving up plans for two giant reactors in Texas and writing off its \$331 million investment.

The future of the nuclear-power industry is of crucial importance to South Florida because energy provider FPL says it needs to add two reactors at Turkey Point in South Miami-Dade to cover projected electrical power requirements for a growing population.

Last week, FPL executives offered assurances to a delegation of four local members of Congress that it was prepared for any conceivable eventuality and that comparisons with Fukushima were off the mark. Turkey Point has a different design, was built by a different company (Westinghouse, not GE), and is powered by different fuel (uranium, not plutonium).

Unlike the Japanese plant, Turkey Point is not located in an earthquake zone, and getting hit by a tsunami is far-fetched, if not impossible, given the barrier formed by the Bahamas chain. The plant has already survived a direct hit from a Category 5 hurricane (Andrew, 1992) and the accompanying storm surge. And FPL plans to build a "dry" storage facility for spent fuel rods - an improvement TVA is just now contemplating - to reduce the risk of a leak.

As long as there are an infinite number of things that can go wrong and only a finite number of preventative measures, nuclear power will never be 100-percent safe. But given existing technology, the increasing needs for power generation and the desire for clean sources of energy, nuclear power cannot be ruled out as a viable option. The industry's safety record and its obvious self-interest in avoiding accidents speak for themselves.

But before going forward, two actions are critical.

-First, FPL must undertake a campaign to inform the public about nuclear power and its safety measures. The public is right to be worried, and without its support nuclear power has no future.

-Second, as Mayor Philip Stoddard of South Miami wrote in a letter to The Miami Herald published on Sunday, "Miami-Dade County is grossly unprepared to deal with a significant radiation release."

Can't happen here? Probably right, but who wants to take a chance? South Florida is so congested, and avenues of evacuation so limited, that the public deserves reassurance on this front, as well. FPL, together with county officials and emergency planners, have a duty to bring the public up to date about plans for the possibility of a nuclear accident.

This week marks the 25th anniversary of the nuclear disaster at Chernobyl, the worst ever. The area near the Ukrainian site is still a no-man's land, and the final accounting of damage remains unknown. It's a good time to redouble efforts to ensure that there are no more Chernobyls - and to be prepared if there are.

## **Constellation Reportedly Takeover Target Of Chicago Power Company (BSUN)**

Baltimore Sun, April 28, 2011

Constellation Energy Group is reportedly in the final stages of takeover negotiations that could see it absorbed by the Chicago-based power company Exelon Corp., a deal that would usher Baltimore's last Fortune 500 company out of town.

For Constellation, the deal comes less than three years after the company narrowly averted bankruptcy and would be the third attempt to sell itself since 2006.

Sources familiar with the matter told several publications late Wednesday that Exelon was in late-stage talks to buy Constellation. The deal would be a stock-for-stock transaction, a source told The Wall Street Journal and The New York Times.

Constellation shares closed at \$34.30 Wednesday, giving the company a market value of just under \$6.9 billion.

Citing sources with knowledge of the matter, news outlets said late Wednesday that Exelon's offer valued Constellation at about \$7.7 billion, which is more than \$38.50 a share.

Exelon's market value at the end of trading Wednesday was nearly \$27.5 billion.

The sources emphasized that the deal was not final and could fall apart.

Constellation spokesman Larry McDonnell declined to comment Wednesday evening. Constellation board member James T. Brady also did not offer a comment.

Constellation is one of the largest public companies in the Baltimore region, employing 7,600 workers and contributing significantly to the city's tax base. It also gives millions of dollars a year in donations to city and state charities. Constellation's regulated utility, Baltimore Gas & Electric Co., serves 1.2 million electric customers in Central Maryland.

"The one thing you don't want to lose is local control over your power company," said Baltimore City Councilman William H. Cole IV, whose district includes downtown. "[Constellation is] enormous. They are major landowners, they pay massive amounts of property and other taxes. And they have a very healthy foundation. They're very generous. They're a huge player and a big employer."

Rick Abbruzzese, a spokesman for Gov. Martin O'Malley, said Wednesday night that it would be premature to comment because the reports of a merger are preliminary.

The Public Service Commission, which regulates power utilities in Maryland, must approve any merger involving Constellation.

The potential union with Exelon would be the third large-scale transaction that Constellation has pursued since 2006 under Chairman and CEO Mayo A. Shattuck III.

After transforming the company from a small utility to the largest energy marketer in the United States, Constellation reached a low point in late 2008 amid the financial sector meltdown. Facing a credit crisis, Constellation agreed to a shotgun deal to sell itself to Warren Buffett's MidAmerican Energy for \$4.7 billion.

But in an about-face, Constellation terminated that agreement to remain an independent company in Baltimore by selling nearly half of its nuclear power business to its then-largest shareholder, French utility EDF Group, for nearly the same price as the earlier deal with Buffett.

In 2006, a merger with Florida Power & Light fell through amid political and regulatory pressure and growing rancor over increasing rates.

In recent months, rumors circulated in trade publications that Exelon and Constellation were looking to consummate a merger.

In the past two years, Constellation has shored up its finances, shed shaky businesses and reduced its debt. In 2009, the company reported a \$4.4 billion profit. Last year, the company had a \$982.6 million net loss, largely attributed to costs related to its nuclear power business.

Exelon would gain Constellation's growing gas and electric supply business, which sells power to wholesale, commercial and industrial customers across the country. Constellation has said its NewEnergy unit could account for up to 45 percent of the company's earnings this year.

In addition, Exelon would gain a stake in Constellation's existing nuclear plants in Southern Maryland and New York through a merger. EDF Group owns nearly half of Constellation's nuclear power business.

## **Reports: Exelon Near Deal To Buy Constellation Energy (WASHBIZ)**

### **Exelon near deal to buy Constellation Energy**

By Ryan Sharrow

Washington (DC) Business Journal, April 28, 2011

Constellation Energy Group Inc. is nearing a deal to be bought by Chicago's Exelon Corp. in a deal valued at \$7.7 billion, according to multiple reports.

The deal would mark the third time in the last five years Baltimore's largest public company would reach a deal to be sold.

Exelon (NYSE: EXC) could announce the transaction as early as Thursday, The Wall Street Journal reports.

Exelon has been rumored over the last several months to be targeting Constellation (NYSE: CEG), the parent company of utility Baltimore Gas & Electric Co.

Bloomberg cites an unnamed source saying the deal values Constellation's stock at more than \$38.50 a share. Constellation's stock closed Wednesday at \$34.30.

The report also says Constellation CEO Mayo A. Shattuck III would become chairman of the combined company, while Exelon President Chris Crane would become CEO.

Constellation spokesman Lawrence McDonnell could not be reached for immediate comment. rsharrow@bizjournals.com or (410) 454-0537.

## **Constellation-Exelon Deal Seen As A Good Fit (BALBIZ)**

By Scott Dance

Baltimore Business Journal, April 28, 2011

A union between Constellation Energy Group Inc. and Chicago-based Exelon Corp. has been viewed favorably by analysts covering both companies.

Both companies have fleets of nuclear plants, and both own regulated gas and electric utilities. But the key to the deal, analysts say, is Constellation's growing business of selling retail power to electricity customers.

Analysts could not be reached Wednesday night or declined to comment until an official announcement about a sale is made. Exelon is near a deal to buy Constellation for \$7.7 billion, according to multiple media reports.

But analysts have said Constellation's (NYSE: CEG) retail power growth could be attractive to Exelon. (The skinny on Exelon)

Constellation launched the retail power supply business in earnest about a year ago; today, it has about 150,000 customers. In Maryland, it sells power through its BGE Home and Constellation Electric businesses.

The business is seen as promising because in states with deregulated energy markets, including Maryland, the number of customers opting to buy power from competitive suppliers, as opposed to from utilities like Baltimore Gas and Electric Co., is growing. That share reached 21 percent of BGE customers in March.

The business is seen as favorable to Exelon (NYSE: EXC) because that company has a massive supply of power generation, but does not have a retail power supply business as large as Constellation's.

Constellation was expanding that business around the same time it departed from a plan to build a third nuclear reactor at Calvert Cliffs, and eventually shed its business developing new nuclear reactors altogether. After that move, analysts said they weren't concerned because any payoff the company would have received from new nuclear was a long way off.

## **Exelon CEO Rowe To Exit After Constellation Deal Closes (CRCHIBIZ)**

By Steve Daniels

Crain's Chicago Business, April 28, 2011

(Crain's) — John Rowe will retire as CEO of Exelon Corp. once its acquisition of Constellation Energy Group Inc. is completed, marking a closing chapter in a decades-long career in the utility industry, according to a person familiar with the transaction.

As soon as Thursday morning, Exelon is expected to announce an agreement to purchase Constellation in an all-stock deal valuing the Baltimore-based utility holding company at more than \$7.7 billion, the source said.

Once the deal closes, Exelon President and Chief Operating Officer Christopher Crane will succeed Mr. Rowe, 65, as CEO of the combined company, with Constellation CEO Mayo A. Shattuck III serving as chairman. Mr. Shattuck will have some executive responsibilities in that role, the source said.

Mr. Rowe, a consistent believer that bigger is better in the capital-intensive utility industry, has hunted in vain for an acquisition since he created Exelon in 2000 through the merger of Commonwealth Edison Co. parent Unicom Corp., which he ran, and Philadelphia's Peco Energy Co. Since then, he's tried three different gambits, with failed deals to acquire Decatur-based Illinois Power Co. and New Jersey-based Public Service Enterprise Group Inc., and then an unsuccessful hostile bid for Princeton, N.J.-based NRG Energy Inc.

The Constellation deal will be subject to numerous regulatory approvals, most crucially by the state of Maryland. In addition, Exelon, which has power plants in the Mid-Atlantic region where Constellation also operates, will be expected to have to divest some of the combined company's power plants in order to comply with federal restrictions on market power.

Typically, such deals can take a year or longer to close.

Constellation's stock price jumped 4% on Wednesday, as investors made apparent bets that a major deal is in the works.

Reuters reported late Wednesday that the talks were "late stage" and that it would be a stock-for-stock deal, citing an anonymous source. Bloomberg, also citing a person with knowledge of the matter, said the two companies were near an agreement valuing Constellation at \$38.50 per share. The Wall Street Journal pegged the value of the deal at more than \$40 a share.

(Read Crain's premium content: Constellation looks like a nice match for Exelon.)

Constellation's stock rose \$1.37, or 4.2%, to \$34.30 on volume that was 68% higher than average. Exelon's stock was up 32 cents, or 0.8%, to \$41.49—about in line with the increase in most electric utility stocks. Wall Street observers said the prospect of an Exelon buyout accounted for Constellation's increase.

Exelon CEO John Rowe, responding Wednesday to questions from analysts on the company's first-quarter earnings call, declined to comment when asked directly about his interest in Constellation.

When an analyst pointed out that Mr. Rowe had talked in the past about specific companies Exelon was interested in, Mr. Rowe responded, "We don't comment on anything specific that hasn't already gone by (in a deal with another company). And we won't."

A Constellation representative wasn't immediately available for comment. An Exelon spokesman declined to comment.

Mr. Rowe, though, consistently has preached the virtues of size and scope in his capital-intensive industry, and made clear again Wednesday that Exelon was open to buying both regulated and unregulated energy companies "at the right price."

Analysts and investors have pointed to Constellation as a particularly good match for Exelon. That's because Constellation owns the country's largest supplier of power to businesses, while Exelon is one of the nation's largest power generators. With wholesale power prices low, Exelon could benefit from owning a big supplier to provide a larger outlet for the electricity it generates.

Constellation also owns Baltimore's electric utility, as well as a fleet of power plants, including three nuclear facilities.

(Note: Your first name and last initial will appear with your remarks.)

## **Exelon May Acquire Constellation Energy (CHIST)**

By Sandra Guy

Chicago Sun-Times, April 28, 2011

Exelon Corp., parent company of Commonwealth Edison, is reportedly in talks to acquire rival Constellation Energy as part of Exelon's plans to expand, according to media reports quoting unnamed sources.

A report in the Wall Street Journal says the possible stock-for-stock deal could value the Baltimore, Md.-based Constellation Energy at \$8.1 billion.

Crain's Chicago Business reported that Exelon is expected to announce as early as this morning an agreement to purchase Constellation.

Constellation's stock has delivered mediocre returns, prompting speculation for months that the only way Constellation can raise its stock price is to be acquired. Constellation now sells electricity in the Chicago market at cheaper rates than ComEd, and Exelon could benefit by obtaining that portion of Constellation's business, experts say.

Exelon, the nation's largest nuclear-power generator, faces heightened scrutiny from nuclear regulators in the wake of the nuclear-plant disaster in Japan — just as Exelon had intended to add power to its existing plants and boost its profits and stock.

A spokesman for the Chicago utility said Exelon never comments on rumors about impending acquisitions, but that Exelon "continually evaluates all opportunities to add value for our shareholders."

## **Exelon Pursuing Constellation (WSJ)**

By Anupreeta Das And Rebecca Smith

Wall Street Journal, April 28, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Exelon Said To Be Near \$7.7 Billion Deal For Constellation (BLOOM)**

By Zachary R. Mider And Jim Polson

Bloomberg News, April 28, 2011

Exelon Corp. (EXC), the largest operator of US nuclear power plants, is near agreement to buy Constellation Energy Group Inc. (CEG) for about \$7.7 billion, adding stakes in five reactors in Maryland and New York, according to a person with knowledge of the matter.

In the transaction under discussion, Constellation shareholders would get 0.93 Exelon share for each of their shares, said the person, who declined to be identified because the talks are private. Based on Exelon's closing stock price of \$41.49 today, that would value Constellation at \$38.59 a share, a 12.5 percent premium to its closing price.

Exelon, based in Chicago, may announce a deal as soon as tomorrow, said three people with knowledge of the matter. If completed, it would be Exelon's largest transaction. The company was formed by the merger of Peco Energy and Unicom in 2000, with the combined company then valued at \$7.14 billion.

Constellation operates three nuclear plants in Maryland and New York. Exelon has specialized in buying reactors at a fraction of the cost to build them and selling the power on competitive markets.

"Constellation has a substantial retail marketing business and Exelon has a whole lot of wholesale power to sell," said Paul Patterson, a New York-based utility analyst at Glenrock Associates LLC.

Exelon's latest planned purchase comes after setbacks to nuclear reactor construction projects in the competitive US markets of Maryland and Texas, and amid concerns about the safety of atomic power in the wake of the crisis at the Fukushima Dai-Ichi plant in Japan.

"The deal makes a lot of sense in terms of nuclear concentration, because of the economies of scale," said Daniele Seitz, a New York-based utility consultant. "Expanding their nuclear generation is a positive, especially considering that future construction will be at a very slow pace."

NRG Energy Inc. (NRG), the largest US independent power producer, this month canceled its plans to build two new reactors at a Texas nuclear plant, citing diminished prospects after a partial meltdown at Tokyo Electric Power Co.'s Dai-Ichi plant spread radiation across parts of Northern Japan.

Constellation in October withdrew from a joint venture to build a new reactor with Electricite de France SA, citing excessive cost and a dim economic outlook for power prices. Southern Co. (SO) and Scana Corp. (SCG), regulated utilities that don't have to compete on price, are continuing plans to build new reactors in Georgia and South Carolina with financing backed by state-imposed rates.

Constellation also owns Baltimore Gas & Electric, which delivers power at regulated rates. Its service territory extends within a few miles of Exelon's Peco utility in Philadelphia.

“We’d like more regulated assets, if the price is right,” Exelon Chief Executive Officer John W. Rowe, 65, said today on an earnings call with investors. “We’d like more generation assets, especially nuclear and gas, if the price is right. We like more renewable, if the price is right and we get enough contracts. We like safer channels to market and we won’t say anything about any specifics.”

Exelon has tried unsuccessfully three times to buy other power companies since 2003, and Constellation has been the target of two failed bids.

Paul Elsberg, a spokesman for Chicago-based Exelon, and Lawrence McDonnell, a Constellation spokesman, declined to comment.

EDF, seeking a foothold in the US to build reactors designed by Paris-based Areva SA (CEI), defeated a \$9.5 billion offer in 2008 for all of Constellation from Warren Buffett’s Berkshire Hathaway Inc. The next year, EDF bought a minority stake in Constellation’s nuclear plants for \$4.5 billion in cash.

Constellation used the money to shore up its energy- marketing business and avert bankruptcy after the 2008 financial collapse. The company’s shares have risen 19 percent since it rejected the Buffett offer.

In the plan now being discussed with Exelon, Constellation CEO Mayo Shattuck, 56, would become chairman of the combined company, and Chris Crane, now the president of Exelon, would become CEO, succeeding Rowe, one of the people familiar with the matter said. The talks started last year, the person said.

Rowe built Exelon into the largest US generator of nuclear power. He failed in attempts to buy NRG Energy Inc. for \$14.3 billion in 2008, Public Service Enterprise Group Inc. (PEG) for \$25.9 billion in 2004 and Illinois Power Co. for \$2.2 billion in 2003.

Shattuck, a former banker, expanded Constellation by selling power to corporations and other large customers in states that allow competition with utility monopolies. He reached a \$14.8 billion deal to sell Constellation to NextEra Energy Inc. (NEE), the largest US wind-power generator and owner of Florida’s largest utility. The deal collapsed in 2005, with NextEra citing interference by officials in Maryland.

US utility transactions accelerated this year, as companies sought to cut overhead and borrowing costs to finance new plants, new power lines and pollution controls. About 30 power company deals valued at \$43 billion have been announced this year, compared with \$37.6 billion for all of 2010.

With 2010 sales of \$10.9 billion, Constellation’s competitive marketing and power-generation businesses accounted for 76 percent of revenue, according to data from filings compiled by Bloomberg.

Constellation shares closed at \$34.30 and rose as much as 11 percent in after-hours trading. Exelon rose 32 cents to \$41.49 at 4:15 p.m. in New York Stock Exchange composite trading.

Platts reported earlier today that the companies may announce a combination.

In January, Duke Energy Corp. (DUK) announced plans to acquire Progress Energy Inc. (PGN) for \$13.7 billion in stock, creating the largest US utility. On April 20, AES Corp. (AES), the US power producer with operations in 28 countries, said it agreed to buy DPL Inc. (DPL), based in Dayton, Ohio, for \$3.5 billion in cash.

“The industry has been consolidating for a long time, and it will probably continue for quite a while,” Patterson, the Glenrock analyst, said.

Exelon owns the largest group of US nuclear power plants with 17 reactors at 10 stations in Illinois, Pennsylvania and New Jersey.

## **Jay Hancock's Blog: Is Shattuck Trying To Sell Constellation -- Again? (BSUN)**

Baltimore Sun, April 28, 2011

Mayo Shattuck was an investment banker before he was an electricity executive. I always figured he would sell Constellation Energy, parent of Baltimore Gas & Electric, before he was through with it. In 2006 he was trying to seal a deal to sell Constellation to Florida

Mayo Shattuck was an investment banker before he was an electricity executive. I always figured he would sell Constellation Energy, parent of Baltimore Gas & Electric, before he was through with it. In 2006 he was trying to seal a deal to sell Constellation to Florida-based FPL Group, but it petered out amid that year’s brouhaha over BGE’s 72 percent rate increase.

Now he may be at it again. There is been building speculation in recent weeks that Constellation, whose stock price had lagged since its near-bankruptcy during the 2008 financial crisis, would seek a deal with another big energy company. Several news outlets are reporting tonight that the company is close to an agreement with Chicago-based Exelon. This from Bloomberg: Exelon Corp. (EXC) is near an agreement to buy Constellation Energy Group Inc. (CEG) in a stock deal that values the company at about \$7.7 billion, according to a person with knowledge of the matter.

The offer values Constellation at more than \$38.50 a share based on Exelon's closing stock price today, said the person, who declined to be identified because the talks are private. In the plan under discussion, Constellation Chief Executive Officer Mayo Shattuck would become chairman of the combined company, and Chris Crane, currently the president of Exelon, would become chief executive officer, succeeding Rowe, the person said. The talks started last year, the person said.

Constellation is by far the largest Baltimore-based company, an outgrowth of BGE, which was the nation's first natural-gas utility in the 1800s. Unclear what exactly this deal might mean for Constellation and its Baltimore workforce, but it's probably not good. However much of the company's employment is tied to BGE, the local utility, and can't be moved or downsized.

## **Constellation Energy Shares Surge On Reports That Utility Is In Talks With Exelon (WP)**

By Steven Mufson

Washington Post, April 28, 2011

Constellation Energy Group's shares surged in after-hours trading on reports that the Chicago-based utility Exelon was negotiating to acquire the company for more than \$7 billion.

Exelon is the nation's biggest nuclear power generator and one of the nation's largest electric utilities, with 5.4 million customers in northern Illinois and southeastern Pennsylvania.

Constellation is owner of Baltimore Gas and Electric and a fleet of coal- and natural-gas-fired power plants. A Constellation joint venture with Electricite de France owns the nuclear plants at three locations, including Calvert Cliffs, Md.

Constellation's shares jumped more than 11 percent in after-hours trading to about \$38 a share, on top of a 4 percent increase during regular trading.

An acquisition could end several years of controversy for Constellation chief executive Mayo Shattuck, who delved into risky hedging activities, tried to merge with a Florida utility, did battle with Maryland legislators and regulators, then angered Constellation partner and major shareholder EDF.

The EDF dispute took place last year when Constellation withdrew from a proposal for federal loan guarantees to build a new nuclear reactor at Calvert Cliffs; Obama administration officials said they were on the verge of granting the request. EDF said it would still pursue plans for a new nuclear reactor there.

A merger of Constellation and Exelon would also continue a trend toward consolidation in the utility industry.

Last week, Arlington County-based AES announced a \$4.7 billion acquisition of DPL, the parent company of Dayton Power & Light.

With tepid growth in electricity usage, acquisitions offer a way for big utilities to grow.

But many takeovers have been foiled by regulatory obstacles. An earlier proposed merger of Constellation and the Florida-based utility now known as NextEra Energy ran into widespread opposition in Maryland. The deal was eventually dropped.

Exelon, itself the product of a merger in 2000, has failed at two takeover attempts, including a hostile bid for NRG Energy that it abandoned in 2009. At the time, Exelon chief executive John W. Rowe said he would seek other acquisition opportunities.

Rowe has said that while Exelon's nuclear plants are highly profitable, it does not make economic sense for companies to build new ones when natural gas prices are low and when Congress is unwilling to make companies pay for carbon dioxide emissions.

Many of Constellation's coal plants are aging. A Citigroup report Wednesday said that Environmental Protection Agency regulations could force Constellation to invest in expensive scrubbers or retire some facilities.

## **Exelon Nears Takeover Of Constellation Energy (NYT)**

By Michael J. De La Merced

New York Times, April 28, 2011

The energy utility company Exelon is near a deal to buy the Constellation Energy Group for about \$7.7 billion in stock, people briefed on the matter said Wednesday.

A deal between the two would be the latest in a recent wave of consolidation within the energy industry, especially among utility companies.

Under the terms of the proposed takeover, Exelon would issue 0.93 of a new share for each Constellation share. At Wednesday's closing prices, that would be worth about \$38.59 a share.

That is a roughly 17 percent premium to Tuesday's closing price, the last day before rumors of a potential deal pushed Constellation's stock higher.

The merger could be announced as soon as Thursday morning, the people briefed on the matter said, cautioning that talks had not yet concluded and might still collapse.

An Exelon spokesman, Paul Elsberg, said: "Exelon continually evaluates all opportunities to add value for our shareholders, including M.& A. However, we don't comment on rumors about specific M.& A. activity." A representative of Constellation was not immediately available for comment.

Shares of Constellation rose 4 percent, to \$34.40, on Wednesday amid reports of a potential sale. Platts, an energy information company, first reported the possible deal. Exelon shares rose slightly on Wednesday, to \$41.49, giving the company a market value of \$27.5 billion.

Utilities have sought to combine with each other to gain more customers, in part to fight falling prices. One of the largest deals announced so far this year is the \$13.7 billion all-stock merger of Duke Energy and Progress Energy.

Constellation, based in Baltimore, has tried to sell itself before. Two years ago, it agreed to sell itself to Berkshire Hathaway's MidAmerican Energy Holdings for \$4.7 billion — only to cancel that deal in favor of selling nuclear assets to Électricité de France for \$4.5 billion.

Constellation, based in Baltimore, has tried to sell itself before. Two years ago, it agreed to sell itself to Berkshire Hathaway's MidAmerican Energy Holdings for \$4.7 billion — only to cancel that deal in favor of selling nuclear assets to Electricité de France for \$4.5 billion.

Exelon has also stumbled in previous deal-making attempts as well. It pursued a \$7.5 billion hostile bid for NRG Energy beginning in 2008, only to drop its offer after failing to win over the target's shareholders.

This post has been revised to reflect the following correction:

Correction: April 27, 2011

An earlier version of this article incorrectly stated the premium in the reported takeover offer as 18 percent.

## **Exelon Set To Buy Constellation For \$7.7bn (FT)**

By Helen Thomas And Ed Crooks

Financial Times, April 28, 2011

Full-text stories from the Financial Times are available to FT subscribers by clicking the link.

## **National Business Briefs For April 28 (RICHTD)**

Richmond (VA) Times-Dispatch, April 28, 2011

Durable-goods orders up 2.5% in March, US says

Businesses increased their orders for heavy machinery, computers, autos and steel in March, boosting demand for long-lasting manufactured goods for a third straight month.

Orders for durable goods rose 2.5 percent in March, the Commerce Department said Wednesday. That's up from a revised 0.7 percent increase the previous month.

A key category considered a proxy for business investment rose 3.7 percent in March, rebounding after a slight gain in February and a big decline in January.

Berkshire Hathaway says Sokol violated policies

Berkshire Hathaway said Wednesday that a former executive believed to have been in line to succeed Warren Buffett as CEO violated the company's insider trading and ethics policies by buying stock in a chemical company Berkshire is acquiring and failing to disclose key details.

Buffett released a report that Berkshire's audit committee produced after examining David Sokol's \$10 million investment in Lubrizol. It's not clear whether Sokol will face any additional sanctions for his actions because the company says its policies set a higher standard than the law does.

Sokol resigned from Berkshire shortly after Buffett's Omaha company announced plans to acquire Lubrizol for \$9 billion. When his resignation was announced late last month, Sokol said he was leaving to start his own firm.

The audit committee of Berkshire's board said Sokol offered "misleadingly incomplete disclosures" about his Lubrizol trades, which were made while he was scouting acquisition candidates for Berkshire.

Elsewhere

•Merck & Co. Inc. said Wednesday that its board of directors approved the buyback of up to \$5 billion in common stock for the drug developer's treasury. The company said the program has no expiration. Overall, the company is now authorized to buy back up to \$6.4 billion in common stock.

•DuPont says its board has authorized a buyback of up to \$2 billion of its common stock. This program will begin after the company's purchase of about \$500 million still remaining under a previous buyback program is done.

•Bank of America Corp. has started telling customers that it may raise the interest rate on their credit cards if they are late on payments. Notifications sent with bills this month say the Charlotte, N.C.-based bank can apply a "penalty rate" of nearly 30 percent to future balances.

•Northrop Grumman increased its quarterly dividend by 6 percent, to 50 cents per share, from 47 cents per share. The dividend is payable on June 11 to shareholders of record as of May 31.

•Exelon Corp. is in talks to buy Constellation Energy Group Inc., according to several media reports. The reports say the deal would value Constellation shares at roughly \$8.1 billion.

•Health giant Johnson & Johnson said it will buy US-Swiss medical-device maker Synthes Inc. for \$21.3 billion.

## **Reports: Exelon In Talks To Buy Constellation Energy; Constellation Shares Jump (AP)**

Associated Press, April 28, 2011

Exelon Corp. is in talks aimed at buying Constellation Energy Group Inc., several media outlets reported on Wednesday.

The Wall Street Journal reported that the deal would value Constellation shares at roughly \$8.1 billion.

Exelon spokesman Paul Elsberg says the Chicago-based nuclear power company is open to chances to add to shareholder value. But he declined to comment on any specific deal. Constellation, an energy provider and utility based in Baltimore, did not immediately respond to a message seeking comment.

Constellation shares jumped \$3.05— nearly 9 percent — to \$37.35 in late trading, after gaining \$1.37, or 4.2 percent, to \$34.30 in the regular session. Exelon shares rose 32 cents to \$41.49 in the regular session and fell 27 cents in after-hours trading.

Exelon has twice tried to do mergers in recent years and failed.

Exelon Chairman and CEO John Rowe was asked about potential mergers on a conference call earlier Wednesday to discuss its first-quarter earnings. He said consolidation makes sense in his industry.

"We always look, and we're as cold-blooded as it can be when it comes down to the economics," he said. "We won't overpay for a deal and we won't enter transactions that give away all of our upside to a power market recovery. It's really important to us."

Exelon reported that its first-quarter net income fell 11 percent to \$668 million on hedging losses and other charges. Revenue rose 13 percent to \$5.05 billion.

## **UPDATE 4-Exelon Near \$7.7 Bln Deal For Constellation-sources (REU)**

By Michael Erman

Reuters, April 28, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Exelon In Talks To Buy Constellation (MRKWTWCH)**

**Combination would create giant utility in Midwest and eastern US**

By Alistair Barr

MarketWatch, April 28, 2011

Berkshire Hathaway says former top executive David Sokol violated standards and may face legal action related to Lubrizol investments. Shira Ovide and Alistair Barr weigh in ahead of the company's shareholder meeting on Saturday.

Utilities are granted monopolies in return for adhering to restrictions on their ability to raise prices. Such regulation limits profit-growth opportunities, so another avenue for expansion is through mergers and acquisitions.

M&A has increased a lot in recent quarters as the Federal Reserve's zero interest-rate policy has kept borrowing costs near record lows. That's made it cheaper to finance deals.

Still, M&A in the utility industry is also watched carefully by regulators, and any deal between Exelon and Constellation would likely face scrutiny.

Constellation, headquartered in Baltimore — is the parent of regulated utility Baltimore Gas & Electric and the nation's largest merchant-power provider.

The company has 10,000 employees and 12,000 megawatts of power generation. It operates in 11 states, serving 19,000 commercial and industrial customers. Fuel mix at its power plants is 41% natural gas, 23% coal and 17% nuclear. In 2010, revenue was \$14.3 billion.

EXC 41.49, +0.32, +0.78%

CEG 34.30, +1.37, +4.16%

Exelon, based in Chicago, is the holding company for regulated utilities ComEd (Chicago) and Pepco (Philadelphia), as well as a merchant-power fleet that sells electricity to industries and other utilities.

It owns 31,758 megawatts of generating capacity, including the nation's largest fleet of nuclear plants, and delivers power to about 5.4 million homes and businesses in Illinois and Pennsylvania. It had \$18.6 billion in operating revenue in 2010 and about 19,200 employees.

## **Exelon In Talks For Constellation: Source (REU)**

Reuters, April 28, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **SRS MOX Contractor Honored (AUGC)**

Augusta Chronicle, April 28, 2011

The contractor building the US Government's \$4.86 billion mixed oxide fuel plant at Savannah River Site was accepted recently into the S.C. Department of Health & Environmental Control's Environmental Excellence Program.

Shaw AREVA MOX Services, the company responsible for the design and construction of the National Nuclear Security Administration facility, demonstrated environmental performance through pollution prevention, energy and resource conservation, and the use of an environmental management system to qualify for the honor.

The company has also been free of any state environmental violations for the five years the construction project has been under way.

DHEC's deputy commissioner, Robert W. King Jr., presented the award during a site visit on Monday.

The MOX plant is designed to dispose of plutonium from dismantled nuclear bombs by blending it with uranium to make fuel suitable for commercial power reactors.

## **MOX Services Awarded For Environmental Leadership (AIKSTD)**

By Anna Dolianitis, Staff Writer

Aiken (SC) Standard, April 28, 2011

Shaw Areva MOX Services, the contractor responsible for the construction of the \$4.8 billion mixed oxide fuel fabrication facility at the Savannah River Site, has been recognized by the South Carolina Department of Health and Environmental Control for outstanding environmental leadership and accepted into the organization's South Carolina Environmental Excellence Program (SCEEP).

The honor, DHEC's federal facilities liaison Shelly Wilson said, is decided upon by a board that includes members outside DHEC and chooses recipients of the award based on their environmental management systems and their interest in finding areas of improvement within their organization.

"They have a good compliance record and also a commitment to evaluate continually," Wilson said.

SCEEP is a voluntary program recognizing South Carolina facilities that have demonstrated environmental performance through pollution prevention, energy and resource conservation, and the use of an environmental management system.

"We are committed to building the MOX facility in a manner that is not only safe but environmentally friendly through the implementation of a strong Environmental Management Systems program," said Kelly Trice, president and CEO of Shaw AREVA. "This recognition by the South Carolina Department of Health and Environmental Control underscores our efforts to protect the environment."

Shaw AREVA was invited and accepted into the program because of "its effective implementation of a strong environmental management system and the absence of any violations from environmental regulators during the more than five years of the civil work and construction of the MOX project," according to a National Nuclear Security Administration (NNSA) press release.

"Ensuring that our facilities are energy efficient is an important part of our effort to improve the way we do business and ensure we are good steward of the taxpayer's money," said Anne Harrington, NNSA deputy administrator for defense nuclear nonproliferation.

The MOX facility is intended to convert surplus weapons-grade plutonium into mixed oxide fuel to be used in commercial nuclear power plants and was initially slated to become operational by 2016.

It was recently proposed that a modification be made to the design of the MOX facility to provide the capability to manufacture a variety of fuel types, including fuel for boiling water reactors and next-generation light water reactors.

## **Judge Strikes Down State Law Requiring Strict Cleanup Rules At Rocket Test Site In California (AP)**

Associated Press, April 28, 2011

A federal judge has ruled that a state law that laid out stringent cleanup standards at a contaminated rocket engine test site outside of Los Angeles was unconstitutional.

The ruling this week was a victory for the site's current owner Boeing Co., which claimed that it was being unfairly singled out and that the cleanup rules were unreasonable.

The state law, passed in 2007, required that the 2,850-acre Santa Susana Field Laboratory be cleaned up to standards above Superfund requirements. Santa Susana was the site of rocket engine tests for decades and housed up to 10 nuclear reactors, including one that had a partial meltdown in 1959.

Contamination at the lab has been a source of long-running controversy as the metropolitan Los Angeles region expanded and pressed closer to the site.

The state law treated Boeing and the Santa Susana site "far less favorably than it treats other contaminated sites and potentially responsible parties," US District Judge John Walter wrote in a ruling released Tuesday.

The state Environmental Protection Agency vowed to appeal. Environmental Protection Secretary Linda Adams said Wednesday the agency will work to "compel Boeing to clean up the site to the highest environmental standards for the benefit of the entire community."

The Energy Department carried out nuclear research at the site 25 miles northwest of downtown Los Angeles from the 1950s through 1998. In 1959, one reactor's coolant channels became blocked, causing fuel rods to overheat and partially melt. There was also an open-air pit where workers burned radioactive and chemical waste.

In a statement, Boeing said it was pleased that the court agreed that "the cleanup of Santa Susana should not be treated differently from the cleanup of other sites in California." The aerospace company said it intends to follow cleanup standards for residential neighborhoods.

The deadline for ridding the site of chemical and radioactive pollution is 2017.

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## **Environmental Report Covers Los Alamos Facility (AP)**

Associated Press, April 28, 2011

The federal government is proposing to move ahead to replace a nuclear facility at Los Alamos National Laboratory, but critics of the multibillion dollar project contend a newly released environmental analysis was done to back up a decision that's already been made.

The National Nuclear Security Administration released a draft supplemental environmental impact statement last week that favors building a modified version of the nuclear facility portion of the Chemistry and Metallurgy Research Replacement project, known as CMRR. One building of the two-structure complex is finished, and the new environmental document addresses the second, the nuclear facility.

The NNSA wants to change the building's design to address seismic safety and other improvements, although no final design has been selected. The lab adopted a seismic analysis standard in 2007, four years after the original environmental impact statement for the project.

A National Defense Authorization Act report in November estimated the CMRR's cost at \$3.7 billion to \$5.8 billion. That's an increase from a 2008 Senate report, which projected a cost of \$2.6 billion, about five times the initial estimate.

The NNSA, an arm of the Department of Energy, said the building is critical to nuclear national security missions ranging from counterterrorism to making sure the nuclear weapons stockpile is safe and reliable.

Critics, however, maintain its rising cost and new information on the area's earthquake dangers require the government to review whether the project should go ahead at all.

"They have a fixed agenda and they're pursuing it," said Jay Coghlan of Nuclear Watch New Mexico, one of several groups opposing the nuclear facility.

Coghlan and Greg Mello of the Los Alamos Study Group contend NNSA decided to build the nuclear facility and now is coming back with a document to back up the decision. The study group sued last August, alleging the Department of Energy and the NNSA violated the National Environmental Policy Act by not doing a completely new environmental impact statement for the project.

Coghlan criticized the supplemental environmental statement for failing to offer "credible alternatives."

But Toni Chiri of the NNSA's Los Alamos Site Office said the document shows the government has analyzed various alternatives. NNSA is trying to consolidate activities to make operations safer and more efficient, she said.

The agency chose the modified version of the nuclear facility as its preferred alternative. The environmental statement also looked at the options of sticking with the building as envisioned in a 2003 environmental impact statement or having scientists continue working in the current 60-year-old chemistry and metallurgy building, which the NNSA has long maintained is inadequate and outdated.

Chiri said a decision on the project is expected in the fall.

Critics have argued Los Alamos can meet its nuclear security needs in other ways.

"There's not a clear mission need" for the nuclear facility, Coghlan said.

## **Nuclear Watchdog Groups Slam New Mexico Plan (REU)**

By Zelig Pollon

Reuters, April 28, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Y-12 Completes Bear Creek Road Bypass Project (OAKR)**

Oak Ridger, April 28, 2011

A new bypass on Y-12 National Security Complex's east-west thoroughfare, Bear Creek Road, recently opened to traffic.

The segment of road north of the Jack Case Center and east of Bear Creek Portal parking lot was completed by Stein Construction Co. Inc. from Chattanooga.

John Howanitz, senior vice president for Transformation and Projects, said Y-12 sought a contractor with infrastructure expertise rather than attempting the work in-house, and he credited Stein Construction with completing the project well within the desired budget and time frame.

The project concluded with no worker injuries, a fact underscored by site leaders.

"That's tremendous," Ted Sherry, manager of the National Nuclear Security Administration's Y-12 Site Office, stated at a ribbon-cutting ceremony.

The bypass project allows Y-12 to complete security upgrades that respond to DOE policy changes over the past several years by moving traffic away from production facilities and behind new security fencing.

The bypass comprises approximately three quarters of a mile of two 12-foot lanes with four-foot shoulders and turning lanes at intersections. It will run north of the existing road, and some stretches of the bypass require guardrails. New intersections for parking at Central Portal and Bear Creek Portal will be constructed.

Each work day, approximately 2,000 people drive on the stretch of road affected by the bypass construction.

## **Work Under Way To Cocoon N Reactor (TRICITYH)**

By Annette Cary

Tri-City Herald (WA), April 28, 2011

Work is under way to cocoon Hanford's N Reactor, the nuclear reservation's most modern plutonium production reactor and one that repeatedly made national news.

It was the nation's only reactor to produce both plutonium and power, drawing President John F. Kennedy for a visit shortly before his assassination.

N Reactor was back in the news 25 years ago this week, when the Chernobyl nuclear reactor unit 4 exploded and the Department of Energy was pressured to shut down the last Hanford reactor because of perceived similarities to the Russian plant.

Today, N Reactor is fast becoming just a part of history.

The heat exchanger building attached to the reactor has been cocooned and work has begun to cocoon the reactor, DOE contractor Washington Closure Hanford announced Tuesday.

"We're ahead of schedule," said Gary Snow, deputy director of deactivation and demolition for Washington Closure. He expects cocooning to be finished by the end of the year, well ahead of a legal deadline of September 2012.

Cocooning is the process DOE is using to put all of Hanford's plutonium production reactors, except the historic B Reactor, into long-term storage. The reactors are torn down to little more than their radioactive cores, the remaining structures are reroofed and openings are sealed up.

Then they are left for up to 75 years to allow radioactivity to decay to more manageable levels.

"This is the sixth reactor we'll have cocooned at Hanford and certainly the largest by far," said Cameron Hardy, DOE spokesman.

The five Hanford reactors cocooned so far -- D, DR, F, C and H -- largely are cookie-cutter copies of each other.

But the N Reactor complex, when cocooned, will be about three times larger than the other cocooned reactors.

Construction began in 1959 to build N Reactor to produce plutonium for nuclear weapons. The ninth production reactor at Hanford, it was designed to take advantage of new technologies and address concerns about radioactive materials that were released into the Columbia River by older reactors.

But with a push from the late US Sen. Henry "Scoop" Jackson, D-Wash., the project was expanded to include power production.

Water used to cool the reactor, which became radioactively contaminated, got hot enough to heat clean water in the adjoining building that is been cocooned, the heat exchanger building.

Steam then was sent through pipes on a trestle to the nearby Hanford Generating Plant.

Kennedy visited Hanford on Sept. 26, 1963, two months before his assassination, to speak at the ground-breaking for the power production plant.

"A nation dedicated to living in peace is forging, not a sword but a plowshare, the Hanford Generating Plant," he said.

Steam from the plant produced enough electricity for about 650,000 homes.

N Reactor ultimately was decommissioned in 1989, not because of pressure from the Chernobyl disaster but because the nation had enough plutonium, said Mike Lawrence, DOE's manager of Hanford at the time.

As word spread of the Chernobyl disaster April 26, 1986, national reporters gathered at the Richland Federal Building with questions about the similarities between the Chernobyl reactor and N Reactor, the only Hanford production reactor that had not been permanently shut down.

Despite similarities that only were superficial, "(N Reactor) drew tremendous attention and tremendous pressure" to shut down, Lawrence said.

Both reactors used graphite to moderate the nuclear reactions, and unlike commercial nuclear power reactors in the United States, neither had a large containment dome.

But unlike the Chernobyl reactor, N Reactor had a confinement system that allowed venting through filters to relieve pressure and had heavy concrete construction, Lawrence said.

He recalls how he took the reporters out to the reactor and showed them the 4-foot thick concrete construction, including the heavy concrete doors.

Upgrades were done after the Chernobyl disaster and the plant did operate at least briefly before the nation decided its stockpiles of plutonium were sufficient to end production, Lawrence said.

Now, as part of cocooning, the 80-foot tall reactor has been torn down to little more than its radioactive core and its face, where fuel assemblies were held, is exposed. The holes have been plugged and sealed.

Work also is under way to clean up about 140 waste sites and buried piping around the reactor.

"This is the last reactor built so we had pretty good historical drawings," said Mark Buckmaster, Washington closure project manager for field remediation of the reactor area.

Work is just starting to dig up six miles of piping, the largest of which were 9-foot diameter pipes used for water intake. Most of the piping is wrapped in asbestos and some of it is radiologically and chemically contaminated from carrying discharge.

However, unlike earlier Hanford reactors, there are no major burial grounds at N Reactor holding radioactive debris.

DOE has a December 2012 legal deadline to finish cleanup of the waste sites associated with N Reactor.

## **Hanford N Reactor Cocooning Ahead Of Schedule (AP)**

Associated Press, April 28, 2011

Work to cocoon the N Reactor on the Hanford nuclear reservation is ahead of schedule.

The Tri-City Herald reports the work should be finished by the end of the year, well ahead of the September 2012 deadline.

Five other Hanford reactors already have been cocooned, but the N Reactor is the largest. Construction began in 1959. President Kennedy visited the plant in 1963 at the ground-breaking for the power plant.

The N Reactor produced plutonium for nuclear weapons and used the heat to generate enough electricity for 650,000 homes.

It was decommissioned in 1989.

## **Inside The Ring (WT)**

By Bill Gertz, The Washington Times

Washington Times, April 28, 2011

China bank fraud alert

The FBI sent out a warning this week about a new wave of cybercrime emanating from China after computer thieves stole \$11 million from US businesses.

"The FBI has observed a trend in which cybercriminals - using the compromised online banking credentials of US businesses - sent unauthorized wire transfers to Chinese economic and trade companies located near the Russian border," the notice stated.

The alert, dated April 26, was first reported by the security website Dark Reading.

Computer security specialist Jeffrey Carr said the cyberfraud is "an entirely new tactic of using Chinese companies as an endpoint in ripping off US businesses."

"Wire transfers directly made to Chinese companies by an attacker is an unusually aggressive tactic and probably shouldn't be taken at face value," he said.

The FBI said that since March 2010 the bureau had uncovered 20 cases involving the compromise of online banking credentials of small- to medium-sized US businesses.

The credentials were used by criminals for wire transfers of money to Chinese companies. The companies were not identified by name, but most Chinese companies are wholly or partly state-owned.

"As of April 2011, the total attempted fraud amounts to approximately \$20 million; the actual victim losses are \$11 million," the alert stated.

The FBI notice is unusually detailed and indicates that Chinese hackers, many of whom have been linked to Chinese government entities, are engaged in cybercrime, in addition to widespread intelligence gathering and theft of data by computer.

The Chinese bank fraud was done by either "phishing" - obtaining confidential passwords by deceit - or through prompting employees of a targeted company to visit a malicious website that then infects their computers and takes them over remotely. In one case, a target computer hard drive was erased by hackers to stymie investigators, the FBI said.

The malware collected the user's bank transfer data, which then is used to make unauthorized transfers of funds to intermediary banks in New York and, finally, to "the Chinese economic and trade company bank account."

"The intended recipients of the international wire transfers are economic and trade companies located in the Heilongjiang province in the Peoples Republic of China," the notice said.

The companies appear to be official provincial government firms that use official names of Chinese port cities. The cities include Raohe, Fuyuan, Jixi City, Xunke, Tongjiang and Dongning, and the company names include "economic and trade," "trade" and "LTD."

The malicious software involved Zeus, Backdoor.bot and Spybot, which secretly steal passwords and bank transfer codes.

The FBI warned banks to notify customers about the Northeast China bank fraud in the designated cities and to closely monitor fund transfers there. The bureau said it could not identify the hackers and did not know whether the Chinese companies were the final deposit point for the stolen funds.

Missile-warning satellite

The Air Force is set to launch the first of a new generation of four infrared satellites capable of detecting hot spots such as missile launches from thousands of miles in space.

The first GEO-1 Space-Based Infrared System satellite, called SBIRS, will be launched May 6 atop an Atlas V booster from Cape Canaveral, Fla.

Brig. Gen. Roger Teague, the Air Force's space-based infrared systems director, said the launch is "the dawn of a new era in persistent overhead surveillance."

The maneuverable, \$1.2 billion satellite is the first of four new high-tech sensors. It will conduct orbit tests and six engine firings before reaching geosynchronous orbit 26,199 miles above Earth.

Its mission from launch until it is fully operational in October 2012 will be to watch for missile launches around the world. It also is part of US missile-defense systems and will provide what the military calls "technical intelligence and battle-space awareness" around the world.

"The SBIRS system will remain the gold standard for missile warning," Gen. Teague said in a conference call with reporters, noting that the infrared sensors are "the backbone of the important mission that we do, that our nation needs to provide that early warning of hostile missile intent and threats around the world for our nation and our allies."

Gen. Teague said GEO-1 is "so much more sensitive" than other satellites used for missile warning, including the Defense Support Program constellation of satellites.

"We can see much more, much earlier, much sooner ... many dimmer targets than we ever could before," he said, declining to elaborate because of concerns about classified information.

The new satellite also will provide new power for spying on battlefields and on the technical specifications of foreign missiles and other heat-producing systems, he said.

"It's how fast can I process information that the sensor is detecting, and how quickly can I disseminate that information to battlefield commanders? That's the real power of this system and the capabilities that we'll have," Gen. Teague said.

Manufactured by Bethesda-based Lockheed Martin, GEO-1 uses sophisticated scanning sensors. It will monitor "missile launches and natural phenomena across the Earth, while the staring sensor will be used to observe smaller areas of interest with enhanced sensitivity," the company said in a statement.

IED dogs of war

The Pentagon is developing a new dog for the battlefield. This canine will be able to sniff out hard-to-detect, buried improvised explosive devices (IEDs) that are increasingly maiming and killing troops in Afghanistan.

For currently deployed dogs - and electronic sensors - such fertilizer-based homemade explosives are difficult to find.

The Pentagon's Joint Improvised Explosive Device Defeat Organization (JIEDDO) decided to train its own specialized kennel of sniffers before sending them to war in September.

"The JIEDDO dog program is solely focused on the current threat in Afghanistan to detect homemade explosives off leash," spokeswoman Irene Smith told special correspondent Rowan Scarborough.

"There are other military working dogs who are trained off a [Defense Department] scent list, allowing them to be deployed around the world. JIEDDO's dog program is specifically tailored to [Afghanistan] ... This is a unique capability from the other military working-dogs programs."

The agency is working with a number of breeds in addition to the ubiquitous, human-friendly Labrador retriever.

"There is a debate on which dog is best for detecting explosives," Ms. Smith said.

Sending super dogs to Afghanistan is one of several moves JIEDDO is making in response to an increase in the number of pressure-activated IEDs buried around villages by the Taliban to attack Marines and soldiers approaching on foot.

China's Fiji gambit

A State Department cable made public this week highlights China's efforts to co-opt the government of the remote South Pacific island of Fiji using what the cable called "checkbox diplomacy."

The 2009 cable quoted an official from Fiji's military regime as saying the island nation, located some 1,700 miles from Australia and 1,200 miles from New Zealand, is viewed by the Chinese as "an important partner, noting that China valued Fiji as a useful transit point and for its proximity to important shipping lanes."

The official said China has wide influence in Fiji because of its assistance, trade and investment ties and noted that "the Chinese government was providing Fijian government officials with training on a range of skills in China," including "training military officials, a practice that began after the 2006 coup."

## **IN THE BLOGS:**

### **Radioactive Strontium Found In Hilo, Hawaii Milk (FORBES)**

By Jeff McMahon

Forbes, April 28, 2011

A radioactive isotope of strontium has been detected in American milk for the first time since Japan's nuclear disaster—in a sample from Hilo, Hawaii—the Environmental Protection Agency revealed yesterday.

"We have completed our first strontium milk sample analysis and found trace amounts of strontium-89 in a milk sample from Hilo, Hawaii. The level was approximately 27,000 times below the Derived Intervention Level set by the US Food and Drug Administration," EPA said in a statement emailed to me yesterday afternoon. EPA posted the test result at [epa.gov](http://epa.gov) in a pdf.

EPA found 1.4 picoCuries per liter of strontium-89 in a milk sample collected in Hilo on April 4.

Although the EPA tests milk, the FDA regulates it, and the FDA's Derived Intervention Level—the standard observed for food—is 4,400 pCi/L for strontium-90. I'm working to confirm whether FDA has a separate DIL for Sr-89.

The EPA's Maximum Contamination Level for Sr-89 in drinking water is 20 pCi/L. (For more on the difference between EPA and FDA standards, see "Why Does FDA Tolerate More Radiation Than EPA?")

The two man-made isotopes of strontium—Sr-89 and Sr-90—are among the most dangerous products of nuclear fission to human and animal health. Both are “bone-seekers,” chemically similar to calcium, that collect in bone and marrow, where they are known to cause cancer. They are particularly dangerous to the growing bones of fetuses and children.

The half-life of Sr-89 is 50.5 days, and Sr-89 is sometimes used as a cancer pain treatment under the commercial name Metastron, because it collects in and destroys the fast-growing cells of bone cancer. EPA considers Sr-90, meanwhile, “the most important radioactive isotope in the environment” because of its health impacts and a longer half-life of 29 years.

EPA has found no strontium-90 in its testing, according to the statement, and it has found neither of the strontium fission products in drinking water.

Image via Wikipedia

Where’s the strontium? has been a question pressed by nuclear watchdogs—including one of the participants in this forum, liberationangel—since the Fukushima Dai-Ichi nuclear disaster. And not only where, but why aren’t the hazardous man-made isotopes of strontium included in the EPA’s open data system?

EPA does not list strontium in that system, I have learned, because it does not routinely test for strontium, even during its increased testing since the Fukushima disaster.

Tests for strontium are triggered by the presence of cesium isotopes, which have been found in milk from Hilo, Montpelier VT, and Oakland and in precipitation from Boise, Richmond CA, Salt Lake City and a few other cities.

The Strontium-89 was found in April 4 Hilo samples previously found to contain cesium-134 and cesium-137, and the test results were released only yesterday because they take longer to analyze, according to EPA’s statement:

In response to the Japanese nuclear power plant release, if we identify radioactive cesium... those samples will be analyzed for strontium. Testing for strontium is a complex process that takes time.”

More cesium was found in a Hilo milk sample on April 13. All of EPA’s initial milk testing is available here.

Some bloggers and activists have accused EPA of finding and then concealing plutonium and strontium in US test results. The accusations seem to stem from searches of EPA’s more complicated Envirofacts database, which EPA made available to the public only recently in response to the Fukushima disaster. The database had previously been restricted to scientists.

The quantities of strontium and plutonium listed in that database are so minute—for example, 0.0008 pCi/m<sup>3</sup> per cubic meter, and, in another case, a negative number: -0.00013 pCi/m<sup>3</sup>—and they are so dwarfed by the margin of error, that EPA categorizes them as “non-detectable,” according to the EPA statement sent to me yesterday:

It is important to note that Envirofacts contains all data points, including negative numbers and numbers we consider to be non-detects, because having all the results is important for technical experts to gain a complete understanding of the situation. A data point is considered a non-detect when it is less than or equal to twice the combined standard uncertainty (which is listed on the Envirofacts tables).

Thus, numbers that appear in EnviroFacts as minute or negative quantities of strontium and plutonium may appear as “non-detectable” in public data releases. EPA reported at the end of its business day yesterday there have been no detectable strontium or plutonium readings other than the Hilo result. Related Posts:

Radiation Detected In Drinking Water In 13 More US Cities, Cesium-137 In Vermont Milk

A hat tip to liberationangel and mothra for prompting and informing this post.

## **INTERNATIONAL NUCLEAR NEWS:**

### **Tepco To Start Decontaminating Water At Fukushima Nuclear Plant In June (BLOOM)**

By Tsuyoshi Inajima

Bloomberg News, April 28, 2011

Tokyo Electric Power Co. plans to begin decontaminating water flooding its crippled Fukushima Dai- Ichi nuclear power plant in June, to allow more workers to get access to damaged equipment needed for cooling reactors.

The amount of radioactive water lying in basements and trenches has increased by almost half to 87.5 million liters (23.1 million gallons) since April 5, Junichi Matsumoto, a general manager at the utility known as Tepco, said late yesterday.

Tepco has used fire engines and external pumps to get water into reactors and spent fuel after the March 11 earthquake and ensuing tsunami knocked out external power and cooling systems at the plant, triggering the worst nuclear accident since Chernobyl. The company estimates about half a million liters of radioactive water is overflowing every day.

"Contaminated fluids will keep building up as Tepco pours in water," Tadashi Narabayashi, a professor of nuclear engineering at Hokkaido University. "That's why the most important thing now is to create a cooling system that circulates the water back to the reactors."

Areva SA (CEI) and Kurion Inc. are supplying a water treatment unit, which is part of a decontamination facility that includes storage tanks and desalination systems designed by Toshiba Corp. (6502) and Hitachi-GE Nuclear Energy Ltd.

The treatment unit can process 1.2 million liters of contaminated water per day, Matsumoto said.

Tepco shares rose as much as 3.9 percent today to 428 yen and traded at 417 yen at 11 a.m. in Tokyo.

## **NASA Technology Examines Inside Of Japan's Crippled Nuclear Plant (INTLBIZ)**

By Daniel Lee

[International Business Times](#), April 28, 2011

Design techniques were used to create the rover currently examining the inside of Japan's nuclear reactors, in areas not yet deemed safe for human crews, which before were honed at NASA's Jet Propulsion Laboratory in Pasadena, Calif., for Mars rovers.

Recently, iRobot provided two PackBots to help after the devastating March 11, 2011, earthquake and tsunami in Japan.

The PackBot models, currently taking radioactivity readings in the damaged Fukushima Daiichi nuclear power plant buildings, are equipped with multiple cameras and hazard material sensors. The images and readings provided by the PackBots indicated radiation levels are still too high to allow human repair crews to safely enter the buildings.

The iRobot PackBot employs technologies used previously in the design of "Rocky-7," which served as a terrestrial test bed at JPL for the current twin Mars rovers, Spirit and Opportunity.

PackBot's structural features are modeled after Rocky-7, including the lightweight, high-torque actuators that control the rover; and its strong, lightweight frame structure and sheet-metal chassis.

PackBot's other "ancestor," called Urbie, was an urban reconnaissance robot with military and disaster response applications. Urbie's lightweight structure and rugged features also made it useful in emergency response situations, such as at sites contaminated with radiation and chemical spills, and at buildings damaged by earthquakes.

Urbie's physical structure was designed by iRobot Corp., Bedford, Mass., while JPL was responsible for the intelligent robot's onboard sensors and vision algorithms, which helped the robot factor in obstacles and determine an appropriate driving path. Following the success of Urbie's milestones, the team at iRobot created its successor: PackBot.

Since 2002, iRobot has delivered variations of the PackBot model to the US Army, US Air Force and US Navy.

The tactical robot's first military deployment was to Afghanistan in July 2002, to assist soldiers by providing "eyes and ears" in the most dangerous or inaccessible areas. It was also used to search through debris at Ground Zero after the Sept. 11, 2001 attacks in New York.

## **III. Officials Send Radiation Detectors To Japan (AP)**

[Associated Press](#), April 28, 2011

Ill. officials send radiation detectors to Japan

Associated Press | Posted: Thursday, April 28, 2011 4:05 am

4/28/2011 4:05:00 AM

Illinois law enforcement agencies are sending 2,000 radiation detectors to Japan to help with recovery efforts around a nuclear power plant crippled by the recent earthquake.

Kent Jepsen is inventory coordinator for the Illinois Law Enforcement Alarm System. He told The (Champaign) News-Gazette on Tuesday that the detectors were among 6,200 bought by the state for use by local agencies.

Jepsen says those agencies agreed they could spare some of the detectors to help with the recovery in Japan.

Radiation has leaked from the damaged nuclear plant on Japan's east coast since the March 11 earthquake.

## **Treasury Seeks More Iran Sanctions Scrutiny With Proposed Rules (WSJ)**

By Joe Palazzolo

[Wall Street Journal](#), April 28, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **US Urges Turkey On Iran Sanctions (AP)**

By Christopher Torchia, Associated Press

[Associated Press](#), April 28, 2011

ISTANBUL – Iran could try to exploit growing trade ties with Turkey, a neighbor with a booming economy, in order to circumvent international sanctions aimed at forcing it to stop its suspected efforts to make nuclear weapons, a US Treasury Department official said Wednesday.

The warning reflected US concerns that Turkey might become a vulnerable link in the effort to isolate Iran, which is under four sets of U.N. Security Council sanctions, primarily for defying council demands to stop uranium enrichment. Turkey has pledged to abide by U.N. resolutions, though it has differed with the US stance on Iran and is eager to develop energy and other business ties with its neighbor.

"As trade relationships expand, the risk of abuse by Iran expands at the same time," David S. Cohen, acting undersecretary for terrorism and financial intelligence, said at a news conference at the US consulate in Istanbul.

"Iran has a track record of using deceptive practices to facilitate its proliferation activity, and it tries to hide within a broad stream of commerce those transactions that they need in order to continue their nuclear program and their ballistic missile program," Cohen said.

Cohen delivered his message to senior government officials and banking sector leaders on a two-day visit. He did not offer a direct assessment of Turkey's implementation of sanctions, but he noted that its financial sector was "working to protect itself" from allegedly illicit activities by Iran, and that authorities last month seized an Iranian plane bound for Syria that he said was carrying weapons.

In that incident, Turkey said it seized the cargo of an Iranian plane because the shipment violated U.N. sanctions. Turkish media said the aircraft was carrying light weapons, including automatic rifles, rocket launchers and mortars.

Turkey, the biggest Muslim ally in NATO, has worked closely with Washington in Iraq and Afghanistan. But it has also sought closer ties with Iran, which says U.N. sanctions are "illegal" and that it has the right to develop peaceful nuclear power. Last year, Turkey and Brazil became the only two U.N. Security Council members to vote against a US-backed measure to impose new sanctions on Iran because of its disputed nuclear program.

The two countries had brokered a fuel-swap agreement with Iran that was cast as an alternative solution to Western concerns about Tehran's uranium enrichment. Low-enriched uranium can be used to fuel a reactor to generate electricity, which Iran says is the intention of its program. But if uranium is further enriched to around 90 percent purity, it can be used to develop a nuclear warhead.

The council vote hurt relations between the United States and Turkey, which hosted an unsuccessful round of talks between Iran and world powers in Istanbul in January.

Turkish President Abdullah Gul said in February that annual trade with Iran had reached \$10 billion and the aim was to reach \$30 billion in the next few years. However, a Turkish business group said the sanctions were taking their toll on cross-border trade.

"Companies hesitate to work between Turkey and Iran, even for goods outside embargo categories," said Ozcan Alas, chairman of the Iran and Middle Eastern Trade Development Association, based in Istanbul. "Turkey interferes so much that trade has shifted to the illegal mountain zones. Turkey keeps saying, 'You cannot sell this, and buy that,' while Iran applies a horrid customs tariff for protection."

Cohen said it was vital that Turkish banks refrain from doing business with any Iranian banks or institutions suspected of proliferation activities. He said Iran's Bank Mellat had been judged to be involved in illicit activity by the United States, the European, Japan, South Korea and other nations, and that the bank and its branches in Turkey should be isolated "entirely."

Bank Mellat's website says it has 1,815 branches inside Iran, and four foreign branches — in South Korea, Istanbul, the Turkish capital, Ankara, and the western coastal city of Izmir. It has subsidiaries in Armenia and London.

Total gross profit of the foreign branches and subsidiaries was \$77 million in the 2009-2010 financial year, the bank says.

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Associated Press writer Ceren Kumova contributed from Ankara, Turkey.



# NUCLEAR REGULATORY COMMISSION NEWS CLIPS

FRIDAY, APRIL 29, 2011 7:00 AM EDT

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## **NRC NEWS:**

### **NRC Chief Questions Blackout Plans For US Plants (AP)**

By Dina Cappiello

Associated Press, April 29, 2011

WASHINGTON – The nation's top nuclear regulator cast doubt Thursday on whether reactors in the US are prepared for the type of days-long power outage that struck a nuclear power plant in Japan.

The Nuclear Regulatory Commission has only required plants in this country to cope without power for four to eight hours. After that time, it assumes some electrical power will be restored.

NRC chairman Gregory Jaczko on Thursday questioned whether four to eight hours is enough time, even though it's unlikely a nuclear power plant would lose power from both the grid and emergency diesel generators as the Japan plant did. Requirements put in place after the September 11 terrorist attacks could lengthen plants' ability to withstand a blackout.

"Four hours doesn't seem to be a reasonable time to restore offsite power if you lost the diesels immediately," Jaczko said at a commission meeting at the NRC's Rockville, Md., headquarters. "In the event there is a station blackout that is externally driven, I'm not convinced that in that situation four hours" is enough time to restore offsite power.

An Associated Press investigation last month examined the risk to the nation's 104 nuclear reactors to a complete loss of electrical power. In the US, such a "station blackout" has only happened once, at the Vogtle Electric Generating Plant in eastern Georgia in 1990. There, power was restored in 55 minutes.

The Japan disaster showed that it could be days before the electricity needed to pump water and keep the radioactive core from melting can be turned back on. In Japan's case, the plant operator found other ways to cool the cores without onsite or offsite power.

Of the 104 nuclear reactors in the US, 87 can cope for four hours in a blackout. Another 14 can cope for eight hours, and three can last for 16 hours.

As part of a review initiated after the Japan incident, the commission is looking at whether the blackout rule needs to be updated. At the time the rule was written in the 1980s, the commission assumed electrical power could be restored in 50 minutes to 2 hours. The NRC added an additional two hours to that time as a safety buffer.

Since then, plants have lost offsite power for longer periods of time. In every case, diesel generators kicked on and supplied electrical power, sometimes for days. There also are agreements with power grid operators that nuclear power plants get first priority as power is restored.

"We have a high expectation you will restore offsite power, restore emergency diesels or use alternate sources," said Pat Hiland, director of the NRC's reactor regulation engineering division.

But Jaczko pointed out that the blackout regulation is designed to deal with a situation where even diesel generators don't work, as in the case of the Fukushima Dai-ichi plant in Japan.

A top staffer told NRC commissioners Thursday that the Japan situation "has definitely improved" in recent weeks.

Bill Borchardt, NRC's executive director for operations, said that while there are still many unanswered questions about equipment failures and other problems at the facility, the situation is "certainly not as highly dynamic" as it was.

Overall, Japan is "making progress," he said. "They have a road map and certainly a good start toward long-term restoration."

## **Inside Politics (WT)**

Washington Times, April 29, 2011

### **WHITE HOUSE**

First lady says overseas trips are family highlights

Michelle Obama says some of the first family's best moments have been during trips abroad.

During an interview on "The Oprah Winfrey Show," the first lady singled out a visit to Rome in 2009 when the president and his family met Pope Benedict XVI. She talked about watching daughters Malia and Sasha as they met the pontiff.

President Obama joked during the interview that, as the girls got tired, every time someone wearing a frock passed by they asked, "Is that the pope?" He said he told them they would know when it was the pope.

Miss Winfrey's show released an excerpt from the interview Thursday. The Obamas taped it Wednesday at Miss Winfrey's studio in Chicago. It's scheduled to be broadcast nationally on Monday.

### **HOUSE**

Clarification urged for cities on fingerprinting program

Rep. Zoe Lofgren, California Democrat, is asking for an investigation of Homeland Security Department employees over a supposedly voluntary immigration enforcement program that linked cities with the federal immigration database.

When cities declined to join the program, federal officials told them it was mandatory.

Ms. Lofgren said she thinks some of the statements made by Homeland Security Department and Immigration and Customs Enforcement employees were intentionally false and misleading.

She asked the department's inspector general to investigate.

The Secure Communities program invited cities to have local suspects' fingerprints run through the federal immigration database. But the Associated Press reported in February that cities were not allowed to decline to participate, despite assurances to the contrary.

### **WHITE HOUSE**

Obama lauds free-trade deal with Panama

President Obama is commending Panama's president for his leadership in resolving issues that had stalled a key free-trade agreement between their countries.

Mr. Obama said he is confident that the deal will be good for the economy in the US and in Panama. He spoke in the Oval Office alongside President Ricardo Martinelli.

The US and Panama reached agreement on the pact this month after the Panamanian government signed off on a provision to deter tax evasion by using banks in the Central American country.

Mr. Obama also said Panama would be a key partner in regional security and the promotion of democracy in Latin America.

### **SENATE**

Lawmaker seeks ban on doping of horses

Sen. Tom Udall, New Mexico Democrat, is seeking a national ban on performance-enhancing drugs in horse racing, calling for a federal role in a sport that lacks uniform standards.

Under the legislation, any person with three violations would be permanently banned from horse racing. A horse that tests positive for performance-enhancing drugs three times would receive a two-year ban.

The bill will be introduced three years after some in the industry urged the federal government to get involved. One prominent horse owner pleaded at a hearing for Congress to help.

Mr. Udall plans to announce the bill next week, ahead of the Kentucky Derby. The Associated Press obtained a draft of the legislation Thursday.

#### USDA

Judge OKs \$680 million settlement for Indian farmers

A federal judge has approved a \$680 million settlement between the Agriculture Department and American Indian farmers who say they were denied loans because of discrimination.

The two sides agreed on the deal last year, subject to court approval. US District Judge Emmet G. Sullivan approved the terms Thursday.

Individuals who can prove discrimination could receive up to \$250,000. The agreement also includes \$80 million in farm debt forgiveness for the Indian plaintiffs and a series of initiatives to try to alleviate racism against American Indians and other minorities in rural farm loan offices.

The lawsuit, filed in 1999, contends Indian farmers and ranchers lost hundreds of millions of dollars over several decades. The government last year settled a similar lawsuit filed by black farmers more than a decade ago.

#### ENERGY

Nuclear regulator asked about blackout plans

The nation's top nuclear regulator is casting doubt on whether reactors in the US are prepared for the type of prolonged power outage that struck a nuclear power plant in Japan.

Nuclear Regulatory Commission Chairman Gregory B. Jaczko said Thursday that a US requirement that a plant be able to last at least four hours without any electrical power "doesn't seem to be reasonable" after the Japanese disaster. After that time, the radioactive core's cooling systems could fail unless some power is restored.

Of the 104 nuclear reactors in the US, 87 can last four hours in a blackout. Another 14 can cope for eight hours, and three can last for 16 hours.

The Fukushima Dai-ichi plant had no electrical power for days after the earthquake and tsunami.

Sponsored Link: 'Black Market Income' Video reveals how to get an extra \$34,000/year... Without touching regular Wall Street investments.

### **Nuclear Regulator Scrutinizes Back-up Power Plans (REU)**

By Roberta Rampton And Ayesha Rascoe

[Reuters](#), April 29, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

### **Jaczko Questions NRC Rules On Backup Power (GWIRE)**

By Hannah Northey

[Greenwire](#), April 29, 2011

Just hours after tornadoes knocked out three reactors at a plant in north Alabama, the top US nuclear regulator today questioned why the country's nuclear plants are only required to have four hours of battery life if all sources of power are lost.

Nuclear Regulatory Commission Chairman Gregory Jaczko said he is not convinced the agency has sufficient data to ensure four hours of battery life is adequate to restore power if a plant loses backup generators, power lines and all other energy sources.

"We have lots of examples where it takes longer than four hours to restore offsite power," Jaczko said in reference to the agency's requirement. "There seems to be an inconsistency with that."

NRC staff said the four-hour requirement is based on a plant losing power lines and backup generators and noted that operators can find ways to extend the life of the batteries.

US plants have sufficient stockpiles of generators and batteries and are meeting the requirements of the rule, which dates back to the 1980s, NRC staff said.

Forty-four plants have batteries to continue powering reactors for four hours if diesel generators are lost. Sixty plants are meeting the NRC requirements with alternate power sources that enable them to reconnect with the electric grid when normal power sources are shut down, agency staffers said.

NRC said three hours is the longest time a reactor has taken to reconnect to the grid in routine cases. An exception was the 2003 blackout in the Northeast, an "extraordinary" case in NRC parlance, when it took plants up to days to reconnect.

NRC Commissioner George Apostolakis said assumptions underpinning the commission's rules need to be re-examined and called for studies on how plants could withstand a power loss over a matter of weeks.

The plants' ability to withstand the loss of power lines and the failure of emergency onsite generators has been scrutinized in the aftermath of the Japanese nuclear crisis that began on March 11.

A magnitude-9 earthquake rocked the Fukushima Daiichi nuclear complex on the country's east coast, followed by a massive tsunami that flooded equipment at the plant. The damage made it impossible to restore power at the site, NRC said.

The commission is also reviewing the status of Tennessee Valley Authority's Browns Ferry nuclear plant in near Athens, Ala., where storms yesterday knocked three reactors offline.

The units at the plant are now running on backup generators, which are also cooling a spent fuel pool there, said TVA spokesman Mike Bradley.

Bradley said the plant shut down safely and is stable.

## **Nuclear-Plant Safety Questioned (WSJ)**

By Tennille Tracy

Wall Street Journal, April 29, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **US Nuclear Chief Questions Adequacy Of Emergency Power At US Plants (DJNews)**

By Tennille Tracy

Dow Jones Newswires, April 29, 2011

WASHINGTON -(Dow Jones)- The US nuclear chief questioned Thursday whether US nuclear plants are prepared to deal with major losses of power that last several hours or even days.

In a meeting of the Nuclear Regulatory Commission, NRC Chairman Gregory Jaczko said existing standards for emergency power might not be "reasonable" given the damage that major catastrophes can cause at nuclear facilities.

In Japan, for example, a one-two punch involving an earthquake and tsunami knocked out primary power and then back-up generators at the Fukushima Daiichi plant, causing a station blackout that crippled the cooling system.

In the wake of the Fukushima disaster, nuclear experts have raised questions about the adequacy of emergency power supplies at US facilities. They have taken particular issue with nuclear plants that rely on batteries because the batteries have limited lifespans.

An NRC task force, formed after the Fukushima disaster to assess the safety of US facilities, is also reviewing the adequacy of station blackout procedures, Jaczko said.

Dozens of US nuclear plants rely on batteries for emergency power. The NRC assumes those facilities will be able to access reliable power—either by reconnecting to the grid or jump-starting diesel generators—within four hours of losing power.

Other plants rely on alternative electricity supplies, such as gas turbines, for emergency power and the NRC grants them longer periods of time to reconnect to reliable power.

On Thursday, Jaczko questioned whether it was reasonable to assume US facilities would be able to access reliable power within a matter of hours, following the events at Fukushima.

"I'm not convinced that in that situation four hours is a reasonable time to restore offsite power," Jaczko said. "That may be something we want to look at a little bit more."

Thursday's meeting, whose goal was to review the US station-blackout standards, fell on the heels of a power outage at a nuclear plant operated by the Tennessee Valley Authority.

In the midst of storms and tornadoes that rocked the Southeast, transmission lines going into the Browns Ferry nuclear facility in Alabama were damaged. After power was lost at the site, back-up diesel generators and batteries helped the facility shut down properly.

"Everything worked as was designed," Barbara Martocci, a spokeswoman for TVA, said.

The event "provided a reminder" about the importance of emergency power regulations, Jaczko said.

There has been only one event in the US that qualified as a station blackout. In 1990, the Vogtle Nuclear Plant lost power after a truck backed into a column supplying power to the units.

## **The Latest From The N.R.C. On Fukushima, And More (NYT)**

By Matthew L. Wald

New York Times, April 29, 2011

The Nuclear Regulatory Commission has not yet said what changes it will order at American reactors in response to the Fukushima disaster, but at a briefing on Thursday morning, some clues emerged about areas that might require further study.

The issue the five-member commission was considering was its "station blackout rule," which dates from 1980 and specifies what preparations the plants must make for the loss of off-site power because of a blackout in the area and the failure of the emergency diesel generators to start. While the commission is not particularly worried about a tsunami, which caused the station blackout at Fukushima, it is concerned about getting the same result from other causes.

One obvious question is whether the four-hour battery capacity at most plants is adequate to run instruments, lights and valves until power can be restored.

A commission staff member, George Wilson, a specialist in electrical engineering, explained that the commission had asked the industry how long it was likely to take to restore power, either by starting an emergency diesel generator or some other local source, or reconnecting to the grid. The answers, he said, ranged from 0.9 hour to two hours. So the staff doubled that number and required four hours of battery life.

But how long does it typically take to end a station blackout, asked William D. Magwood, one of the commission members. In a way, that was a trick question, because there has only been one station blackout: at the Georgia Power Company's Alvin Vogtle plant near Augusta, while that plant was shut for maintenance. The diesel generators were also undergoing maintenance work, and a truck knocked down a utility pole that was bringing in outside power. The answer there was 55 minutes, but that is an isolated case.

Mr. Wilson said that the commission staff was in touch with the North American Electric Reliability Corporation, which is a body comprised of industry experts that sets rules for grid operations, and the Federal Energy Regulatory Commission. But he did not have an answer about how long it typically takes to restore power.

Many of the plants are connected to the grid in two different paths, so that if one substation fails and power stops flowing, another may still work. But Mr. Magwood also asked whether both paths could fall victim to the same problem.

"If you have a hurricane that takes out the transmission lines for one source of off-site power, why do you think there would be a second?" he asked.

Mr. Wilson said that two links would provide greater security than one, but he pointed out that the grid itself is subject to the commission's rule for "safety grade" systems, which requires that such systems include separate, redundant equipment so that no single failure can interrupt their function.

In the course of the 90-minute briefing, the commissioners also got an update from Bill Borchardt, its senior staff official, on the status of the damaged Fukushima Daiichi nuclear plant. For the first month of the accident, the N.R.C.'s assessment was consistently grimmer than that of the plant owner, Tokyo Electric Power. It was the N.R.C.'s assessment that one of the spent fuel pools was empty, or nearly so, that led to advice that Americans stay at least 50 miles from the site. Now, though, the agency is painting a slightly better picture.

"The situation has definitely improved, but we're still in the accident mitigation phase," he said, referring to ongoing efforts to reduce the amount of radioactive material escaping from the reactors.

"They're still using temporary pumps and hoses to inject water into the reactor vessels and spent fuel pools and into the containment," Mr. Borchardt said. "There are still many unanswered questions regarding the status of various pieces of equipment." He listed the reactor vessels, the containments and the spent fuel pools.

"I would describe the situation as not being quite stable but certainly not as highly dynamic" as on March 21, when he last briefed the commission, he said.

But a continuing problem, Mr. Borchardt said, is that many of the monitoring instruments are giving inaccurate readings or have failed completely.

## **US Reactor Review Finds No Need For Quick Action, NRC Says (BLOOM)**

By Simon Lomax

Bloomberg News, April 29, 2011

A review of US nuclear power plants hasn't found a need for quick changes in response to Japan's reactor crisis, a US Nuclear Regulatory Commission official said.

"To date, we have not identified anything that requires immediate action," Bill Borchardt, the executive director for NRC operations, said today at a meeting at the agency's headquarters in Rockville, Maryland.

US regulators and lawmakers are examining the safety of the nation's 104 commercial nuclear reactors after a March 11 earthquake and tsunami triggered a partial meltdown at the Fukushima Dai-ichi power plant.

The situation in Japan “has definitely improved,” although the plant isn’t yet “quite stable,” Borchardt said. “The Japanese are making progress.”

Destroyed power lines, flooded emergency diesel generators and depleted backup batteries knocked out the cooling systems at Tokyo Electric Power Co.’s Fukushima Dai-ichi plant. Fuel rods in four of the plant’s six reactor buildings overheated, causing fires, explosions and radiation leaks in the world’s worst nuclear incident since the 1986 Chernobyl disaster.

The utility, known as Tepco, has doused the damaged reactors with water for almost seven weeks to keep them cool.

Radiation levels at reactor No. 1 rose to their highest level since the earthquake and tsunami struck, Tepco said yesterday, citing readings from two robots sent into the building. The peak levels recorded at the plant, about 135 miles (220 kilometers) north of Tokyo, were more than four times the annual dose allowed for Japanese nuclear workers.

It may take three to six months to complete a cold shutdown, where reactor core temperatures fall below 100 degrees Celsius (212 degrees Fahrenheit), Tepco said April 17.

In March, the NRC began a 90-day safety review of US reactors in light of Japan’s crisis. The agency’s officials will provide an update on May 12, according to the NRC.

The agency approved regulations in 1988 that require nuclear plants to be able to restore electricity to cooling systems if there’s a “station blackout.” In the US, 44 reactors rely on batteries for backup power. The remaining 60 reactors can use “alternate” power sources, such as diesel generators or natural-gas turbines, according to the NRC.

Since the 2001 terrorist attacks on the US, the NRC has also required nuclear plants to make changes so they can withstand disasters that cause “the complete loss of offsite power and all onsite emergency power sources,” according to an agency fact sheet.

## **Tennessee Valley Shuts All Browns Ferry Reactors After Storm (BLOOM)**

By Leela Landress

Bloomberg News, April 29, 2011

Tennessee Valley Authority shut all three Browns Ferry reactors in Alabama yesterday after severe storms and tornadoes caused a brief power outage at the plant, Barbara Martocci, a company spokeswoman, said.

The plant, which includes the three reactors, automatically shut at 5:30 p.m. local time after losing the off-site power supply, Martocci, who is based in Knoxville, Tennessee, said today in a telephone interview.

“They are in safe shutdown mode and will stay shut down until we can assess the damage in the area and determine where the power lines are down and what we need to restore those lines in order for anything we generate from Browns Ferry to go back out to the public,” she said.

The plant automatically shut down and the emergency systems came on as they were designed to do, Martocci said.

A series of lethal storms moved through the US Southeast killing at least 178 people in five states. Alabama was hardest-hit, as high winds tore apart homes and businesses, the Associated Press reported. About 300,000 people were without power.

It may have been the deadliest single day for tornadoes in the US since April 3, 1974, when 310 people died, according to AccuWeather Inc.

The Browns Ferry plant has a combined capacity of 3,284 megawatts, enough to power 2.6 million average US homes, according to US Energy Department statistics. The plant is located about 84 miles (135 kilometers) north of Birmingham.

## **Alabama Nuclear Power Plant Offline After Storm (AFP)**

AFP, April 29, 2011

WASHINGTON — US officials were Thursday monitoring a nuclear plant in the southern state of Alabama that lost power amid severe storms that swept through the region.

The US Nuclear Regulatory Commission (NRC) said the Browns Ferry nuclear power plant near Athens, Alabama “lost offsite power early Wednesday evening due to severe storms that damaged power lines in the area.”

The plant automatically shut down after losing offsite power and operators from the Tennessee Valley Authority are working to restore that supply, said the NRC, stressing the plant’s “safety systems have operated as needed.”

The historic storms that slammed the region on Wednesday left at least 190 people dead, killing 128 people in Alabama alone with tornados and floods ripping a trail of destruction across the state.

## **US Nuclear Plants Hit By Storm Are Stable: NRC (REU)**

By Roberta Rampton And Ayesha Rascoe

Reuters, April 29, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Alabama Nuclear Plant Shut Down Safely After Storm (WSJ)**

By Angel Gonzalez And Ryan Tracy

Wall Street Journal, April 29, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Alabama Nuclear Plant Remains In Safe Shut-Down -TVA Spokeswoman (DJNews)**

By Angel Gonzalez

Dow Jones Newswires, April 29, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Deadly Storms, Tornadoes Sweep Through South; Tuscaloosa In Alabama Is Hard-hit (LAT)**

### **Deadly storms, tornadoes kill nearly 200 in South**

Los Angeles Times, April 29, 2011

A wave of tornado-spawning storms strafed the South on Wednesday and early Thursday, splintering buildings across hard-hit Alabama and killing at least 194 people in five states.

At least 131 died in Alabama alone, officials said early Thursday. Among the cities hit hard by a tornado was Tuscaloosa, home to the University of Alabama. The mayor said sections of the city were obliterated and its infrastructure decimated.

"What we faced today was massive damage on a scale we have not seen in Tuscaloosa in quite some time," Mayor Walter Maddox told reporters Wednesday.

The tornado "paralyzed many city operations that directly respond to events like we experienced today," he said. "Pray for us."

News footage showed paramedics lifting a child out of a flattened home, with many neighboring buildings in the city of more than 83,000 also reduced to rubble.

The injured flocked to DCH Regional Medical Center. More than 200 were admitted and four of them died, hospital spokesman Brad Fisher said.

"We got no water and we're on emergency power," he told The Times. "It's pandemonium."

The hospital itself was damaged, Fisher said. Nine diesel generators provided power Wednesday night, as patients and workers relied on bottled water.

Alabama Gov. Robert Bentley declared a state of emergency and mobilized 1,400 National Guard troops to help with search and rescue and law enforcement.

President Obama declared the state a disaster.

"Michelle and I extend our deepest condolences to the families of those who lost their lives because of the tornadoes that have swept through Alabama and the southeastern United States," he said in a statement. "Our hearts go out to all those who have been affected by this devastation, and we commend the heroic efforts of those who have been working tirelessly to respond to this disaster."

Around Tuscaloosa, traffic was snarled by downed trees and power lines, and some drivers abandoned their cars in medians. University officials opened the student recreation center as a shelter.

Blaine Duncan, 34, a high school teacher, had Wednesday off. The storms had been so bad Tuesday evening that the school day had been canceled citywide. About 5:15 p.m., he was relaxing at the home he shares near the university with T.D. Wood, 26, a cook at a local restaurant.

"I was watching the news, and they had a camera stationed in downtown Tuscaloosa on a rooftop," Duncan told The Times. "It picked up a tornado heading practically straight for the camera, which would mean it was headed straight for our house."

The camera went dark. Then Duncan's power went out. He and Wood fled to the hallway, hoping to be safer there. They waited as a low rumbling became a loud rumbling. It was over in 90 seconds. They were fine.

But what they saw outside was shocking. Trees down and blocking their residential street, trees bashed into homes, homes with gashes in the roofs and, then, a few blocks away, a more apocalyptic scene:

"Complete devastation," Duncan said, "to the point where it was piles of bricks instead of buildings."

The University Mall was badly damaged, he said, as was the strip mall that housed the Barnes & Noble. Cars were overturned in the middle of the street with windows broken out. People were roaming amid the rubble, surveying the damage, or "displaced and trying to figure out what they were going to do next."

Tuscaloosa City Councilman Lee Garrison said the twister touched down at the southwest corner of the city and moved northeast, "staying on the ground pretty much the entire time."

About 83,000 homes were without power. Two fire stations and a police substation were also badly hit.

"We are right now just doing what we can," Garrison said, adding that other cities had pledged to send supplies and support.

Earlier in the day, a tornado that "looked like it was a mile wide" struck Birmingham, Mayor William Bell told CNN. That storm also felled numerous trees that impeded emergency responders and those trying to leave hard-hit areas.

Surrounding Jefferson County reported 11 deaths by late Wednesday. Another hard-hit area was Walker County, with eight deaths. The rest of the deaths were scattered around the state, emergency officials told the Associated Press.

Austin Ransdell and a friend had to hike out of their neighborhood south of Birmingham after the house where he was living was crushed by four trees. No one was hurt.

As he walked away from the wreckage, trees and power lines crisscrossed residential streets, and police cars and utility trucks blocked a main highway.

"The house was destroyed. We couldn't stay in it. Water pipes broke; it was flooding the basement," he said. "We had people coming in telling us another storm was coming in about four or five hours, so we just packed up."

In Huntsville, meteorologists found themselves in the path of a tornado and had to evacuate the National Weather Service office. The Browns Ferry nuclear plant west of town lost power and was operating on diesel generators. The Nuclear Regulatory Commission said the safety systems were operating properly, and the emergency was classified as the lowest of four levels.

Thirty-two deaths were reported in Mississippi, 11 in Georgia, 15 in Tennessee and eight in Virginia. In addition, one person in Arkansas was killed by the same storm system Tuesday.

In Choctaw County, Miss., a Louisiana police officer was killed Wednesday morning when a towering sweet gum tree fell on his tent as he shielded his young daughter with his body, said Kim Korthuis, a supervisor with the National Park Service. The 9-year-old wasn't hurt.

Her father, Lt. Wade Sharp, had been with the Covington Police Department for 19 years.

"He was a hell of an investigator," said Capt. Jack West, a colleague in Louisiana.

Mississippi Gov. Haley Barbour declared a state of emergency. That state's fatalities also included a man crushed in his mobile home when a tree fell during the storm, a truck driver who hit a downed tree on a state highway and a member of a county road crew who was struck by a tree the workers were removing.

Duncan, the Tuscaloosa teacher, called the devastation "the worst thing I've seen with my own two eyes in person."

The area has little choice about what to do next, he said. "I mean, the cheesy obvious answer is that we're gonna band together and rebuild, and everthing's going to be OK. But I guess that's my answer, because what else are we gonna do?"

## **Alabama Nuclear Power Goes Down During Storm, On Backup Power (EPOCH)**

By Jack Phillips

Epoch Times, April 29, 2011

A nuclear power plant in Alabama went without power on Wednesday when massive storms hit the South but officials say that it will be weeks before it goes back online. The plant was able to prevent a partial meltdown due to its backup power systems.

The US Nuclear Regulatory Commission held a meeting on Thursday regarding the Browns Ferry nuclear power plant, which by providing power to 2.6 million homes, is one of the largest in the nation.

Of the plant's backup diesel generators, one went down and is being maintained but seven more are online and supplying power.

The agency said that it is closely monitoring the situation at the power plant, which went down when power lines were severed during the storm.

"Severe storms in the South last night provided a stark reminder that we are not immune to the effects of natural events," NRC Chairman Gregory Jaczko cautioned.

He noted that the plant's three units went offline and had to be shut down. However, "all safety functions performed as designed," he said.

The US and other countries have been on alert over the past several weeks as Japanese workers attempt to contain contamination at the compromised Fukushima Daiichi plant that was damaged during the massive 9.0-magnitude earthquake and following tsunami. In recent weeks, officials have questioned the integrity of US power plants during natural disasters.

During the storms that ravaged the southern region of the US, 248 people died in six states. Alabama was hit the worst with 162 deaths confirmed, the state's Emergency Management Agency said on Thursday.

President Obama said that he will travel to Alabama on Friday to assess damage done during the storm and meet with Governor Robert Bentley.

## **Browns Ferry Hit By Major Storms (WNN)**

World Nuclear News, April 29, 2011

A nuclear power plant shut down automatically as the worst outbreak of tornados to hit America for many years downed power lines in three southern states.

Regional utility the Tennessee Valley Authority (TVA) reported blackouts in much of northern Mississippi as well as parts of northern Alabama and southeastern Tennessee as a result of the tornados and high winds. President Barack Obama declared a state of emergency in Alabama to allow the Federal Emergency Management Agency to coordinate relief efforts. Almost 300 people are reported to have been killed by the storms.

TVA said it had never experienced anything like the passage of several storm systems through its 80,000 square mile service area. Each one caused more damage to transmission lines until over 100 transmission elements were knocked out and some 677,000 homes left without power.

The three boiling water reactors at TVA's Browns Ferry nuclear power plant in Alabama shut down automatically with cooling systems powered by "a combination of offsite transmission and on-site diesel generators." However, the shutdown was notified as an 'unusual event' to the Nuclear Regulatory Commission "when the normal and alternate power supplies for essential equipment were unavailable for more than 15 minutes." TVA stressed that "safety systems performed well."

The plant shut down on 27 April at 4.36 pm and units 2 and 3 achieved cold shutdown at 2.43 am and 5.45 am on 28 April respectively. TVA said that unit 1 was being cooled and the priority now was to get that reactor into cold shutdown as well.

One 161 kV line is available to Browns Ferry, as are all the plant's eight diesel generators. One of these was out of service for maintenance when the storms hit, but work was completed quickly and the generator put back to work.

No reports came from TVA on any storm effects at its other nuclear power plants, Sequoyah and Watts Bar.

## **US Storms Kill Hundreds In South (FT)**

By Johanna Kassel And Michael Stothard In New York

Financial Times, April 29, 2011

Full-text stories from the Financial Times are available to FT subscribers by clicking the link.

## **TVA Says 'Unprecedented' Storm Damage In Mississippi And Northern Alabama (KNOXNS)**

Knoxville News Sentinel (TN), April 29, 2011

Video statement from TVA's Chief Operating Officer Bill McCollum about damage to the TVA system from the storms on April 27th.

TVA says it has severe damage to its system and had over 300,000 customers without service in the two states. The Browns Ferry Nuclear Plant in Alabama was knocked off line. The plant's three reactors were shutdown safely, TVA said.

## **Tornado, Storms Kill Nearly 200 In South; 128 Killed In Alabama Alone, 32 In Mississippi; Video Embed (AP)**

By HOLBROOK MOHR And JAY REEVES

Associated Press, April 29, 2011

Alabama's state emergency management agency said it had confirmed 128 deaths, up from at least 61 earlier.

"We expect that toll, unfortunately, to rise," Gov. Robert Bentley told ABC's "Good Morning America."

Mississippi officials reported 32 dead in that state and Tennessee raised its report to 14. Another 11 have been killed in Georgia and eight in Virginia.

The fierce storms Wednesday spawned tornadoes and winds that wiped out homes and businesses, forced a nuclear power plant to use backup generators and prompted the evacuation of a National Weather Service office.

The National Weather Service's Storm Prediction Center in Norman, Okla., said it received 137 tornado reports around the regions, including 66 in Alabama and 38 in Mississippi.

One of the hardest-hit areas was Tuscaloosa, a city of more than 83,000 and home to the University of Alabama. The city's police and other emergency services were devastated, the mayor said, and at least 15 people were killed and about 100 were in a single hospital.

A massive tornado, caught on video by a news camera on a tower, barreled through the city late Wednesday afternoon, leveling it.

By nightfall, the city was dark. Roads were impassable. Signs were blown down in front of restaurants, businesses were unrecognizable and sirens wailed off and on. Debris littered the streets and sidewalks.

College students in a commercial district near campus used flashlights to check out the damage.

At Stephanie's Flowers, owner Bronson Englebert used the headlights from two delivery vans to see what valuables he could remove. He had closed early, which was a good thing. The storm blew out the front of his store, pulled down the ceiling and shattered the windows, leaving only the curtains flapping in the breeze.

"It even blew out the back wall, and I've got bricks on top of two delivery vans now," Englebert said.

A group of students stopped to help Englebert, carrying out items like computers and printers and putting them in his van.

"They've been awfully good to me so far," Englebert said.

The storm system spread destruction from Texas to New York, where dozens of roads were flooded or washed out.

The governors in Alabama, Mississippi and Georgia each issued emergency declarations for parts of their states.

President Barack Obama said he had spoken with Alabama Gov. Robert Bentley and approved his request for emergency federal assistance, including search and rescue assets. About 1,400 National Guard soldiers were being deployed around the state.

"Our hearts go out to all those who have been affected by this devastation, and we commend the heroic efforts of those who have been working tirelessly to respond to this disaster," Obama said in a statement.

Around Tuscaloosa, traffic was snarled by downed trees and power lines, and some drivers abandoned their cars in medians.

"What we faced today was massive damage on a scale we have not seen in Tuscaloosa in quite some time," Mayor Walter Maddox said.

University officials said there didn't appear to be significant damage on campus, and dozens of students and locals were staying at a 125-bed shelter in the campus recreation center.

Volunteers and staff were providing food and water to people like 29-year-old civil engineering graduate student Kenyona Pierce.

"I really don't know if I have a home to go to," she said.

Storms also struck Birmingham, felling numerous trees that impeded emergency responders and those trying to leave hard-hit areas.

The Browns Ferry nuclear power plant about 30 miles west of Huntsville lost offsite power. The Tennessee Valley Authority-owned plant had to use seven diesel generators to power the plant's three units. The safety systems operated as needed and the emergency event was classified as the lowest of four levels, the Nuclear Regulatory Commission said.

In Huntsville, meteorologists found themselves in the path of severe storms and had to take shelter in a reinforced steel room, turning over monitoring duties to a sister office in Jackson, Miss. Meteorologists saw multiple wall clouds, which sometimes spawn tornadoes, and decided to take cover, but the building wasn't damaged.

"We have to take shelter just like the rest of the people," said meteorologist Chelly Amin, who wasn't at the office at the time but spoke with colleagues about the situation.

In Kemper County, Miss., in the east-central part of the state, sisters Florrie Green and Maxine McDonald, and their sister-in-law Johnnie Green, all died in a mobile home that was destroyed by a storm.

"It's hard. It's been very difficult," said Mary Green, Johnnie Green's daughter-in-law. "They were thrown into those pines over there," she said, pointing to a wooded area. "They had to go look for their bodies."

In Choctaw County, Miss., a Louisiana police officer was killed Wednesday morning when a towering sweetgum tree fell onto his tent as he shielded his young daughter with his body, said Kim Korthuis, a supervisory ranger with the National Park Service. The girl wasn't hurt.

The 9-year-old girl was brought to a motor home about 100 feet away where campsite volunteer Greg Maier was staying with his wife. He went back to check on the father and found him dead.

"She wasn't hurt, just scared and soaking wet," Maier said.

Her father, Lt. Wade Sharp, had been with the Covington Police Department for 19 years.

"He was a hell of an investigator," said Capt. Jack West, his colleague in Louisiana.

In a neighborhood south of Birmingham, Austin Ransdell and a friend had to hike out after the house where he was living was crushed by four trees. No one was hurt.

As he walked away from the wreckage, trees and power lines crisscrossed residential streets, and police cars and utility trucks blocked a main highway.

"The house was destroyed. We couldn't stay in it. Water pipes broke; it was flooding the basement," he said. "We had people coming in telling us another storm was coming in about four or five hours, so we just packed up."

Not far away, Craig Branch was stunned by the damage.

"Every street to get into our general subdivision was blocked off. Power lines are down; trees are all over the road. I've never seen anything like that before," he said.

In eastern Tennessee, a woman was killed by falling trees in her trailer in Chattanooga. Just outside the city in Tiftonia, what appeared to be a tornado also struck at the base of the tourist peak Lookout Mountain.

Tops were snapped off trees and insulation and metal roof panels littered the ground. Police officers walked down the street, spray-painting symbols on houses they had checked for people who might be inside.

Mary Ann Bowman, 42, stood watching from her driveway as huge tractors moved downed trees in the street. She had rushed home from work to find windows shattered at her house, and her grandmother's house next door shredded. The 91-year-old woman wasn't home at the time.

"When I pulled up I just started crying," Bowman said.

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Mohr reported from Choctaw County, Miss. Associated Press writers Jamie Stengle in Edom, Texas, Andrew DeMillo and Nomaan Merchant in Vilonia, Ark., Jack Elliott Jr. in Jackson, Miss., Anna McFall and John Zenor in Montgomery; Bill Fuller and Alan Sayre in New Orleans, Dorie Turner in Atlanta, Bill Poovey in Chattanooga, Tenn., and Terry Wallace in Dallas contributed to this report.

#### EARLIER...

The death toll from severe storms that roared across the South has risen to 173 across five states with Alabama and Mississippi each reporting increases in the number of deaths in their states.

Alabama's emergency management agency says their death toll has gone up to 128, while Mississippi officials are reporting 32 dead in that state.

Another 11 have been killed in Georgia and one each in Tennessee and Virginia.

The fierce storms spawned tornadoes and have wiped out homes and businesses, forced a nuclear power plant to use backup generators and even prompted the evacuation of a National Weather Service office.

The storms obliterated large swaths of land from Mississippi to Georgia, wiping out homes and businesses, causing a nuclear power plant to use backup generators and even forcing the evacuation of a National Weather Service office.

One of the hardest-hit areas was Tuscaloosa, a city of more than 83,000 and home to the University of Alabama. The city's police and other emergency services were devastated, the mayor said, and at least 15 people were killed and about 100 were in a single hospital.

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Storms also struck Birmingham, felling numerous trees that impeded emergency responders and those trying to leave hard-hit areas. Surrounding Jefferson County reported 11 deaths; another hard-hit area was Walker County in the far northwest part of the state with at least eight deaths. The rest of the deaths were scattered around northern Alabama.

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"We have to take shelter just like the rest of the people," said meteorologist Chelly Amin, who wasn't at the office at the time but spoke with colleagues about the situation.

She said the extent of the damage statewide is still unknown.

"I really think with the rising of the sun, we'll see the full extent of this," she said.

In Kemper County, Miss., in the east-central part of the state, sisters Florrie Green and Maxine McDonald, and their sister-in-law Johnnie Green, all died in a mobile home that was destroyed by a storm.

Johnnie Green's daughter-in-law said Florrie Green and McDonald owned mobile homes side-by-side, and Johnnie Green lived nearby. Johnnie Green was at one of the woman's homes at the time the storm hit.

"It's hard. It's been very difficult," Mary Green said. "They were thrown into those pines over there," she said, pointing to a wooded area. "They had to go look for their bodies."

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Tops were snapped off trees and insulation and metal roof panels littered the ground. Police officers walked down the street, spray-painting symbols on houses they had checked for people who might be inside.

Mary Ann Bowman, 42, stood watching from her driveway as huge tractors moved downed trees in the street. She had rushed home from work to find windows shattered at her house, and her grandmother's house next door shredded. The 91-year-old woman wasn't home at the time.

"When I pulled up I just started crying," Bowman said.

Mohr reported from Choctaw County, Miss. Associated Press writers Jamie Stengle in Edom, Texas, Andrew DeMillo and Nomaan Merchant in Vilonia, Ark., Jack Elliott Jr. in Jackson, Miss., Anna McFall and John Zenor in Montgomery; Bill Fuller and Alan Sayre in New Orleans, Dorie Turner in Atlanta, Bill Poovey in Chattanooga, Tenn., and Terry Wallace in Dallas contributed to this report.

FIRST PUBLISHED...

Tornadoes kill dozens in South

Associated Press

BIRMINGHAM, Ala. — A wave of tornado-spawning storms strafed the South on Wednesday, splintering buildings across hard-hit Alabama and killing 72 people in four states.

At least 58 people died in Alabama alone, including 15 or more when a massive tornado devastated Tuscaloosa. The city's mayor said sections of the city that's home to the University of Alabama have been destroyed and the city's infrastructure is devastated.

Eleven deaths were reported in Mississippi, two in Georgia and one in Tennessee.

News footage showed paramedics lifting a child out of a flattened Tuscaloosa home, with many neighboring buildings in the city of more than 83,000 also reduced to rubble. A hospital there said its emergency room had admitted at least 100 people.

"What we faced today was massive damage on a scale we have not seen in Tuscaloosa in quite some time," Mayor Walter Maddox told reporters, adding that he expected his city's death toll to rise.

The storm system spread destruction Tuesday night and Wednesday from Texas to Georgia, and it was forecast to hit the Carolinas next and then move further northeast.

Around Tuscaloosa, traffic was snarled Wednesday night by downed trees and power lines, and some drivers abandoned their cars in medians. University officials said there didn't appear to be significant damage on campus, and it was using its student recreation center as a shelter.

Maddox said authorities were having trouble communicating, and 1,400 National Guard soldiers were being deployed around the state.

Brian Sanders, the manager of an oil change shop, brought his daughters to DCH Regional Medical Center because he felt they would be safe there. He said his business had been leveled.

"I can't believe we walked away," he said.

Storms struck Birmingham earlier in the day, felling numerous trees that impeded emergency responders and those trying to leave hard-hit areas. Surrounding Jefferson County reported 11 deaths by late Wednesday; another hard-hit area was Walker County with eight deaths. The rest of the deaths were scattered around the state, emergency officials said.

Austin Ransdell and a friend had to hike out of their neighborhood south of Birmingham after the house where he was living was crushed by four trees. No one was hurt.

As he walked away from the wreckage, trees and power lines crisscrossed residential streets, and police cars and utility trucks blocked a main highway.

"The house was destroyed. We couldn't stay in it. Water pipes broke; it was flooding the basement," he said. "We had people coming in telling us another storm was coming in about four or five hours, so we just packed up."

Not far away, Craig Branch was stunned by the damage.

"Every street to get into our general subdivision was blocked off. Power lines are down; trees are all over the road. I've never seen anything like that before," he said.

In Huntsville, meteorologists found themselves in the path of tornado and had to evacuate the National Weather Service office.

In Choctaw County, Miss., a Louisiana police officer was killed Wednesday morning when a towering sweetgum tree fell onto his tent as he shielded his young daughter with his body, said Kim Korthuis, a supervisor with the National Park Service. The girl wasn't hurt.

The 9-year-old girl was brought to a motorhome about 100 feet away where campsite volunteer Greg Maier was staying with his wife, Maier said. He went back to check on the father and found him dead.

"She wasn't hurt, just scared and soaking wet," Maier said.

Her father, Lt. Wade Sharp, had been with the Covington Police Department for 19 years.

"He was a hell of an investigator," said Capt. Jack West, his colleague in Louisiana.

Also in Mississippi, a man was crushed in his mobile home when a tree fell during the storm, a truck driver died after hitting a downed tree on a state highway and a member of a county road crew was killed when he was struck by a tree they were removing.

By late Wednesday, the death toll had increased to 11 for the day, said Mississippi Emergency Management Association spokesman Jeff Rent. The governor also made an emergency declaration for much of the state.

Storms also killed two people in Georgia and one in Tennessee on Wednesday. Aside from the deaths on Wednesday, one person was killed by the same storm system late the previous night in Arkansas.

In eastern Tennessee, a woman was killed by falling trees in her trailer in Chattanooga. Just outside the city in Tiftonia, what appeared to be a tornado also struck at the base of the tourist peak Lookout Mountain.

Tops were snapped off trees and insulation and metal roof panels littered the ground. Police officers walked down the street, spray-painting symbols on houses they had checked for people who might be inside.

Mary Ann Bowman, 42, stood watching from her driveway as huge tractors moved downed trees in the street. She had rushed home from work to find windows shattered at her house, and her grandmother's house next door shredded. The 91-year-old woman wasn't home at the time.

"When I pulled up I just started crying," Bowman said.

Many around the region were happy to survive unscathed even if their houses didn't. In Choctaw County, Miss., 31-year-old Melanie Cade patched holes in her roof after it was heavily damaged.

Cade was in bed with her three children when the storm hit.

"The room lit up, even though the power was out. Stuff was blowing into the house, like leaves and bark. Rain was coming in sideways," she said, adding that they managed to scurry into a bathroom.

"I didn't care what happened to the house," Cade said. "I was just glad we got out of there."

## **Southern Storms: 'I Don't Know How Anyone Survived' (LAT)**

CNN, April 29, 2011

Storms of near-epic proportions cut wide swaths of destruction across the South, killing at least 250 people in six states, ravaging whole neighborhoods and crippling towns.

The vast majority of fatalities occurred in Alabama, where 162 people perished, said Yasamie August, Alabama Emergency Management Agency spokeswoman.

A breakdown provided by Alabama Gov. Robert Bentley's office showed that violent weather claimed lives in 16 Alabama counties. Thirty people perished in DeKalb County in northeastern Alabama; the death toll in the hard-hit city of Tuscaloosa, in west-central Alabama, was at 36 as of Thursday morning, said Mayor Walter Maddox.

"I don't know how anyone survived," Maddox said. "We're used to tornadoes here in Tuscaloosa. It's part of growing up. But when you look at the path of destruction that's likely 5 to 7 miles long in an area half a mile to a mile wide ♦ it's an amazing scene. There's parts of the city I don't recognize, and that's someone that's lived here his entire life."

Thirty-two people died in Mississippi, emergency officials said. Tennessee emergency officials said 33 people died in that state. Fourteen were dead in Georgia, eight in Virginia and one in Arkansas.

Entire neighborhoods were leveled and hundreds of thousands of people were without power in the affected regions. As of 4 a.m. Thursday, Alabama Power said 363,511 customers had no electricity, and as of 8 a.m. About 61,000 people in Georgia were without power, according to Georgia Power and the Georgia Electric Membership Corp. Bentley estimated as many as half a million to a million people had no electricity in Alabama.

"This could be one of the most devastating tornado outbreaks in the nation's history by the time it's over," CNN Meteorologist Sean Morris said.

Long before the death toll mushroomed, governors in Alabama, Mississippi and Georgia had declared states of emergency within their borders. Virginia followed suit Thursday. Mississippi Gov. Haley Barbour said Thursday he was asking for a statewide emergency declaration.

President Barack Obama announced late Wednesday he had approved Bentley's request for emergency federal assistance, including search and rescue support. The White House said Obama will travel to Alabama on Friday.

Bentley said Thursday he is asking Obama for a major disaster declaration. According to FEMA, such declarations are made when "an incident is of such severity and magnitude that effective response is beyond state and local capabilities and that federal assistance is necessary."

FEMA said in a statement Administrator Craig Fugate was traveling to Alabama on Thursday to meet with Bentley and state and local officials.

In the DeKalb County, Alabama town of Rainsville, 25 bodies were recovered near a trailer park, said Police Chief Charles Centers. Many people are unaccounted for, Centers said, and authorities haven't even been able to reach all the affected areas yet, because some roads are impassable. Patrol cars are running out of fuel, and buildings including a school, homes and several businesses have been damaged or destroyed.

Israel Partridge, a local business owner who teaches search and rescue and volunteered to help the Rainsville Fire Department Wednesday night, said one tree that had been uprooted and tossed still had a dog alive, tied to it. Partridge said he freed the dog and gave it to a family to take care of.

The Nuclear Regulatory Commission said it was monitoring the Browns Ferry nuclear power plant near Athens in north Alabama, about 32 miles west of Huntsville, after it lost offsite power Wednesday night due to the storms. The three units at the plant shut down automatically when power was lost, it said.

"One of the plant's diesel generators was out of service for maintenance, but the other seven started to power the units' emergency loads," the commission said. "Plant operators and Tennessee Valley Authority line crews are working to restore offsite power to all three units." The Tennessee Valley Authority operates the plant.

TVA spokeswoman Barbara Martocci told CNN no radiation was released as a result of the shutdown, and the plant is currently in a safe shutdown mode.

At least one strong tornado swept through Tuscaloosa, leaving dozens of roads impassable and destroying hundreds of homes and businesses.

Resident James Sykes said the massive twister was "like a silent monster. It was just moving at a steady rate and just demolishing everything in its path."

"It literally obliterated blocks and blocks of the city," Maddox, the Tuscaloosa mayor, said. He told CNN Thursday morning the devastation was "unparalleled" and the city's infrastructure has been absolutely decimated."

"We've lost two water tanks on the east side of the city, which is crippling the water supply," he said. "We're facing an overwhelming situation in which we are short of men, materials and equipment." But he said Bentley has been "outstanding" in mobilizing resources.

"We've lost our environmental services," he said. "We've lost police precincts. We've lost fire stations. So our own infrastructure itself, which would deal with these issues, has been crippled. It's just compounding the situation."

Authorities' primary focus on Thursday will be search and rescue, he said, adding recovery efforts are likely 24 to 48 hours away. "Our focus right now is finding citizens who are hurt, finding those who are missing."

He predicted the city could take months to recover from the blow.

"Except for the sirens, it had an eerie quiet this morning," said Brian Wilhite, an internist at Tuscaloosa's Druid City Hospital. "It looks like an atomic bomb went off in a straight line. It's probably close to a mile wide."

He said people flocked to the hospital, many with head injuries and lacerations. "It looked more like a Vietnam War site than a hospital," he said. "I know one physician who watched two people die right in front of him. There was nothing he could do."

The University of Alabama, located in Tuscaloosa, escaped mostly unscathed, but Bentley said some students living off-campus were among the dead, and Maddox said there is a "strong possibility" that that is true. Classes were canceled Thursday.

Bentley activated 2,000 National Guard troops Wednesday night and said he will activate more if necessary. In Mississippi, Barbour said he had also activated the National Guard, but did not specify a number of troops.

Witnesses also reported tornado touchdowns in Birmingham, Alabama. "It looked like it was probably a mile wide," said Mayor William Bell.

The northwest corner of the city was particularly devastated, he said, with hundreds injured and many others missing.

The Birmingham neighborhood of Pratt City and the suburb of Pleasant Grove were among the hardest hit areas.

"It's just bare land, debris everywhere," Cierra Brown of Jefferson County, where Birmingham is located, told CNN affiliate WBMA about her devastated neighborhood. "There's no house."

"My bathroom is across the street," Talesha Oliver told WBMA.

Henry Nguyen told CNN early Thursday he was working at his father's convenience store on the edge of Pratt City when he saw a twister angling for the front door. He ducked. When he stood up, Nguyen said he saw that the tornado had missed the storefront by 50 yards.

"Houses are gone. It's pretty crazy," Nguyen said. "A gas station up the street is gone. There is nothing else open here."

Pleasant Grove Police Chief Robert Knight said a suspected tornado cut a half-mile swath through the center of town. He said he expects the death toll – currently at six – to rise.

More than 980 people were treated for injuries at trauma centers in the affected areas, including those treated and released.

About 100 miles north of Birmingham, Huntsville Hospital is currently running on generator power, and local power is not expected to be restored for four to five days, said hospital spokeswoman Pam Sparks.

A Facebook page was set up for users to claim photos and documents found strewn by the storms.

"House mortgage from Tuscaloosa found in Rainbow City," said the caption on one photo. The two cities are 116 miles apart.

In Marshall County, about 35 miles south of Huntsville, CNN iReporter Wes Lyons shot a video of a tornado from his car. "It was definitely the biggest tornado I've ever seen," he said. "I was really just shocked by how big it was."

Several meteorological conditions combined Wednesday to create a particularly dangerous mix, CNN's Morris said.

"It is tornado season, but an intensive event like this only will occur maybe once or twice a year," he said. "It's very rare to have all these ingredients come together."

The town of Ringgold, Georgia, about 17 miles southeast of Chattanooga, Tennessee, was hit particularly hard, officials said. The storm also unleashed as many as 80,000 chickens in Pickens County, Georgia, after four huge coops were destroyed.

The storms are being compared to the "super outbreak" of tornadoes April 3 and 4, 1974, Fugate, the FEMA administrator, said Thursday. In that period, 148 tornadoes were reported in 13 states, and 330 people died. States affected were Alabama, Georgia, Illinois, Indiana, Kentucky, Michigan, Mississippi, North Carolina, Ohio, South Carolina, Tennessee, Virginia and West Virginia.

FEMA is responding to a number of disasters nationwide, including wildfires in Texas and flooding in several states, including some Southern ones also hit by storms. But, Fugate said, the agency has "to be prepared for concurrent multiple disasters occurring in this country."

## **Survivors Assess Damage After Tornado Disaster (AP)**

By Campbell Robertson And Kim Severson

Associated Press, April 29, 2011

TUSCALOOSA, Ala. — A day after enduring a terrifying bombardment of storms that killed hundreds across the South and spawned tornadoes that razed neighborhoods and even entire towns, people from Texas to Virginia to Georgia searched through rubble for survivors Thursday and tried to reclaim their own lives.

At least 285 people across six states died in the storms, with more than two-thirds — 195 people — in Alabama. This college town, the home of the University of Alabama, has in some places been shorn to the slab and accounts for at least 36 of those deaths.

Thousands have been injured, and untold more have been left homeless, hauling their belongings in garbage bags or rooting through disorganized piles of wood and siding to find anything salvageable.

While Alabama was hit the hardest, the storm spared few states across the South. Thirty-four people were reported dead in Tennessee, 33 in Mississippi, 15 in Georgia, seven in Virginia and one in Kentucky. With search and rescue crews still climbing through debris and making their way down tree-strewn country roads, the toll is expected to rise.

"History tells me estimating deaths is a bad business," W. Craig Fugate, the Federal Emergency Management Agency administrator, said in a conference call with reporters.

Cries could be heard into the night here Wednesday, but Thursday hope was dwindling. Mayor Walt Maddox said the search and rescue operation would go for another 24 to 48 hours, before the response pivoted its focus to recovery.

"They're looking for five kids in this rubble here," said Lathesia Jackson-Gibson, 33, a nurse, pointing to the incoherent heap of planks and household appliances sitting next to the muddled guts of her own house. "They're mostly small kids."

President Barack Obama announced that he was coming to Alabama on Friday afternoon, saying in a statement that the federal government had pledged its assistance.

Gov. Robert Bentley toured the state by helicopter along with federal officials, tracking a vast scar that stretched from Birmingham to his hometown, Tuscaloosa. He declared Alabama "a major, major disaster."

"As we flew down from Birmingham, the track is all the way down, and then when you get in Tuscaloosa here it's devastating," Bentley said at an afternoon news conference, with an obliterated commercial strip as a backdrop.

An enormous response operation was under way across the South, with emergency officials working alongside churches, sororities and other volunteer groups. In Alabama, more than 2,000 National Guard troops have been deployed.

Across nine states, more than 1,680 people spent Wednesday in Red Cross shelters, said Attie Poirier, a spokeswoman with the organization. The last time the Red Cross had set up such an elaborate system of shelters was after Hurricane Katrina, a comparison made by even some of those who had known the experience firsthand.

"It reminds me of home so much," said Eric Hamilton, 40, a former Louisianan, who was sitting on the sidewalk outside the Belk Activity Center, which was being used as a Red Cross shelter in south Tuscaloosa.

Hamilton lived in a poor area of Tuscaloosa called Alberta City, which residents now describe as "gone." He wiped tears off his cheeks.

"I've never seen so many bodies," Hamilton said. "Babies, women. So many bodies."

Officials at the National Weather Service Storm Prediction Center said they had received 137 tornado reports Wednesday, with 104 of them coming from Alabama and Mississippi. Overall, there have been 297 confirmed tornadoes this month, breaking a 36-year-old record.

Southerners, who have had to learn the drill all too well this month, watched with dread Wednesday night as the shape-shifting storm system crept eastward across the weather map. Upon hearing the rumble of a tornado, or even the hysterical barking of a family dog, people crammed into closets, bathtubs and restaurant coolers, clutching their children and family photos.

Many of the lucky survivors found a completely different world when they opened their closet doors.

"We heard crashing," said Steve Sikes, 48, who lives in a middle-class Tuscaloosa neighborhood called the Downs. "Then dirt and pine needles came under the door. We smelled pine.

"When you smell pine," he said, gesturing, by way of a conclusion, toward a wooden wreck behind him, so mangled that it was hard to tell where tree ended and house began.

Some opened the closet to the open sky, where their roof had been, some yelled until other family members pulled the shelves and walls off them. Others never got out.

Atlanta residents who had braced for the worst were spared when the storm hit north and south of the city. Across Georgia, many schools in rural areas sustained so much damage they will close for the rest of the year.

In Mississippi, the carnage was worst in the piney hill country in the northeastern part of the state. Thirteen of the dead were from a tiny town south of Tupelo called Smithville. Most of the buildings in Smithville, which has a population of less than 800, were gone.

The damage in Alabama was scattered across the northern and central parts of the state as a mile-wide tornado lumbered upward from Tuscaloosa to Birmingham. More than 1,700 people have been examined or treated at local hospitals, according to officials at the Alabama Hospital Association.

The deaths were scattered around the state: six in the small town of Arab, 14 in urban Jefferson County.

"You have visions of this monster coming through, picking people up and just dumping them somewhere," said Vicki Wood, 52, who was picking photographs and children's clothes out of the rubble of her daughter's house in the Birmingham suburb of Pleasant Grove.

Her daughter survived, but Wood said she knew several people in the area who had died, and watched injured children being carried away to help on ripped-off doors.

More than 1 million people in Alabama, Mississippi and Tennessee were left without power, with much of the loss caused by severe damage to transmitters at the Browns Ferry Nuclear Plant west of Huntsville, Ala. The plant itself was not damaged, but the dozens of poles that carry electricity to local power companies were down.

"We have no place to send the power at this point," said Scott Brooks, a spokesman for the Tennessee Valley Authority, which sells electricity to companies in seven states. "We're not talking hours, we're talking days."

In Tuscaloosa, Bentley, a Republican, made it clear that Alabama would need substantial federal assistance.

"We're going to have to have help from the federal government in order to get through this in an expeditious way," he said.

Campbell Robertson reported from Tuscaloosa, Ala., and Kim Severson from Atlanta. Kevin Sack contributed reporting from Tuscaloosa, and Robbie Brown from Birmingham, Ala.

## **Tornadoes: Tornado Damage, Deaths Stun The South (LAT)**

By Richard Fausset And Robin Abcarian

Los Angeles Times, April 29, 2011

Reporting from Tuscaloosa, Ala.—

A historic tornado outbreak battered six Southern states, swooping like a deadly scythe from Mississippi to New York, killing hundreds, injuring many more, flattening neighborhoods and forcing the closure of a nuclear power plant in Alabama, the hardest-hit state.

Search and rescue teams combed through the matchstick remains of homes and businesses in several states Thursday looking for survivors or bodies as residents grappled with grief and the struggle for food, water and shelter. It is believed to be the deadliest US tornado toll in 37 years.

The death count rose steadily throughout the day: at least 195 in Alabama, 34 in Tennessee, 32 in Mississippi, 14 in Georgia, 12 in Arkansas, five in Virginia and one in Kentucky.

"We do expect that number to rise," Alabama Gov. Robert J. Bentley said. "This may be the worst natural disaster in Alabama's history."

President Obama declared a state of emergency in Alabama and announced he would visit the state Friday to meet with government officials and console victims.

The tornadoes began Wednesday afternoon when violent thunderstorms collided with warm air from the Gulf of Mexico, creating the massive twisters. By early evening, a monster cloud began to spin across Alabama.

As local evening newscasts showed live shots of the dark tornado spewing pieces of buildings and other debris, broadcasters urged viewers to take cover immediately. Their voices were filled with astonishment and concern. "Please, please take our advice and get to a safe place right now," said meteorologist Jason Simpson on ABC 33/40.

Parts of Tuscaloosa, a town of about 93,000 that is home to the University of Alabama, were unrecognizable at daybreak Thursday. Storm chasers captured the immense, gray funnel cloud on video, a terrifying column that seemed to fill the sky.

"The amount of damage that is seen is beyond a nightmare," Tuscaloosa Mayor Walter Maddox said after touring the city by air. The tornado, he said, wiped out a three- to four-mile long stretch of the town. The swath was about half a mile wide in places.

"I don't know how anyone survived," Maddox told reporters. He said some neighborhoods had been "removed from the map.... There are parts of this city I don't recognize, and that's someone that's lived here his entire life."

About 600 injured converged on DCH Regional Medical Center in Tuscaloosa. About 100 were admitted, 13 of them to the intensive care unit.

"The thing that amazed me was that everybody was so dirty," said Brad Fisher, hospital spokesman. "They looked like they'd been dragged behind a wagon."

Throughout the day in Tuscaloosa, rescue workers, worried neighbors and people looking for friends streamed in and out of the Rosedale Court public housing complex. In the early afternoon, Pastor M.L. Edmondson, his wife and son were walking hurriedly toward the wreckage, hoping to find two teenage girls who attend his Redeemed Apostolic Church.

Navigating the changed landscape was difficult. Entire buildings were gone.

"Dedre, it's right around here, isn't it? The house?" he called to his wife.

"It woulda been straight back," she said.

People standing in what had been kitchens scavenged for clean tennis shoes and dusty console televisions.

"Hey — y'all know a Letica Carter?" the pastor asked a passing group of teenagers.

They shook their heads. Edmondson found the house, marked with Katrina-like runes from the emergency crews. He stood among the rubble for a moment, taking it in.

"My God," he said.

His wife appeared around the corner. Somebody told her the girls were safe.

Nearby at the massive, badly damaged Charleston Square apartments, property manager Frances Brannon tried to keep up a chipper, business-like demeanor even though she was nearly killed in the business office Wednesday night.

Residents were not being allowed in because of a possible gas leak. On the other side of the complex, police in yellow reflective jackets were searching for a possibly a lost girl.

One resident, Anderson M. Hambright, came in to ask about his place.

"Where were y'all last night?" Brannon asked him.

"In the bathroom on the floor," he said. "We had a car demolished."

"Most everybody did," she said. "What about renter's insurance. Did you ever get that in place?"

"No ma'am, I never did get that in place."

The parts of Tuscaloosa that were spared destruction were not spared disruption.

University of Alabama spokesman Shane Dorrill said that the campus was not damaged, but finals, scheduled for next week, had been canceled. Graduation ceremonies that were scheduled for May 7 will be moved to August.

Students said power was out in dorm rooms, and classes were canceled Thursday and Friday. Cellphone service was spotty, and many businesses were closed. Many streetlights were out, snarling the city in massive traffic jams. Hundreds of people wandered around aimlessly, snapping cellphone photos.

The student recreation center was converted into a shelter. Donated food and water poured in. Casey Ferris, 19, a sophomore, was finishing off a paper plate of food, wondering about his next move. Ferris said his off-campus apartment

complex wasn't too badly damaged, but it was without power — at least 787,700 were without electricity statewide Thursday afternoon.

In the Cedar Crest neighborhood, a collection of modest single family homes near the university, the tornado uprooted trees, twisted a Chevron station into a Frank Gehry-esque vision of flying sheet metal, gutted a CVS store and left a Mattress King a hulky, filthy ruin. Block after block of homes were reduced to nothing but walls.

On one street, a group of young people marveled at a large boxy appliance — it wasn't clear exactly what it was — suspended in a tree. A Winnie the Pooh crib bumper hung from another tree.

Cars were thrown around, their windows bashed, their metal battered and caked with mud. A Chevy pickup was clogged with chewed chunks of fiberboard, its "door ajar" signal bonging nonstop.

"Dad, we're at ground zero here, and it's awful," a young man said into his cellphone. "It's really sad."

Kirk Miller, 36, and his wife, Rachelle Miller, 44, stood outside the custom four-bedroom home they built four years ago. One side was staved in from the top, dropping the roof onto their ski boat and motorcycle.

Rachelle and 3-year-old Wyatt were home alone when the tornado struck. She put Wyatt on his stomach in a windowless bathroom and covered him with her body.

When they walked outside, Rachelle was shocked. "Mommy," Wyatt said, "our house is broken."

Near Huntsville, Ala., the three reactors of the Tennessee Valley Authority's Browns Ferry Nuclear Plant automatically shut down after losing power when lines that carry electricity outside of the facility came down in the tornadoes.

"As soon as that happened, the plant did what it was supposed to, which is shut down automatically," spokesman Scott Brooks said. Safety systems operated as needed, according to the US Nuclear Regulatory Commission, which was monitoring the situation. The plant was being closely watched because of the nuclear plant crisis in Japan, which has revived a debate in the United States over the safety of nuclear energy.

It was too soon to put a dollar figure on the damage. Between 1990 and 2009, tornadoes accounted for \$97.8 billion in insured losses in the United States, second only to hurricanes, which accounted for \$152.4 billion, according to the Insurance Information Institute.

The tornadoes were the result of storms that formed when northbound warm, humid air collided with cooler air over Texas, Arkansas and Louisiana and bumped up against warm winds from the Gulf of Mexico, said meteorologist Bob Smerbeck of Accuweather.com.

"All the ingredients were there for the storms to maintain themselves a long time," Smerbeck said.

The National Oceanic and Atmospheric Administration estimated that there were 164 tornadoes on Wednesday that began in Mississippi and raged in a northeast arc as far as New York, where one was reported in the town of Swartwood. The largest previous number of tornadoes on record is 148 on April 3-4 in 1974.

This has been an especially active year for tornadoes, NOAA reported. So far, there have been 745, including more than 600 in April. The average for April during the past decade is around 160. The previous yearly record was set in 2004, with 1,820. May is historically the most active month for tornadoes, raising concerns about the possibility of a record number this year.

The previous most deadly series of tornadoes occurred in April 1974, when more than 300 people in 13 states died.

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Fausset reported from Tuscaloosa, Ala., and Abcarian from Los Angeles. Staff writers Stephen Ceasar and Michael Muskal contributed to this story from Los Angeles and Richard Simon from Washington.

## **Tornadoes Ravage US South, Killing Hundreds In Six States (BLOOM)**

By Brian K. Sullivan

Bloomberg News, April 29, 2011

The worst day of tornadoes in 37 years tore through the US Southeast, killing hundreds of people, causing millions in damage and cutting power to a nuclear plant.

At least 280 people died in six states, with Alabama hardest-hit, as high winds tore apart homes and businesses, the Associated Press reported. As many as a million people were without power, Alabama's governor said. Earlier this week the same weather system killed 11 people in Arkansas.

It was the deadliest single day for tornadoes in the US since April 3, 1974, when 310 people died, according to AccuWeather Inc. President Barack Obama will travel to Alabama tomorrow to survey the damage.

As the system pushed onto the Eastern Seaboard today, thunderstorms caused hours-long delays at airports in New York, Newark, Washington, Baltimore and Philadelphia, according to the Federal Aviation Administration.

Delta Air Lines Inc. (DAL), AMR Corp. (AMR)'s American Airlines and other large carriers canceled about 1,300 flights today on top of 1,000 yesterday because of weather disruptions, said FlightAware.com, a Houston-based firm that tracks aviation data.

Damaging winds and large hail were reported yesterday in 21 states from New York to Arkansas, according to the US Storm Prediction Center in Norman, Oklahoma, which had warned of a major outbreak of tornadoes.

The governors of Mississippi, Virginia and Tennessee declared emergencies and Alabama Governor Robert Bentley activated the state's National Guard to deal with damage reported in 18 counties, according to state websites.

Insured losses will be in the hundreds of millions and total damage may reach \$1 billion, said Jose Miranda, director of client advocacy for catastrophe risk modeler Eqecat Inc. in Hackensack, New Jersey.

Obama issued a disaster declaration for Alabama late yesterday.

"In many places, the damage to homes and businesses is nothing short of catastrophic," Obama said today at the White House.

Tuscaloosa, a city of 93,000 in the west-central part of the state and home to the University of Alabama, was among the hardest-hit areas. Much of the damage there was along a busy, six-lane boulevard, Julie Kenny, owner of the downtown Café J coffee shop, said in a telephone interview today.

"There is a lot of student housing in that area and a lot of that was devastated and lots and lots of businesses were completely gone," Kenny said.

In the Pratt City neighborhood about five miles northwest of downtown Birmingham, stretches of streets looked like refugee thoroughfares as people carried belongings from wrecked homes past piles of rubble, roofless buildings and fallen trees.

Barbara Wells, a trucking company recruiter, said the storm took off the back of her house.

"We heard the walls when they collapsed, and I actually saw the walls go in and I told my daughter, I said, 'Come out of your room, now,'" Wells said. "I told her to hold onto me and don't let go."

In addition to Alabama, storm-related deaths were reported in Mississippi, Tennessee, Georgia, Virginia and Kentucky, AP said.

The Tennessee Valley Authority shut all three reactors at the Browns Ferry nuclear plant in Alabama yesterday after the storms caused a brief power outage, Barbara Martocci, a company spokeswoman, said in a telephone interview. With other reactors offline for seasonal maintenance, US nuclear output fell to the lowest level in more than 10 years.

Each of the reactors at Browns Ferry, 84 miles north of Birmingham, has the capacity to generate more than 1,000 megawatts, according to the US Nuclear Regulatory Commission. Combined, they produce enough to power 2.6 million average US homes, based on Energy Department statistics.

Yesterday's vicious storm outbreak was caused by warm, wet air pushing north from Texas, Arkansas and Louisiana, AccuWeather said. It collided with cooler air, while winds from the south and the southwest combined to allow rotation.

April has been marked by heavy rains that have threatened to drive the Mississippi and Ohio rivers to record flood levels, and by destructive tornadoes, thunderstorms and hail that have left a trail of death and damage from New York to the Gulf of Mexico.

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## **Alabama Tornado Outbreak: Preparedness And Response (CSM)**

**It's not easy to prepare an entire city for a mile-wide tornado like the one that hit Tuscaloosa in Alabama. That makes individual preparedness – and rescue and recovery – especially important. Obama will tour the area Friday.**

By The Monitor's Editorial Board

Christian Science Monitor, April 29, 2011

On the phone with reporters this morning, Alabama Gov. Robert Bentley responded to questions about preparedness for the tornadoes that hit his state on Wednesday, killing at least 162 people.

Alabama is used to tornadoes, he stated. It's part of Dixie Alley. Warnings were broadcast throughout the day, and many schools, businesses, and government offices quit early or remained closed.

"We were very prepared," Governor Bentley said. But in a highly populated area such as Tuscaloosa, where a maximum force, mile-wide tornado wiped out parts of the city, "you cannot move thousands of people in five minutes."

With evacuation not possible, individual preparedness, search and rescue, and recovery become that much more important.

April is shaping up to be one of the most violent months for storms and tornadoes in America in decades. The unsettled weather is causing floods, twisters, and deaths in the Midwest and South. Scientists say it's due to a lingering La Niña system in the Pacific that has shifted wind patterns across the United States.

The severe weather system that plowed through Alabama, Mississippi, Tennessee, and other southern states this week is being compared to the tornado outbreak on April 3-4 in 1974, when 318 people were killed. This time, dozens of tornadoes have killed at least 248 people, but that's before all the searches have been completed.

As this story unfolds, more will be reported on both preparedness and response. Not all of it will be positive. But despite the tragedy, many actions did show that lessons have been learned when it comes to disaster readiness.

The early closures of schools and offices saved lives, says Tuscaloosa's mayor. Two thousand National Guard have been deployed in Alabama. The University of Alabama, which was skirted by the Tuscaloosa tornado, sent buses into town to pick up students and bring them back to campus for safety.

The Tennessee Valley Authority – a major source of electricity – powered down three nuclear reactors at its Browns Ferry nuclear plant near Birmingham when the plant lost external power. TVA authorities say the system worked as it was supposed to, although as many as a million people may be without power in Alabama due to major damage to transmission lines.

The coming days will show how well the federal government, through the Federal Emergency Management Agency (FEMA), and the states respond to this weather disaster. But individuals will certainly do their part, as they have in past emergencies.

People will be reminded of the importance of personal preparedness – for instance, having a safe place to go if your home does not have a basement and having water, food, and flashlights stored in that emergency place.

[TORNADO CHECKLIST: Six things to do and four myths to ignore.]

Volunteers will also be on the move, just as they were after hurricane Katrina or the armies of people sandbagging in the flooded Midwest. Churches and other groups will offer refuge and resources. Neighbors will reach out to one another.

Disasters leave heartache in their wake, but they also bring people together. That's the way of love.

## **Nuclear Reactor Knocked Offline By Tornadoes (WPLN)**

**Nashville, Tennessee**

WPLN-AM, April 29, 2011

Hundreds of thousands are without power in the TVA service area this morning after tornadoes took out transmission lines and kicked a nuclear reactor offline.

TVA chief of operations Bill McCollum says in a video press release that the Browns Ferry nuclear plant in north Alabama lost external power. He says the emergency backup generators began working.

"The units are being shut down safely. All of the systems at the plant functioned as designed and normal procedures are being used to cool down the plant."

TVA says restoring power to the Browns Ferry plant is the top priority. Next is getting electricity to customers like hospitals and nursing homes.

McCollum says it could be days or even weeks before some customers get power. He says so far it's been impossible or unsafe to fully assess the damage. A statement from TVA says the utility has never experienced such a major weather event.  
Printable Version

## **Tornadoes Carve Path Of Death, Destruction Across South, With Nearly 300 Dead (WP)**

By Joel Achenbach And Michael E. Ruane

Washington Post, April 29, 2011

The death toll soared to near 300 Thursday as rescuers dug through rubble from Mississippi to Virginia in the nation's deadliest natural disaster since Hurricane Katrina.

It was what they call a tornado outbreak, something rarely seen on such a scale. Not since April 3, 1974, has the United States witnessed so much destruction from twisters, and tornado experts say Wednesday, April 27, 2011, may go down in history as the most destructive outbreak in eight decades.

Alabama took the most brutal pounding, the entire state scarred by a monster funnel cloud that crossed the state on a track that struck Tuscaloosa head on and chewed through the Birmingham suburbs before exiting into Georgia. At least 194 Alabamans lost their lives.

"This place looks like a war zone," Jackie Wuska Hurt, director of development for the honors college at the University of Alabama in Tuscaloosa, wrote in an e-mail. "Folks looked like refugees walking single file with suitcases or grocery carts of their belongings down the sidewalks of University Boulevard."

President Obama, who called the damage "nothing short of catastrophic," will tour the devastated region Friday before going to Florida for the space shuttle launch.

"It's almost total disbelief," said Phyllis Little, director of emergency management for Cullman County, Ala., a largely rural area of 82,000 peppered with small towns. "The county courthouse lost its roof. The Baptist church has a skeleton for a steeple. Old buildings that have been there for hundreds of years have just collapsed."

The entire county is without power, and emergency responders are operating on natural gas generators. Little has been turning away volunteers who have called her office, offering to come to Cullman to help.

"Fuel is an issue for us," Little said. "We're struggling to provide that to the emergency response agencies. If you don't live here or have business here, don't come."

'Little middle ground'

Local TV stations in Alabama captured stunning footage of the squat, black maelstrom as it chewed a path through Tuscaloosa shortly before dusk Wednesday, riding along an interstate highway, and coming within a mile of the football stadium that is home to the fabled Crimson Tide.

The university has closed, canceling final exams and postponing graduation exercises until August. Power outages shut down most forms of communication, but students found they could still track the news through Twitter.

"Somehow the Twitter feeds keep coming," said Ian Sams, 22, a senior. "You'd see people tweeting from shelters saying, 'We need blankets, we need diapers, if you can bring them, bring them.'"

As with any tornado, the destruction could seem capricious, with obliterated areas bracketed by neighborhoods that were merely a little windblown.

"There's very little middle ground. Either you took a beating, like you really were just devastated by it or — I went to my parents' house, and they have power — and it's just another day," said Brandi Freeman, 21, a senior.

Alabama's Emergency Management Agency said 31 of the state's 67 counties have reported damage. Most are in the central and northern parts of the state.

"This was the big one," said James-Paul Dice, chief meteorologist at WBRC Fox 6 in Birmingham. "A monster of a storm."

Dice said the biggest tornado passed two miles from the station as most of his co-workers took shelter. He continued broadcasting, telling his viewers that this was unlike anything he'd seen in his 16 years in the business.

That this would be a day of severe storms had been known many days in advance, thanks to computer models of the weather pattern, but Dice said he was shocked Wednesday morning at some of the numbers he was seeing. He said there is a measure of potential tornadic activity known as the "energy helicity index." Anything in the range of 3 or 4 would suggest a possible tornado, and he was stunned to see, on Monday, a forecast of a 6 for Wednesday. Then, Wednesday morning, the index jumped to 14.

"It was off the charts. This was almost like made-up numbers," Dice said.

Meteorologists are on the ground examining the damage in an attempt to get a precise handle on the number of distinct tornadoes and their intensity. What seems certain is that this was the worst day for twisters in America since Richard Nixon was in the White House.

"The outbreak is the biggest in terms of tornadoes and in terms of impact since '74 and it's possible that it's actually bigger than '74," said Harold Brooks, research meteorologist at the National Severe Storms Laboratory in Norman, Okla.

The April 3, 1974, outbreak sparked twisters across the eastern United States, claiming 310 lives, Brooks said. Wednesday's outbreak may be most similar to the tornado outbreak of March 21, 1932, when 332 people were killed, including 268 in Alabama, he said. Nothing, however, comes close to the destruction of March 18, 1925, when 747 people died, most of them along the path of a single twister, the so-called Tri-State Tornado that tore up Missouri, Indiana and Illinois.

Brooks said the conditions have been ripe in recent weeks for just such a catastrophe. Cold, dry air aloft, powered by the jet stream, blows in from the west, meeting the low-level, warm, moist air moving northward from the Gulf of Mexico. If the cold fronts are strong enough they'll suppress tornado formation. But if they're weak, the result can be a deadly compromise between the colliding air masses: The warm air at ground level will be moving in a different direction from the air higher up. That's a recipe for the rotational energy that spawns a full-blown tornado.

At the nuclear plant

The storms shut down the three nuclear reactors at the Browns Ferry power plant 30 miles west of Huntsville, Ala., a plant of similar design to the severely damaged Fukushima Daiichi power plant in Japan. But unlike Fukushima Daiichi, when Browns

Ferry lost primary power, the plant's diesel generators kicked in as designed to keep the reactors cool, said Barbara Martocci, a spokeswoman for the Tennessee Valley Authority, which operates the 3,274-megawatt facility. "The plant is shut down safely," she said, meaning that control rods dropped into the reactors when power went offline, stopping nuclear fission.

The plant's cooling systems can run indefinitely on diesel generators as crews work to restore external power, Martocci said. The facility will not begin producing electricity again until "we have a full damage assessment of our entire transmission system," Martocci added.

In Virginia, five people died — three in the small town of Glade Spring — in Washington and Halifax counties, when twisters roared through overnight, officials said.

A truck stop on Interstate 81 and a new factory were destroyed, according to Christy Parker, assistant administrator in Washington County, in southwest Virginia.

Tractor trailers "were flipped and thrown about the interstate like toys," she said Thursday.

Pokey Harris, Washington County's director of emergency management, said late Thursday: "We have multiple injuries . . . broken bones, crush injuries. We have a tremendous amount of devastation. A lot of buildings are destroyed."

Most of the Virginia fatalities occurred when what appeared to be a tornado hit a mobile home park, the truck stop and an apartment complex, Virginia Department of Emergency Management officials said. Storms ripped through a subdivision in Shenandoah County, damaging several homes. Virginia Governor Robert F. McDonnell (R) declared a state of emergency, authorizing state agencies to assist local governments in responding to the impact of the weather.

Severe storms and possible tornadoes also struck Goochland County, officials said. Fifty people were injured statewide.

Tornado warnings were issued across the D.C. suburbs early Thursday morning. Fast-moving bands of storms packed high winds and torrential rains. A funnel cloud formed over Point of Rocks in Frederick County shortly before 7 a.m., according to the National Weather Service.

There were widespread reports of damaged trees, including one that fell across Route 109 in Barnesville and another that landed on an electric line in Middleburg, according to the Weather Service. Fauquier County schools were delayed by two hours, and Prince William County schools canceled outdoor activities.

The storms caused flight delays of up to 90 minutes at Reagan National and Dulles International airports.

Staff writers Michael Bolden, Jason Samenow, Krissah Thompson, Brian Vastag, Erin Williams and researcher Madonna Lebling contributed to this report.

## **Emergency Declared At Browns Ferry Nuclear Plant [PHOTOS] (INTLBIZ)**

[International Business Times](#), April 28, 2011

Alabama officials have declared an emergency at a nuclear power plant in the northern part of the state and have started shutting it down in the aftermath of severe storms and tornadoes that have pounded the state.

Tennessee Valley Authority began the process Wednesday afternoon, declaring an 'unusual event,' the lowest of four emergency levels as the storms damaged electricity transmissions lines powering the plant.

"This afternoon, the Browns Ferry plant, because of the loss of transmission declared an unusual event, which is the lowest of the four emergency classifications used by the Nuclear Regulatory Commission and personnel are working to safely shut down the plant," said Tennessee Valley Authority Chief Operating Officer Bill McCollum in a video posted to the Authority's web site.

The Browns Ferry plant contains three nuclear units and "is being shut down this afternoon after the transmission line damage took the plant offline," McCollum said.

He said all of the systems at the plant functioned as designed and normal procedures were being used to cool down the plant.

The plant's units combine to give it 3,274 megawatts of power.

A spokeswoman said backup diesel generators started and operated as designed, according to Reuters.

The Brownsferry plant has the same design and age as the Fukushima Daiichi plant in Japan, which was damaged when a tsunami in the aftermath of a 9.0 magnitude earthquake knocked out power and water damaged emergency backup units.

Browns Ferry's nuclear reactors are of the Mark 1 type by General Electric, similar to those at Fukushima.

Preston D. Swafford, TVA's chief nuclear officer said on a March 26 tour of that plant that Browns Ferry was ready for "a one-in-a-million-year flood, or however many zeroes you want to go out," according to the New York Times.

## **TVA Loses All Power Transmission Lines In Alabama And Mississippi, Browns Ferry Nuclear Plant Forced Into Emergency Shutdown (CHTNGA)**

By Pam Sohn

Chattanooga (TN) Times Free Press, April 29, 2011

Wednesday's storms took out all of TVA's electric power transmission lines in Mississippi and North Alabama, and forced Browns Ferry Nuclear Plant into diesel backup power and into emergency and automatic cold shutdown.

Bill McCollum, the chief operating officer of Tennessee Valley Authority, said it may be weeks before power can be restored to all of the 300,000 customers whose power is supplied by the federal utility.

"With the level of damage we have, it will be — we hope it will be days until we get most of the customers back on, but it will be weeks before we've fully repaired all of the damage," he said.

McCollum said the reactors, now being cooled by backup diesel power, are safe.

He said the spent fuel pools also are being cooled by backup diesel power and are safe.

The transmission lines are the monster power lines that carry electricity from TVA power plants to power distributors such as EPB and Huntsville Utilities.

Now those utilities, along with a number of large industries that are wired directly to TVA transmission lines, will not have power until the lines are repaired, McCollum said.

The loss of those transmission lines also caused Browns Ferry Nuclear Plant to lose power.

When the plant generates power, it uses some of that power and the excess is sent out on the transmission lines. When those transmission lines can't take power, it causes the reactors to trip, according to TVA officials.

## **Still Without Power - The Daily Sentinel: News (SDS)**

By Ken Bonner

Scottsboro (AL) Daily Sentinel, April 29, 2011

A large part of the Tennessee Valley Authority's service area is likely to be without power for several days yet after storms Wednesday devastated a large portion of the utility's transmission lines.

Thursday, April 28, 2011 12:00 AM

Posted: Thursday, April 28, 2011 6:56 pm | Updated: 7:15 pm, Thu Apr 28, 2011.

A large part of the Tennessee Valley Authority's service area is likely to be without power for several days yet after storms Wednesday devastated a large portion of the utility's transmission lines.

TVA officials said Thursday afternoon that the damage was worse than at first anticipated. They would not give an estimation as to when power would be restored.

More than a dozen transmission towers were downed near Widows Creek Fossil Plant in Bridgeport after a tornado swept through the area just west of the aging facility. It appeared one unit was operable at the facility and parts of Bridgeport and Stevenson had power.

An inspection crew was overflying the site assessing damage to the lines leaving the coal-fired generating plant. A crew had also been on the ground photographing and documenting the damage near the facility. The plant was not damaged.

TVA reported at least 90 transmission lines, including 25 500kv lines were damaged in its seven state service area. Most areas of North Alabama were without power late Thursday.

A long stream of cars traveled US Highway 72 from Scottsboro to the Tennessee state line Thursday leaving the state in an effort to find lodging, food and fuel. Tags identified vehicles from as far west as Morgan and Limestone counties and from Jackson, Marshall and Madison counties. Most vehicles were heavily packed as North Alabama residents began to understand the region could be without electricity for at least several days.

Scottsboro City School system announced earlier in the day that it would be closed indefinitely. Jackson County School Superintendent Ken Harding said late Thursday that his system would be closed Friday. He said a decision would be made over the weekend about the class schedule for the upcoming week.

"The tornado came within 50 yards of my house," Harding, who had been out helping neighbors with their clean up efforts, said. "We will make our decision and let people know later in the week."

Lines were also down at the Browns Ferry Nuclear Plant near Athens and the facility's three reactors were not producing power. The plant was not struck by a tornado that passed nearby and was safely shutdown, according to reports.

"Restoration will be slow," a TVA spokesperson said. "Damage is widespread."

The tornado that affected Widows Creek began to drop out of the sky on the southern side of Steam Plant Road sometime shortly after 4 p.m. It stayed at tree top level before touching down in the vicinity of Jackson County Road 255 and 256 just southeast of downtown Bridgeport and continued into the Battery Hill area of the town.

TVA will keep the public utilities and direct customers its serves updated on a daily basis until full power is restored.

## **Noon Power Update - WAFF.com: North Alabama News, Radar, Weather, Sports And Jobs- (WAFF)**

### **Huntsville, Alabama**

By Roger Seay

WAFF-TV, April 29, 2011

HUNTSVILLE, AL - Thousands of people are still in the dark across North Alabama this afternoon.

The trouble is tTransmission lines from TVA are damaged and they're still checking things out.

Once TVA restores power to this area it could take another five to seven days to get things back up and running for all Huntsville utilities customers.

Unfortunately there's no word on how long it will take TVA to do what they need to do.

You'll still see Huntsville crews out in the area working on lines that will help speed things up once TVA is able to transmit power to the area.

There are some things you need to know before the lights come back on.

First, be e sure to turn off your air conditioner. When the power's back, you'll want to start up your appliances gradually. Second, turn off your stove! Were you cooking dinner when the storms hit? Make sure the burners are off!

Finally, conserve water. There's no immediate threat of a water shortage.. But treatment plants are on generators and not operating at 100-percent.

## **Marshall County Schools Closed Friday; Albertville, Boaz Unsure (SANDAL)**

By Malarie Haven

Sand Mountain (AL) Reporter, April 29, 2011

Area schools will have to find a way to make up days lost due to power outages from the string of storms that made its way across the state Wednesday.

"We don't have power, and we don't see us getting power for a while," said Tim Nabors, superintendent of Marshall County Schools. "We can't operate without it."

Marshall County schools canceled classes Wednesday as severe weather approached. Damage to a TVA transmission line created power outages across the state causing officials to cancel school Thursday and Friday.

Albertville and Boaz city schools were also called off classes Wednesday and Thursday due to loss of power. After missing several days earlier in the year due to winter weather, the schools will be forced to extend the school year even further.

Albertville City Schools Superintendant Ric Ayer said he is unsure how long the schools will be out of session, but "we'll have to make up the days." The school year was already extended to June 2 from the days missed during the winter storms. He said the last school day has now been moved to June 3, and if they are not able to return to school Friday, officials will have to decide whether to use Saturday, May 28 or Monday, June 5 as a make-up day.

Nabors is hoping students will be able to return Monday, but he doesn't expect classes to resume until later next week.

"When we can all get together, we'll come up with a game plan, see what the state will allow us to do and check the rules," Nabors said. "We'll just have to take it day by day."

Boaz City Schools Superintendent Mike Lindsey could not be reached for comment as of 5 p.m. Thursday.

## **Local Crews Help Hard-hit Areas (WALTRIB)**

Walton (GA) Tribune, April 29, 2011

The lights are back on across Walton and surrounding counties after the early Thursday storms.

Walton Electric Membership Corp. had 20 or so broken poles in a small area of Morgan County, a spokesman said. Crews may soon head to Alabama, where hundreds of thousands of people remained without power Thursday night.

Areas of north Alabama served by the Tennessee Valley Authority are looking at several days without power after TVA lost several transmission lines.

Walton EMC had more than 1,700 people offline early Thursday at the peak of the storm.

Monroe Utilities personnel traveled to other Georgia cities Thursday to help in the storm recovery. Walton EMC crews went to the LaGrange area to help Diverse Power's recovery efforts.

Posted on Thursday, April 28, 2011 9:20 pm. Updated: 9:30 pm.

## **Deaths Reported In Wake Of Storms In Tennessee (WSPA)**

**Asheville, North Carolina**

WSPA-TV, April 29, 2011

Deaths Reported In Wake Of Storms In Tennessee

disaster\_accident,tennessee,tennessee emergency operations center,tennessee valley authority,weather

Thursday, April 28, 2011 12:00 AM

Thirty people have died in Tennessee as a result of severe weather, according to the Tennessee Emergency Operations Center. The death total from a wave of powerful storms that struck the South is now as many as 231 people in six states.

The Tennessee Valley Authority reports that Wednesday's storms knocked out 90 large power transmission lines, only 13 of which were back in service by 10 a.m. Wednesday.

More than 322,000 customers of 49 TVA distributors were without power Wednesday morning, the TVA said in a press release.

That number could rise as crews conduct further assessments of damage, TVA said.

## **Tornado Cleanup Begins In Marshall County (SANDAL)**

By Malarie Haven

Sand Mountain (AL) Reporter, April 29, 2011

Area residents are preparing for a long road to recovery after suffering devastating effects from numerous tornados that tore through Alabama on Wednesday.

Marshall County saw five deaths, all from the Ruth Community on Frontier Road in Arab, according to Anita McBurnett, director of the Marshall County Emergency Management Agency. Marshall Medical Centers treated 28 patients for storm-related injuries Wednesday, and several people suffered damage or loss to homes and property, she said.

Early morning storms caused heavy damage to trees, power lines, homes and businesses in Guntersville, Douglas and Horton. Boaz received minor damages from the last cell that traveled through the county Wednesday night, McBurnett said.

"After 12 p.m., we had additional tornadoes that did touch down and cause damage," McBurnett said Thursday morning. "Today, we're out trying to clear roads. Electrical co-op crews are trying to work on these power lines, and what I mean by work is they're just trying to untangle them from tree limbs and cut off snapped poles. We're also trying to remove hanging debris, because that's a major safety issue."

A massive power outage struck areas in north Alabama served by the Tennessee Valley Authority on Wednesday night when the storms damaged a TVA transmission line near a nuclear plant in Limestone County, according to McBurnett. Consequently, services from the Municipal Utilities Board and Marshall-DeKalb Electrical Cooperative were disrupted, causing loss of electrical power to private residences, businesses and even traffic lights across the county.

Boaz Mayor Tim Walker and Albertville Mayor Lindsey Lyons urged motorists to take extra precautions when traveling. While most roads have been cleared of debris, the lack of traffic lights has caused hazardous conditions at intersections. Walker reminded travelers to treat all intersections without working traffic lights as a four-way stop, and Lyons suggested people drive under the speed limit. Lyons also said police officers are barricading certain turn lanes that could cause traffic problems at major intersections.

"Our crews did a great job," Lyons said. "They cleared out all the fallen trees, and we're concentrating on debris removal."

Boaz has a 10 p.m. curfew until power is restored, and emergency personnel are currently stationed at the fire department, Walker said. Lyons reported that Albertville's curfew will last from 10 p.m. to 6 a.m. The only exceptions will be for those commuting to and from work, emergency situations and residents checking on elderly loved ones.

Elden Chumley, general manager of MUB, said he expects residents to be without power for as much as seven days. Depending on the extent of damage and how fast workers can repair the transmission line, he said it could be somewhere between four and nine days before power is restored.

"It's going to take a while to rebuild that structure," he said. "We're all kind of at the mercy of TVA."

He said he receives updates from TVA throughout each day, but as of Thursday afternoon the extent of damage was still unknown.

"They just don't really know, and they're honest about that," he said. "But they're working as fast as they can."

McBurnett said seven days without power could cause multiple problems throughout the county and surrounding areas. Those problems were already visible Thursday morning as residents from Marshall and DeKalb counties piled into gas stations in Etowah County and surrounding areas. Gas pumps in Marshall County were inoperable causing most area gas stations to close.

"We're seeing more people out, but we're trying to remind people to conserve fuel," McBurnett said. "If they're out just being lookiloes or rubbernecks, they're wasting gas they won't be able to replace."

She also said several days without electricity could create problems with water and sewer systems if local plants do not have adequate backup power generators.

"We may have some water issues if this continues over time," McBurnett said. "People need to try to conserve water. Don't be wasteful, and try to reduce your number of flushes."

## **Alabama Nuclear Plant Shuts Safely After Tornadoes (REU)**

By Scott Disavino

Reuters, April 29, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

## **Activists Call For Plant's Closure; Officials Say It's Safe (NCT)**

By Cigi Ross

North County Times (CA), April 29, 2011

Anti-nuclear activists called for the San Onofre Nuclear Generating Station to be shut down, while officials with the Nuclear Regulatory Commission said the plant is safe but improvements are needed, during a public meeting Thursday in San Juan Capistrano.

Representatives of the NRC told the plant's owner, Southern California Edison, that while the commission believes that the utility is operating the plant safely, it still has concerns with how workers and managers at the plant perform their duties and want to see improvements in the plant's "safety culture," or whether employees feel comfortable reporting safety issues to supervisors.

More than 300 people attended the annual performance review meeting at the Capistrano Unified School District offices.

Greg Warnick, the NRC's senior resident inspector at San Onofre, said the commission performed 13,700 hours of inspections at San Onofre in 2010 and will continue its increased reviews of the plant this year.

He said similar plants typically receive 3,000 to 5,000 hours of inspection.

Warnick said the inspections are billed to Southern California Edison and cost about \$3 million in 2010.

The commission's concerns include a lack of adequate design documentation and work instructions, improper error-prevention techniques, and Edison's efforts to make sure projects are properly overseen by management.

Those same issues have been raised during the plant's last seven consecutive review sessions.

In response to the NRC's evaluation, Edison executives highlighted a list of new initiatives to make sure workers are following procedures so that small problems do not grow, including establishing an employee concerns program.

"Our number one priority is the health and safety of the public," said Pete Dietrich, the utility's senior vice president and chief nuclear officer.

After the NRC presented its performance review, about 40 members of the public voiced their concerns with the seaside plant or offered support.

The speakers were mostly split between anti-nuclear activists and plant workers.

San Clemente Mayor Lori Donchak asked the officials to issue a plan to ensure residents' safety and detail evacuation routes in case there is an emergency, such as the March 11 magnitude-9.0 earthquake and subsequent tsunami that damaged the Fukushima Dai-ichi nuclear plant in Japan.

Donchak called that event a "wake-up call."

Steve Netherby, a San Clemente resident, said that it was "insane" to have a power plant in such a heavily populated area.

"Together we can close (the plant)," he said. "We must. We have no other choice."

Gary Headrick, president of the anti-nuclear group San Clemente Green, said the NRC needs to do a "better job of regulating and overseeing" the plant.

"The only result is more safety inspections and there's no consequences," he said of the utility's past poor performance. "Let's shut it down and move on to green technology."

Nicole Pappas, who works at San Onofre, echoed Edison and NRC officials who said repeatedly that residents' safety is their top priority.

"Whether or not they support nuclear power, their health and safety is our priority," she said.

## **Hundreds Voice Nuke Plant Concerns; NRC, Edison Try To Reassure Public (LagBchPatch)**

By Adam Townsend

Laguna Beach Patch, April 29, 2011

Hundreds showed up to the annual Nuclear Regulatory Commission meeting Thursday night to hear an assessment of how safely the San Onofre Nuclear Generating Station operated in 2010.

Residents—dozens of whom carried anti-nuclear energy placards—expressed their increased concerns that a disaster similar to the earthquake and tsunami that destroyed the Fukushima plant in Japan could cause a meltdown at San Onofre.

"We want to decommission San Onofre as soon as we can," said protest organizer and San Clemente Green founder Gary Headrick. "We realize it's a process, but we want the decision to be made right away."

Headrick cited whistle-blower reports, past violations and other safety problems.

One of San Onofre's on-site NRC inspectors, Greg Warnick, told residents at the meeting that the plant's record was improving. He said that after 14,000 NRC man-hours of inspection over the course of 2010, he was confident that "San Onofre operated in a manner that preserved public health and safety."

Pete Dietrich, the plant's chief nuclear officer, told the public that plant officials are committed to keeping residents safe, though he acknowledged that there is still a way to go to before all of the NRC's requirements would be met and regulatory violations fixed.

Warnick said the commission focused on potential personnel problems throughout 2010 and found no major issues. More than a year ago, the NRC issued an inspection paper stating the programs San Onofre was implementing to address the problems were not working.

Plant Manager Tom McCool said detailed procedures are now in place to make sure workers feel comfortable reporting concerns, could easily identify errors and address them and using proper protocol.

Though there has been a sharp drop in the number of safety concerns reported by workers over the from the beginning of 2011 to now, Warnick said the NRC still got too many reports from San Onofre.

"San Onofre is the leader still in safety concerns reported to the NRC," Warnick said. "So far we have not closed the human performance issues."

But, he said, the plant has made progress even since January.

"When people feel free that they can raise concerns through all available avenues, especially their direct supervisors, that's a sign of a healthy organization," Warnick said.

Some 40 residents and plant workers signed up to speak during the public comment period, but only about 25 got to speak.

San Clemente Mayor Lori Donchak, who has been spearheading an effort by the City Council to get a seat at the table when it comes to decisions about the plant, outlined concerns about spent fuel stored at the plant site. She also asked for help paying to connect Avenida La Pata to the arterial street system in San Juan Capistrano.

The \$90 million, two-mile connector now in the planning stages would add a third escape route from town in the event of a nuclear disaster; the only evacuation routes now are the 5 freeway and Pacific Coast Highway.

Other residents were adamant that they wanted the plant shut down. Even the tiniest risk of meltdown, they argued, was too much.

"We want to shut down the San Onofre nuclear plant," said Nancy Nolan of San Clemente. "All nukes are unhealthy and dangerous to civilizations around the world."

Dana Point resident Jeffrey Scott agreed.

"As a resident in the area, I'm taking the risk and I don't feel like I've had a voice in the decisions regarding San Onofre," he said. "This is in a critical location near several earthquake faults."

Dietrich cited science that suggested the Christianitos Fault off the coast of San Onofre was called a "strike slip" fault, which is less risky than a "subduction" fault like the one off the coast of Japan.

Other speakers were plant workers who, themselves, attempted to assure the public their safety was in good hands. About six or eight speakers expressed their faith in nuclear power and the skilled workers at the plant.

## **Anti-nuclear Protest Planned At NRC Meeting (SDUT)**

By Onell R. Soto

San Diego Union-Tribune, April 29, 2011

San Clemente Green, an environmental group opposed to the continued operation of the San Onofre nuclear plant, is planning to protest a meeting today in which the Nuclear Regulatory Commission and Southern California Edison will field questions from the public.

Activists worry that instead of being a watchdog, the NRC too often rules in favor nuclear plant operators, said Gary Headrick, the organization's co-founder.

Protesters plan to gather about 5 p.m., an hour before the meeting is to start in San Juan Capistrano, he said.

At the meeting, NRC staff are to answer questions regarding oversight of the plant, where they have told operator Southern California Edison that there are still problems with worker culture.

The biggest problem, according to the NRC, is that workers are afraid they will be retaliated against if they bring up safety problems, something that's against the rules.

There has been progress, the NRC has said, but there is still work to do.

So far, the problems have not threatened the safety of plant workers or the public.

## **Nuke Plant Public Meeting, Protest Today (OCR)**

By Pat Brennan

Orange County Register, April 29, 2011

Protesters will gather at 5 p.m. Thursday in San Juan Capistrano to call for the closure of the San Onofre nuclear plant, an hour before a public meeting in which federal inspectors will give their 2010 assessment of the plant's performance.

The protest is being organized by the environmental group, San Clemente Green, and could draw 100 to 300 people, said co-founder Gary Headrick.

"We want to close San Onofre as soon as possible, following the example of Germany, and replace it with green technology as soon as possible," Headrick said Thursday.

He said the recent nuclear disaster in Japan could be driving more interest in the protest.

It will be held at the Capistrano Unified School District board room, 33122 Valle Rd., San Juan Capistrano, where Nuclear Regulatory Commission officials will gather at 6 p.m.

The public meeting will focus on safety performance. The plant has been under increased scrutiny from the nuclear agency in recent years, mainly over personnel issues. None were considered to be significant safety problems by the agency.

## **Time To Shut Down California's Nuclear Plants (ALTRNT)**

By Norman Solomon

AlterNet, April 29, 2011

The facts all point to this "inconvenient truth" -- the time has come to shut down California's two nuclear power plants as part of a swift transition to an energy policy focused on clean and green renewable sources and conservation.

The Diablo Canyon plant near San Luis Obispo and the San Onofre plant on the southern California coast are vulnerable to meltdowns from earthquakes and threaten both residents and the environment.

Reactor safety is just one of the concerns. Each nuclear power plant creates radioactive waste that will remain deadly for thousands of years. This is not the kind of legacy that we should leave for future generations.

In the wake of Japan's Fukushima nuclear plant meltdown, we need a basic rethinking of the USA's nuclear energy use and oversight. There is no more technologically advanced country in the world than Japan. Nuclear power isn't safe there, and it isn't safe anywhere.

The perils to people are clear. In a recent letter to the US Nuclear Regulatory Commission, Senators Barbara Boxer and Dianne Feinstein noted that "roughly 424,000 live within 50 miles of the Diablo Canyon and 7.4 million live within 50 miles of the San Onofre Nuclear Generating Station."

As someone who was an Obama delegate to the 2008 Democratic National Convention, I believe it would be a tragic mistake for anyone to loyally accept the administration's nuclear policy. The White House is fundamentally mistaken in its efforts to triple the budgeting of federal loan guarantees for the domestic nuclear power industry, from \$18 billion to \$54 billion.

Our tax dollars should not be used to subsidize the nuclear power industry. Instead, we should be investing far more in solar, wind and other renewable sources, along with serious energy conservation.

The Nuclear Regulatory Commission is a nuclear-friendly fox guarding the radioactive chicken coop. The federal government has no business promoting this dangerous industry while safe and sustainable energy resources are readily available.

The fact that federal law imposes a liability cap of about \$12 billion on a nuclear power accident is a reflection of the fact that those plants are uninsurable on the open market.

As a candidate for Congress in the district that includes Marin and Sonoma counties, I intend to make this a major campaign issue. It remains to be seen whether my one declared opponent, Assemblyman Jared Huffman, will join me in urging a rapid timetable for the closure of California's nuclear power plants.

Huffman has ties to California's nuclear-invested utility PG&E. Between 2007 and 2009, according to campaign finance data compiled by nonpartisan Maplight.org, he received \$11,100 from PG&E, which owns and operates the Diablo Canyon nuclear plant.

While Huffman and other state lawmakers in February signed a letter to a federal commission on America's nuclear future citing seismic "concerns which deserve to be more closely examined," the time for equivocation on nuclear power is long past. We don't need yet more study on whether to operate nuclear plants on fault lines.

People want bold and responsible leadership as we face up to the well-documented realities of nuclear power on this fragile planet.

## **Despite Bipartisan Support, Nuclear Reactor Projects Falter (NYT)**

By Matthew L. Wald

New York Times, April 29, 2011

WASHINGTON — In an effort to encourage nuclear power, Congress voted in 2005 to authorize \$17.5 billion in loan guarantees for new reactors. Now, six years later, with the industry stalled by poor market conditions and the Fukushima disaster, nearly half of the fund remains unclaimed. And yet Congress, at the request of the Obama administration, is preparing to add \$36 billion in nuclear loan guarantees to next year's budget.

Even supporters of the technology doubt that new projects will surface any time soon to replace those that have been all but abandoned.

"My gut feeling is that there is going to be a delay," said Neil Wilmshurst, a vice president of the Electric Power Research Institute, a nonprofit utility consortium based in Palo Alto, Calif. News on Thursday that Exelon Corporation, the nation's largest reactor operator, planned to buy a rival, the Constellation Energy Group, only reinforces the trend; until late last year, Constellation wanted to build, while Exelon was firmly against it.

Mr. Wilmshurst said the continued depressed price of natural gas had clouded the economics of new reactors, and he predicted that construction activity would "go quiet" for two to five years. His group has shifted its efforts to helping figure out how existing plants can extend their licenses to 80 years from the current limit of 60.

Of the four nuclear reactor construction projects that the Energy Department identified in 2009 as the most deserving for the loans, two have lost major partners and seem unlikely to recover soon. In addition to low prices for natural gas, the demand for electricity is down, and the March 11 earthquake and tsunami that damaged the Fukushima Daiichi nuclear power plant could bring new rules.

Only \$8.8 billion of the 2005 guarantee has been allocated — to a twin reactor project in Georgia. Ground has been broken on the fourth candidate, a twin reactor project in South Carolina, but its sponsors may get a better deal in the commercial finance market.

The initial \$17.5 billion was approved during the Bush administration, but President Obama has also embraced the idea of marrying nuclear power to solar, wind and "clean coal" to reach his administration's goal of generating 80 percent of American electricity from those sources by 2035. Mr. Obama's call for new loan guarantees came when the administration was seeking Republican votes in the Senate for a limit on carbon dioxide emissions, but he has stuck with the loan guarantees even after prospects for such legislation died after last fall's midterm elections.

The Republicans, who won control of the House, have portrayed such regulatory legislation as an energy tax. A White House spokesman, Clark Stevens, said that in the president's view, nuclear power would continue to be an important part of the "clean energy economy" he was seeking.

The Senate majority leader, Harry Reid, Democrat of Nevada, said on Wednesday that he favored more nuclear reactors and that loan guarantees were the only way to get them.

The idea was approved by the Republican Congress in 2005. Senator Lisa Murkowski of Alaska, now the ranking Republican on the Energy and Natural Resources Committee, has praised the Energy Department for issuing the first nuclear loan guarantee, for the Alvin W. Vogtle plant expansion, in Georgia. Senator Mitch McConnell of Kentucky, the Republican majority leader, supports loan guarantees as a step to build 100 new nuclear reactors.

One reason for all the financial support may be the way Congress does its accounting. The guarantees cost little or nothing to approve. "It's not real money," Mr. Wilmshurst said.

A federal loan guarantee is a little like a parent co-signing a child's car loan; if the child makes the payments, the parent pays nothing. Under the 2005 law, borrowers pay a lump sum to the government to compensate the Treasury for the risk it is undertaking, and if the companies finish the projects and can pay back the loans, the government makes a profit.

The precise shape of new loan guarantees is uncertain, but when "scoring" the provisions for the purpose of calculating their expense, the White House says they cost nothing, and Congress assumes they cost 1 percent of the face value. But they are not without risk.

If the builders default, as happened on some nuclear construction projects in the 1980s, the taxpayer liabilities could run into the billions of dollars.

Officials at the Energy Department, which administers the loans, said they were confident that other developers would come forward and apply for the guarantees. Jonathan M. Silver, the executive director of the loan programs office, said, "There is a significant queue of nuclear power plants in house that we will and are working on."

"They may just go forward under a different time frame," he said, but he declined to estimate how many years it would be before the government could reach its goal of providing loan guarantees to six to eight reactor projects.

Mr. Silver said that by the time a reactor could be finished and brought on line, market factors might be more in the industry's favor. "There are so many variables in this equation, taking a snapshot may be less relevant than watching the whole movie," he said.

Duke Power, for example, has been seeking to build a twin reactor in South Carolina that would also serve North Carolina. Company executives said that to move forward, it would need approval to charge customers for some construction expenses before the plant is completed. The company is still trying to line up additional partners, and has not made a final decision to build, a spokesman said.

Entergy Corporation, of New Orleans, has applied to the Nuclear Regulatory Commission for permission to build reactors in two locations, but has not reached the point of applying for loan guarantees. It will build "in the event that we do decide that economics, load demand and other factors make new units favorable," the company said.

"There's not much else I'm aware of that's really actively moving forward right now," said Michael J. Wallace, a former Constellation executive who was the chief operating officer of its partnership with a French firm to build the Maryland project, the proposed Calvert Cliffs 3 reactor. With a carbon tax no longer appearing likely, he said a new kind of help, like a federal "clean energy" standard that would set a quota for nuclear and renewable electricity, might be needed.

Henry D. Sokolski, executive director of the Nonproliferation Policy Education Center, said he opposed government assistance for new reactors. He said that because the loan guarantees covered only 80 percent of the construction cost, project sponsors had to come up with the remaining 20 percent.

"Since the most likely candidates to pony up the 20 percent bailed out," he said, "it doesn't augur well."

## **NRC To Discuss Watts Bar Safety Thursday (AP)**

Associated Press, April 29, 2011

The Nuclear Regulatory Commission meets Thursday in Athens, Tenn., to discuss the safety performance of the Watts Bar nuclear power plant during 2010.

The commission also will discuss construction at Watts Bar unit 2.

The NRC has already announced that the plant's unit 1 operated safely last year and that construction at unit 2 was done in compliance with commission regulations.

The plant is near Spring City, Tenn., and is owned and operated by the Tennessee Valley Authority.

A news release from the commission describes the gatherings Thursday as an open house and meeting.

## **First Energy And NRC Investigate Radiation Exposure (WKSU)**

**Human error could be the cause of an incident involving higher-than-normal levels at Perry Nuclear Plant**

By Dawn Einsel

WKSU-Radio, April 29, 2011

Akron-based FirstEnergy says it thinks human error by contractors working on the Perry Nuclear Power plant led to higher-than-normal radiation readings Friday.

Four workers were exposed and evacuated when their personal alarms detected the higher levels. The contractors were removing a piece of equipment from underneath the reactor, which is about 35 miles northeast of Cleveland along the Lake Erie shore.

FirstEnergy spokesman Todd Schneider says that a special Nuclear Regulatory Commission inspection team has been sent to determine the cause.

## **Brunswick Nuclear Reactor Back On Line (WILMIN)**

By Jim Brumm

Wilmington Star News, April 29, 2011

Unit two at the Brunswick Nuclear Plant is back in full operation after a 42-day refueling and maintenance outage, Progress Energy spokesman Ryan Mosier said Wednesday.

The Nuclear Regulatory Commission Power Reactor Status Report for April 27 showed the 937-megawatt plant operating at 100-percent capacity for the first time since March 4 when the power reduction began for the shutdown that began March 5.

The startup originally began early last week, but was delayed when testing "identified piping in the drywell that needed further maintenance," Ryan said, adding the problem was "addressed and we expect an uninterrupted run until the next refuel in two years."

The power plant, built by General Electric in the 1970s, is located just north of Southport. It is operated by Progress Energy, which has an 81.7 percent interest in the plant. The remaining 18.3 percent interest is held by the N.C. Eastern Municipal Power Agency, which supplies electricity to municipal power systems including Southport's

## **VSNAP Sticks To Closing Of VY (BRATBORO)**

By Josh Stilts

Brattleboro Reformer (VT), April 29, 2011

About 50 people attended the Vermont State Nuclear Advisory Panel meeting in the Vernon Elementary School gymnasium on Wednesday.

Panel Chairman Elizabeth Miller said that no one could have anticipated the events that occurred since the previous meeting in February.

Since that time, there was a devastating earthquake and tsunami in Japan, which also damaged the Fukushima nuclear reactor, the Nuclear Regulatory Commission relicensed the Vermont Yankee nuclear power plant, just days after the natural disasters and Entergy, which owns and operates the plant in Vernon, filed suit against the state, Miller said.

She added that the meeting wasn't the appropriate place to address what had happened in those situations and that the participants should stick to discussing the decommissioning options for the nuclear plant when it does cease to operate.

It's best to let the attorney general respond to the lawsuit filed by Entergy, Miller said.

"For this meeting, we want to try to have an issue focus," she said. Soon after the last meeting, an agenda was created regarding decommissioning concerns from the nuclear plant in Vernon, Miller said.

Last March, the Nuclear Regulatory Commission approved Entergy's application for a 20-year extension of Yankee's operating license. The original 40-year license is due to expire on March 12, 2012.

Entergy must also receive a certificate of public good from the Vermont Public Service Board, which can only issue such a certificate if it has been authorized to do so by the Vermont State Legislature. Entergy agreed to that stipulation when it signed off on a memorandum of understanding prior to purchasing the nuclear plant in 2002.

In 2006 the State Legislature voted itself the authority to prohibit the Public Service Board from issuing a certificate. In January 2010, the Vermont Senate voted 26 to 4 against issuing a certificate. The House of Representatives declined to discuss the issue.

On April 18, Entergy filed a lawsuit against the state, accusing it of attempting to pre-empt the federal approval of the license extension. It also argued that the state went back on its 2002 memorandum of agreement when the Legislature voted in 2006 to give itself the power to prevent the PSB from issuing a certificate.

During the meeting, Chris Company, executive director of the Windham Regional Commission, gave a presentation on the economics between two facility decommissioning processes SAFSTOR and DECON.

The Windham Regional Commission assists towns in southeastern Vermont to provide local government and work cooperatively with them to address regional issues in 27 towns in Windham, Windsor and Bennington counties.

Company said that the WRC, in the absence of county government, has played an essential link between local, state and federal government. He added that the WRC hadn't taken a position on whether or not the plant should remain open.

"The station occupies land along the Connecticut River that is of substantial economic value," he said. "The long-term beneficial commercial development and use of this land is important to the state and region."

Any delay in returning that land to productive use following the eventual closure of the plant would have negative effects upon the economy of the state and the region, Company said.

"The type of decommissioning process used will have significant economic and employment impacts," he said. "The WRC advocates for what the Nuclear Regulatory Commission refers to as DECON. Under DECON, or immediate dismantlement, soon after the nuclear facility closes, equipment, structures and portions of the facility containing radioactive contaminants are removed or decontaminated to a level that permits release of the property and termination of the NRC license."

According to Company, the SAFSTOR method, which could remain that way for 60 years, or possibly longer if approved by the NRC, would result in fewer jobs for an extended period and significantly more harm to the regional and state economy.

"We are concerned that SAFSTOR will be the decommissioning process of choice by Entergy in order to build the decommissioning fund," he said. "It must be ensured that the decommissioning fund and other guarantees are adequate to accomplish the prompt and complete decommissioning of the plant upon shutdown. The WRC contends that the existing fund and its projected growth does not satisfy that need, even given the decommissioning plan as submitted in Public Service Board Docket 7440. Consideration should be given to requiring a more complete analysis of decommissioning costs and related funding."

Bernard Buteau, who works for Entergy, during his presentation about decommissioning, wouldn't say whether the company was in favor of DECON or SAFSTOR.

Deputy Commissioner for the Department of Public Service, Sarah Hofmann, said that the current decommissioning fund, as of March is at roughly \$488.7 million dollars.

During the public comments section people expressed their concern about the health of Vermonters and employees at the nuclear power plant.

Kathleen Krevetski, a registered nurse from Rutland, said that the way cancer incident rates are wrong.

"Lumping men and women together over 10 years tells us nothing," Krevetski said. "Public health monitoring using these methods is a disgrace and should not be considered acceptable to this board. With this type of reporting, the public has been lulled into a false sense of security as we have been lead to believe that the radiation spewing out of Vermont Yankee into the air, into the earth and into the water is not harmful to our health, to our children and to future generations of Vermonters."

She said that studies have shown that risks from radiation exposure are as much as 50 percent higher for women than men and during childhood is even higher.

## **Nuclear Regulators Found Safety Violations In Beaver (PITTR)**

By Jeremy Boren

Pittsburgh Tribune-Review, April 29, 2011

The two nuclear reactors in Beaver Valley Power Station operated safely last year, but regulators said on Thursday they found four low-level safety violations that utility FirstEnergy Nuclear Operating Co. has remedied.

Nuclear Regulatory Commission officials held a public meeting in the Shippingport Community Building across the street from the 1,000-acre plant to discuss its performance. About 25 people attended.

"These findings were of very low safety significance," said Darrell Roberts, director of the Division of Reactor Projects in Region I, which stretches from Pennsylvania to Maine.

Erin Bonney, an inspector based at the power plant, said that in September an instance of "poor maintenance practice" caused a bolt to come off a ventilation system leading to backup diesel generators. The generators provide emergency power.

She said the other three findings were:

- An alarm on a main feed pump on the turbine side of the plant was improperly disabled by workers
- When Unit 1 was being restarted in the fall after refueling, a connecting line to the reactor briefly exceeded the rate at which NRC regulations say it is supposed to heat up
- Workers misread a procedure and misaligned some safety valves that caused packing leakage, but the water leakage was repaired before the unit restarted.

Each finding was rated "green," Roberts said, the lowest of four possible ratings: green, white, yellow and red.

Ted Robinson of Squirrel Hill-based Citizen Power, a watchdog group, asked officials why the steel-and-concrete containment liners surrounding the reactors varied in thickness in an inspection report submitted by FirstEnergy.

Inspector David Werkheiser said the liner met or exceeded the minimum thickness levels required. As part of a recent 20-year extension of the reactors' operating licenses, FirstEnergy promised to evaluate regularly the thickness of its containment liners.

In April 2009, corrosion and a hole about the size of paper clip were found in the Unit 1 reactor liner while it was shut down for refueling, which occurs every 18 months. The section was removed and replaced with a steel plate.

Separately, NRC officials began a "special inspection" on Monday at a different plant operated by FirstEnergy.

Higher-than-expected radiation levels were detected April 22 at the Perry Nuclear Power Plant 35 miles northeast of Cleveland.

Radiation levels increased as five workers removed a neutron monitor from the reactor and the plant was being shut down for refueling, said NRC spokeswoman Viktoria Mitlyng. She said the workers were not hurt and finished the work. An investigation will take about two months to complete.

Todd Schneider, a FirstEnergy spokesman, said one worker was exposed to 98 millirems of radiation, the equivalent of a few hospital X-ray scans. The NRC has established a dangerous yearly exposure threshold at 5,000 millirems.

## **Consolidation For US Nuclear Generators (WRLNUKE)**

World Nuclear News, April 29, 2011

Exelon and Constellation Energy have announced a \$7.9 billion merger. Under the name Exelon, the resulting firm will be America's largest generator of nuclear power by an even greater margin.

A definitive agreement posted today will see a stock-for-stock transaction combine the two companies. The new firm wants to take advantage of Exelon's large low-carbon generation fleet and Constellation's customer-facing business.

The firm will retain the name Exelon and its current headquarters location in Chicago, although retail and wholesale operations currently under Constellation will be based in Baltimore. Renewables businesses for both firms will be placed in Baltimore and the overall firm will keep its three utility brands, BGE, ComED and PECO. It will count a generation portfolio of over 34,000 MWe, of which about 19,000 is nuclear from 22 reactors. About 55% of delivered electricity would come from this.

Constellation shareholders will receive 0.930 shares of Exelon stock for each Constellation share, which works out to a value of \$38.59 per share and a total equity value of \$7.9 billion. These shareholders may be pleased with management efforts over the last few years, having rejected a credit-crunch buyout offer from MidAmerican Energy Holdings of just \$4.7 billion for what was then actually a larger company.

Current Exelon president and COO Chris Crane will be president and CEO of the new company, while current Constellation chair, president and CEO Mayo Shattuck will be the new firm's executive chair. Exelon's current chair, John Rowe, will retire. Crane said the new company will be "well positioned to benefit from a changing industry environment while managing risk and positioning ourselves to benefit from power market recovery."

Nuclear expansion plans for both companies have faltered over the last two years on the drop in power demand due to the financial crisis and the increasing availability of cheap gas.

Exelon had proposed to build two new units at Victoria County in Texas but licensing for this has been downscaled to just an Early Site Permit.

Constellation was a 50% partner in the Unistar initiative to build a fleet of Areva EPRs in America. A proposal for Calvert Cliffs has the most promising of this effort, but the company pulled out last year and sold its stake cheaply to the other partner, EDF of France. This had come after Constellation sold half of its nuclear generation business to EDF for some \$4.5 billion, rejecting an offer of \$4.7 billion for the entire company from MidAmerican Energy Holdings. Constellation shares had plunged on the financial crisis. For its part during that crisis, Exelon had tried to buy out another huge US generator, NRG, for \$6.2 billion.

The nuclear fleet of the expanded Exelon will include its 17 reactors across ten sites: Braidwood, Byron, Clinton, Dresden, LaSalle, Limerick, Oyster Creek, Peach Bottom, Quad Cities, and Three Mile Island 1. The deal with Constellation will add interests in five more reactors across the Nine Mile Point, Calvert Cliffs and R G Ginna sites.

That fleet further establishes Exelon as the USA's largest nuclear power generator, with 18,490 MWe of nuclear capacity from 22 reactors. The second largest nuclear generator in America is Entergy with 8930 MWe from ten reactors, ahead of Duke Energy with 6996 MWe from seven.

## **Japanese Visitors Take Close Look At Seneca Nuclear Plant (ADERSN)**

By Anna Mitchell

Anderson Independent-Mail, April 29, 2011

The people hosting five visitors from Japan this week had planned to take them to the Oconee Nuclear Station.

But the ongoing disaster at the Fukushima Daiichi plant that started March 11 with the 9.0 earthquake along the Sendai coast in Japan made them reconsider, said Patrick Lee. Lee, a retired law enforcement officer, has coordinated the Japanese visitors' stay in Oconee County as a member of the Golden Corner Rotary Club.

"They were anxious to take a look at this facility," Lee said, speaking at the Duke World of Energy welcome center for the nuclear plant in Seneca. "They wanted to learn about the safety procedures in the US nuclear industry. We were sensitive about what's happening in Japan, and we asked their team leader and members to discuss it."

About 70,000 tons of stagnant water with high levels of radiation remains in the basement of three out of the five reactors at the Daiichi plant, according to the International Atomic Energy Agency's most recent report, and two of the units are still emitting white smoke.

Five Japanese women representing various industries are visiting western South Carolina for four weeks as part of Rotary International's Group Study Exchange program. A South Carolina team also visited Japan as part of the program last year.

The leader of the Japanese group is real estate manager Noriko Takanashi, 51. She said Thursday that her fears about the nuclear industry were somewhat allayed by her visit to the three-reactor plant outside Seneca. Seeing the plant and hearing how it works, she said, helped her better understand the industry.

"We requested, please let us see the plant," Takanashi said. "Usually nobody goes inside a plant in Japan. Security is very strict here. It is the same in Japan."

Yuko Fukushima, 31, said she was curious about how Americans viewed nuclear energy. Fukushima, a school teacher, had several family members narrowly survive the March 11 tsunami that followed the earthquake.

Lee led a discussion about the topic before the women toured the World of Energy and said events in Japan have reopened vigorous debate in Washington, D.C., about the energy source.

Last month Seneca resident US Sen. Lindsey Graham, a South Carolina Republican, led members of the media on a rare tour of the Oconee Nuclear Station's turbine deck and control room. A long-time supporter of nuclear power, Graham argued against widespread calls for a moratorium on nuclear power plant construction, saying it was the clean-energy source of the future.

South Carolina is one of a handful of states that gets the majority of its energy from nuclear power plants.

"It's a complicated question," said Lee, who lives four miles from the nuclear plant.

"We are very fortunate to not have had any problems. The Oconee Nuclear Station has been here since 1973."

Kim Gramling, another member of the Golden Corner chapter of Rotary, said college-aged interns and educators looking for extra work in the summer commonly picked up part-time jobs at the station when she was growing up.

"Parents were comfortable having their kids work here," she said.

Takanashi and the four younger team members were unable to go inside the Oconee Nuclear Station, but they walked through the Duke Energy welcome center's exhibits on hydroelectric, coal-fired and nuclear plants — stopping at each for several minutes and taking pictures.

Dr. Ryoko Nakagawara, a 30-year-old allergist, said she has never fully supported nuclear energy, one of Japan's main power sources, and pharmacist Tsugumi Kashima, also 30, said people who might have supported the energy source before the events of March 11 are questioning it now.

They both said nuclear power nevertheless remains the best option for their country economically.

Japan is the site of 55 reactors, which provide 30 percent of the country's energy.

The island chain in the North Pacific Ocean fits a population that is roughly 40 percent of the United States — 127 million people — in a land area 4 percent the size of the United States, or slightly smaller than California. Much of the country's land is mountainous and uninhabitable, so people typically live on the coast.

Nuclear power plants there are also located on the coast as they are cooled with salt water, Nakagawara said.

"Your country has many resources," she said. "Japan is a very small island, so we have to use nuclear."

In the long run, she said, she hoped her nation would invest more in geothermal energy.

"It would be good for Japan to make power from heat from the ground," she said. "We have many volcanoes. But it's more costly, so it is difficult."

## **CEO Interview: Progress Energy's Bill Johnson (CNBC)**

By Jonathan Fahey

CNBC, April 29, 2011

Bill Johnson is poised to become the CEO of the nation's biggest electric utility. That will make him one of the nation's biggest polluters and a key voice in the intensifying debates about how to clean up the nation's electric power industry.

Johnson, 57, is the CEO of Progress Energy, an electric utility based in North Carolina that has agreed to be acquired by Duke Energy. Later this year, if regulators approve the deal, Johnson will become CEO of the combined company.

Together, the companies will serve 7.1 million electric customers in North Carolina, South Carolina, Florida, Indiana, Ohio and Kentucky.

The combined company will produce more electric power than any other utility in the country, and more than half of that with coal. Coal is responsible for 37 percent of the nation's greenhouse gases and nearly all of the emissions of mercury and other pollutants produced by the electric power industry.

Regulators are proposing to tighten a whole suite of clean air and clean water regulations in the coming months. The Obama Administration has proposed a clean energy standard that would move the country toward 80 percent clean energy by 2035.

Individual states, too, have issued renewable power mandates.

All this is forcing utilities to change the way they produce and deliver power for the first time in decades, and leading to enormous cash outlays.

Meanwhile, utility revenues are falling because power prices are low and people and businesses are using less electricity.

Johnson, a lawyer who joined Progress's legal team in 1992, argues that although his industry needs to get cleaner, it needs to do so slowly. That will help keep power prices from rising too fast and slowing economic activity.

Johnson sat down with The Associated Press in New York to talk about the merger and the issues facing his industry.

Q: Why did you agree to be acquired by Duke Energy?

A: If we look at the capital expenditures in front of us and if we want to be a player in new nuclear construction, which we think is important, we're just not big enough to do that efficiently. So what I was looking for, and the board was looking for, was how can we do this more efficiently? Instead of building four new nuclear plants to serve the Carolinas can we build three? The other thing we'll get out of this merger is purchasing power. Instead of buying 10 tons of coal we'll buy 30. Million that is. A big thought behind this combination is customer impact. Because you can see over the next decade rising energy prices.

Q: Why? How is the electric power industry changing?

A: Here's where we are in the evolution of the electric business. What has happened, especially over the last 50 years, is that we've had incremental change. We've been expanding the system. Nuclear was a change, but really what we've been doing is building on what we've had. That infrastructure is now old and inefficient in many cases. We are at a transformational state, instead of an incremental stage. I've got to raise a lot more capital because I'm not refurbishing I'm rebuilding, I'm renewing. I'm doing new technologies.

Q: What do you think of Obama's clean energy plan?

A: I'm generally in favor of a cleaner energy portfolio for the country. That's the right direction, I think the industry is trying to move there, some faster than others. Now of course the devil's always in the details, so what does the clean energy standard mean? If the policy is we're going to move in a clean direction and you're going to get credit for everything you do that's incrementally cleaner than what you are currently doing, I'm supportive of that. But the more complex it is, the harder it is to do, the less in favor of it we'll be. Clean to me is cleaner than what you are doing today, and that's the way the industry ought to be moving.

Q: Does nuclear power have a future at Progress and Duke, and in this country?

A: Today, 20 percent of our electricity comes from nuclear and 70 percent of our clean energy comes from nuclear. If we are going to tackle some of the environmental issues related to burning fossil fuels, nuclear's going to have to play a part. But there's another reason we have to continue. China, India, other countries are going to proceed with this and it's in our national interest to be part of the group that continues with nuclear. We are the best operators of nuclear reactors in the world at the moment and we help set a standard — I would hate to see us cede that position to anyone else. It will continue to be important and it will grow, although the Japan events will have some short term impact.

Q: Even with all of the new electric gadgets out there, are customers really using less power?

A: Nationwide, for the first time since World War II, in 2009, there was a reduction in customer demand across the country. And it didn't come back in 2010. In 2010 there was great weather for the utilities, it was cold and it was hot. So there was demand, but when you took the weather piece out of it, demand was down nationwide 4 percent. What we don't know is if people have changed their usage. Is there more conservation? Is that having an impact? Or, is it consumer confidence? You'd expect to see lower demand on the industrial and commercial side, as part of the normal cycle. But this is really the first time you've seen it in the residential sector on a sustained basis.

Q: Will you be comfortable in the role of the CEO of the biggest company in your industry?

A: Oh yeah, I'm quite comfortable with it. I grew up on my feet, trying cases. I'm pretty adept in speaking forums and I'm a pretty quick thinker. The things that matter in business don't change based on the size of the platform. But a couple of things do change. You are the biggest player so your impact on policy changes. I'm going to have to take a higher profile. It'll be a little different but I'd say I'm looking forward to it.

## **Report Says No To More Radioactive Waste In Texas (AP)**

By Sommer Ingram

Associated Press, April 29, 2011

The potential risks of allowing dozens of states to dump radioactive waste in a remote West Texas site have not been adequately addressed, the environmental group Public Citizen Texas said in a report released Thursday.

Former Republican gubernatorial candidate Debra Medina joined the group in its opposition to what she says will result in taxpayers bearing the cost of the risks. The tea party conservative who ran for governor in 2010 argues that the dangers associated with the dump expansion are too dangerous for the state to bear.

The facility in Andrews County was designed to accept waste solely from Texas and Vermont as a part of a compact between those states, but bills working their way through the Texas House and Senate would open up the site to low-level radioactive waste from 36 other states.

Supporters of the legislation have said the site can be a secure solution for states looking for a place to dump radioactive waste.

Public Citizen Texas says that allowing more radioactive waste to come to Texas will expose citizens to a number of health, environmental and safety risks with few safeguards in case of an accident. The most widely used method of transporting radioactive waste is by truck.

Ali Rawaf, a researcher for the group who wrote the report, said Texas isn't prepared financially and does not have the emergency response staffing necessary to deal with a transportation accident. Texas has set aside \$500,000 to pay for cleanup should an accident occur - a number Public Citizen Texas calls "far from adequate." In many cases, a single accident will cost more than \$500,000, it said.

The group said that if the dump site were to leak, the cleanup cost could be from three to 50 times the amount set aside by Waste Control Specialists, the private company that operates the site.

"These bills divorce risk from profit," Medina said. "That's really bad policy for Texas. Those risks are too heavy for Texas."

Environmentalists also warn of a serious contamination threat to groundwater sources that lie 150 feet from the dump and close to the nation's largest aquifer. The report says contamination of the Ogallala Aquifer would be devastating both economically and environmentally. Cleaning up radioactive leaks has cost hundreds of millions to billions of dollars, according to the report.

Public Citizen Texas says it even doubts the site's ability to hold waste just from Texas and Vermont. Studies by the Texas Commission on Environmental Quality and Texas Low-Level Radioactive Waste Disposal Compact Commission show that waste from those two states alone will exceed the site's 2.3 million cubic feet capacity.

Waste Control Specialists claims there will be excess space.

Tom "Smitty" Smith, director of Public Citizen Texas, said it's irresponsible of legislators to open the site to waste from other states before completing a capacity study.

"We all know we don't have the money to pay our own bills, and we certainly don't have the money to clean up other people's messes," he said.

The author of the Senate bill, Republican Sen. Kel Seliger, said he hadn't seen the group's report, but that studies have been conducted on transportation accidents and other risks the group cites.

"They are all legitimate concerns," Seliger said. "But they have been adequately addressed and studies continue to be conducted today."

## **Just Say 'No': Ex-gubernatorial Candidate Opposes Texas Nuke Site Bill (KENS)**

KENS-TV San Antonio (TX), April 29, 2011

Former Texas GOP gubernatorial candidate Debra Medina is speaking out against legislation that would allow dozens of states to send radioactive waste to West Texas.

At the same time, Public Citizen Texas released a report Thursday criticizing the attempts to allow 36 other states to dump waste at the Andrews County site. The report cites major risks Texas would be taking on at the cost of the taxpayer.

At a Capitol news conference, Medina said possibilities of transportation accidents or contamination of the nation's largest aquifer are risks too heavy for the state to bear. Expanding the site would be what she calls an unfunded taxpayer liability.

Supporters of the legislation have said the site can be a secure solution for states looking for a place to dump radioactive waste.

## **Radioactive Waste Report Released, Public Citizen Recommends ‘No’ Vote On Legislation (PUBCITIZEN)**

Public Citizen, April 29, 2011

A report released today by Public Citizen criticizes radioactive waste importation legislation because there is risk of an unfunded taxpayer liability, risk from a radioactive waste truck accident, risk of contaminating the nation’s largest aquifer, and risk that there won’t be adequate space for Texas and Vermont reactors’ and other radioactive waste. Bills HB 2184, introduced by Trion Lewis, and SB 1504, introduced by Kel Seliger, which would authorize the importation of out of state radioactive wastes currently are being debated in the Texas legislature.

In an ongoing, if unexpected, alliance, consumer and environmental group Public Citizen was joined by Debra Medina, a conservative grassroots organizer and former Republican gubernatorial candidate, at a press conference Thursday to release the scathing report about the impacts of radioactive waste importation on Texas.

“HB 2184 and SB 1504 divorce risk from profit in the Texas radioactive waste industry,” Medina said at the press conference, which was held in the State Capitol. “This kind of crony capitalism is far too common, and I can’t think of a worse industry than radioactive waste to take risk away from the companies involved and put it on taxpayers.”

Medina’s concern about taxpayer liability is spelled out in the report produced by Public Citizen’s Texas office. It finds that if the Andrews County dump site were to leak, the cleanup cost could be anywhere from three to 50 times the amount set aside by the site operator, Waste Control Specialists (WCS). The report cites two examples of radioactive leaks – one in 1984 in near Karnes City in South Texas between San Antonio and Corpus Christi that garnered a \$384 million cleanup bill, and another in 1983 at a site in New York called West Valley with an estimated cleanup cost of \$5 billion.

“The people of Texas are at risk from a leak at the site, which is located dangerously near the Ogallala Aquifer and is only 150 feet from known groundwater sources,” said Ali Rawaf, a researcher with Public Citizen who authored the report, “The Repository and the Risks: A Report on the Andrews County Low-Level Radioactive Waste Disposal Site.” “What’s more, under HB 2184 or SB 1504 we would expect a substantial increase in radioactive transportation accidents, and the state is simply not prepared to deal with that possibility at an emergency response level or at a financial liability level. More than 4,000 trucks a year carrying radioactive waste will soon be rumbling down Texas highways, and if this legislation passes it will mean even more trucks spreading radioactive risk through the state.”

The report claims that in the event of a transportation accident involving radioactive waste, Texas would have only \$500,000 available to cover emergency response, health care and property damage costs. Public Citizen says that amount is far too little.

The report also claims that the dump site being constructed in Andrews County does not have adequate capacity to receive waste from outside the Texas-Vermont Low Level Radioactive Waste Compact, which was designed to limit importation of radioactive wastes. It cites a 2000 study by the Texas Commission on Environmental Quality (TCEQ) and a 2010 estimate by the Texas Low-Level Radioactive Waste Disposal Compact Commission, both showing the site to be short on capacity for the Texas and Vermont waste it was originally intended to handle.

“We are recommending to members of the Texas Legislature that they vote against SB 1504 and HB 2184 and not allow importation until the risks have been addressed and we are assured by a new study by TCEQ that adequate capacity for our reactors will exist at the site,” said Trevor Lovell, nuclear program coordinator with Public Citizen’s Texas office. “It has taken 30 years to start construction on a site for our own waste. SB 1504 would likely send us back to the drawing board, and HB 2184 certainly would.”

Public Citizen is a national, nonprofit consumer advocacy organization founded in 1971 to represent consumer interests in Congress, the executive branch and the courts.

## **Millstone, Malloy In Accord On \$40M ‘flat Tax’ (NB)**

Norwich Bulletin, April 29, 2011

The owner of Millstone Nuclear Power Station is accepting a revised tax proposal worked out by Gov. Dannel P. Malloy that the company says guards consumers as well as its own earnings trajectory.

Thomas F. Farrell II, chairman and CEO of Dominion Resources Inc., Millstone’s parent company, called Malloy’s \$40 million plan “much more reasonable.” Farrell made the comment during Dominion’s first-quarter earnings conference call Thursday.

The tax would begin July 1 and levies all energy generation at \$0.0025, thus getting its moniker of a “flat tax.” The tax would expire in July 2013. Malloy reaffirmed his stance Thursday even after the heads of the General Assembly’s Energy and Technology Committee offered a plan Wednesday that would make Millstone pay \$68 million in new taxes.

"The governor thanks Rep. (Vickie) Nardello and Sen. (John) Fonfara for their ideas but he remains committed to the proposal agreed upon with the leadership last week," Malloy's communications director, Colleen Flanagan, wrote in an email.

Dominion opposes the latest Nardello/Fonfara proposal. Their committee approved an earlier bill that would have slapped Millstone with \$335 million in new taxes, a 994 percent increase over the Waterford plant's current annual total tax bill of \$33.7 million.

"As the governor has stated and we agree – an energy tax policy that is more uniform, where any increase is shared by all generators, is the right policy," said Daniel Weekley, Dominion's VP of governmental affairs.

The after-tax impact of the measure agreed upon by the Virginia-based company and Malloy will be \$24 million per year, Farrell said. This will not force Dominion to cut its projected earnings growth rate, he said. The "flat tax" provides much more protection to consumers from possible price increases, the company states.

"This tax proposal limits the potential negative effects on consumers and businesses," said Ken Holt, Millstone's on-site communications chief, reading from the company's position paper.

Dominion Generation, the division that includes Millstone, reported lower first-quarter operating earnings, of \$298 million, or 51 cents a share, from \$325 million, or 54 cents, a year earlier.

The company's overall operating earnings fell to \$541 million, or 93 cents a share, from \$576 million, or 96 cents. Operating revenue was \$4.06 billion in the latest first quarter compared with \$4.17 billion a year ago.

Executives were pleased since earnings hit the high end of 85 to 95 cents estimates. Dominion reaffirmed its \$3.00 to \$3.30 per share year earnings target.

"Dominion is off to a very good start in 2011," Farrell said on the call.

The inner workings of Millstone and like plants pleased the CEO. The nuclear and hydroelectric divisions did not get even one OSHA complaint during the first quarter.

"This has never happened in the history of our company," Farrell said.

Nuclear units performed at 99.3 percent of capacity, not including refueling outages, during the quarter, he said.

## **Lawmakers Change Bill To Tax Electricity Generators (NHR)**

By Luther Turmelle

New Haven Register, April 29, 2011

HARTFORD - State lawmakers have revamped a controversial plan to tax utilities that generate electric power.

The new plan would still tax electricity generated by nuclear plants at a higher rate than power producers that operate on other kinds of fuel. But the tax is considerably lower than what had been proposed under Senate Bill 1176, which would have required the state's only nuclear plant operator, Dominion Energy, to pay \$330 million, the overwhelming majority of the revenue the tax would raise.

"Our primary goal in offering a generation tax proposal was to insure that the tax would be constructed in a manner that does not allow it to be passed on to ratepayers," said State Rep. Vickie Nardello, D-Prospect, who crafted the revised legislation with her General Assembly Energy and Technology Committee co-chair, State Senator John Fonfara, D-Hartford. "By taxing generators who have low costs, and minimizing taxes on the natural gas generators who set the price of electricity, we enable ratepayers to be held harmless."

Nardello and Fonfara's proposal has three possible tiers that would raise between \$72 million and \$150 million. Only one of which would be approved as part of the state's proposed budget, the lawmakers said.

Their proposal would compete with one that Gov. Dannel Malloy has supported, a flat generation tax of .0025 cents per kilowatt hour across all fuel sources of electric generation.

"The flat generation tax as now included in the budget would result in less revenue than projected and less income tax revenue, cause dirtier plants to be running, and produce higher electric prices for Connecticut and all of New England," Fonfara said.

The revisions proposed by Fonfara and Nardello have the support of Consumer Counsel Mary Healey, who represents the state's utility customers in rate cases.

"I remain confident that a well-calibrated tax on power plants, which takes into account unique aspects of the regional electric market design, can yield revenues for rate relief and the budget while avoiding a pass-through to ratepayers," Healey said. "Such a tax on power plants might also help to reduce or eliminate the direct tax on electric ratepayers that was passed as a last resort in the 2010 budget negotiations."

But a group representing power plant operators in New England said it opposes the revisions put forth by Nardello and Fonfara.

"This new tax – which would be the only tax of its kind in the nation – unfairly singles out generating companies and will ultimately be passed along to ratepayers," said Sandi Henniquin, vice president of the Boston-based New England Power Generators Association. "We feel the newest proposal will continue to turn Connecticut ratepayers' electric bills into tax bills. Connecticut already pays some of the highest electric rates in the country, and people deserve lower electricity costs, not higher." Continued...

Although the Fonfara-Nardello proposal would lower the amount Dominion would pay in new generation taxes from \$330 million to \$68 million, the company's vice president for government affairs, Daniel Weekley, said the plan "is nothing more than a regurgitation of Senate Bill 1176."

"Dominion has invested more than \$600 million into Millstone since purchasing the station in 2001, improving the reliability and overall margin of safety," Weekley said. "This is a strange way for these legislators to treat a company that has grown its business. As the governor has stated and we agree – an energy tax policy that is more uniform, where any increase is shared by all generators, is the right policy."

But Fonfara said the revised generation tax would be charged according to each generator's ability to pay, which he said is a reflection of the different costs incurred by generators using different fuels. Nuclear power plants produce electricity more cheaply than other types of generation units, he said.

## **Kewaunee Nuclear Plant Up For Sale (MJS)**

By Rick Romell

Milwaukee Journal Sentinel, April 29, 2011

The Kewaunee Power Station, one of two nuclear power plants in Wisconsin, is for sale, the Richmond, Va.-based owner of the operation announced Thursday.

Dominion Resources Inc. bought the Kewaunee plant in 2005 amid plans to stake a wider claim on nuclear facilities across the Midwest.

But with the company unable to add other nuclear plants in the region to its portfolio, holding Kewaunee no longer fits the firm's business plans, CEO and Chairman Thomas F. Farrell II said in a conference call with analysts.

Dominion is among a small number of energy companies that have sought to consolidate ownership of nuclear plants. Besides the single-reactor Kewaunee operation, the firm owns three other nuclear plants with two reactors each in Virginia and Connecticut.

Dominion generated \$2.8 billion in profit last year on \$15.2 billion in revenue.

The company hasn't yet discussed Kewaunee with any potential buyers, spokesman Jim Norvelle said.

"This is just hanging the for-sale sign out," he said of Thursday's announcement, which came as the company discussed its first-quarter financial results.

Any sale will have to pass muster with both the US Nuclear Regulatory Commission and the Wisconsin Public Service Commission.

Scrutiny from the agencies and from advocacy groups is all but guaranteed.

The recent disaster at the Fukushima plant in Japan has heightened general concerns about nuclear power. And while Dominion's plant here is in a rural area, it sits on the shores of Lake Michigan, about eight miles south of the City of Kewaunee. It can be seen from Highway 42.

Dominion bought the plant for some \$192 million from two utilities, Wisconsin Public Service Corp. of Green Bay and Wisconsin Power & Light Co. of Madison.

Since the transaction, the utilities have purchased electricity from the plant, which generates enough to power 140,000 houses. About 700 people work at the plant.

The 2005 sale agreement also gives the utilities the right to top any offer Dominion gets from another buyer.

The plant has worked to improve its safety performance in recent years, earning the Nuclear Regulatory Commission equivalent of an "A" grade the past two years.

This year, regulators approved a 20-year extension on the facility's operating license, allowing it to run through 2033.

Among Midwestern nuclear plants that have changed hands in recent years but which Dominion failed to acquire was Point Beach, also on Lake Michigan and just four miles south of the Kewaunee facility. Wisconsin Energy Corp. sold the two-reactor Point Beach complex in 2007 to a Florida firm now known as NextEra Energy Inc.

Kewaunee isn't only geographically isolated for Dominion. It's also on a different regional transmission network than the firm's other plants, which as a result offer better operating economics, Norvelle said.

Both federal and state authorities will examine potential purchasers of Kewaunee for their capacity to operate the plant safely.

Primary regulatory authority rests with the Nuclear Regulatory Commission, but the PSC also will have a role because of conditions built into the 2005 sale by the Wisconsin utilities to Dominion.

The Citizens Utility Board, a consumer advocacy group based in Madison, will monitor developments too, Executive Director Charlie Higley said.

## **Kewaunee Nuclear Plant For Sale (GBPG)**

By Richard Ryman

Green Bay (WI) Press-Gazette, April 29, 2011

CARLTON — Dominion Resources Inc. plans to sell the Kewaunee Power Station nuclear plant, its chairman said Thursday.

Thomas Farrell II, chairman, president and CEO of Dominion, said the Kewaunee purchase in 2005 was intended to be one of several in the Midwest, but the Richmond-based company was unsuccessful in acquiring other nuclear plants in the region.

"Without the other units, the strategic rationale for continuing to own Kewaunee is diminished, and we believe it is time to pursue a sale of the plant," he said during an earnings conference call.

The company also owns nuclear plants in Virginia and New England.

Dominion acquired Kewaunee for \$220 million from Wisconsin Public Service Corp. of Green Bay and Alliant Energy of Madison.

Kewaunee recently received a 20-year renewal of its license from the Nuclear Regulatory Commission. The plant went online in 1974.

Wisconsin Public Service and Alliant Energy purchase electricity from the plant under a contract that expires in December 2013. Farrell said discussions are under way on a new electricity-purchase agreement with Wisconsin Public Service and Alliant, but nothing has been finalized.

Wisconsin Public Service and Alliant have rights of first refusal on any sale, up to their previous share of ownership. Wisconsin Public Service owned 59 percent of the plant, and Alliant, as Wisconsin Power & Light, owned 41 percent.

"The good news for us is we'll be involved because of the right of first refusal, so we can look out for the interests of our customers. We'll at least be a party to the discussions," said Kerry Spees, spokesman for Wisconsin Public Service in Green Bay.

Charlie Higley, executive director of public interest group Citizens Utility Board in Madison, said Dominion agreed to a number of conditions when it bought the plant, including allowing the state Public Service Commission to review the next sale.

"(The PSC's) goal is to make sure the entity that buys it is able to manage the facility appropriately and is creditworthy," Higley said. "I think, ultimately, we want to make sure those conditions that Dominion agreed to carry on for the next (owner)."

A sale will take 12 to 18 months to close once an agreement is reached, said Jim Norvelle, spokesman for Dominion in Richmond.

The one-reactor, 568-megawatt plant recently completed a refueling. It replaces one-third of its 121 fuel assemblies every 18 months.

The plant, located on Lake Michigan nine miles south of Kewaunee and 33 miles southeast of Green Bay, employs about 700 people.

There are three operating reactors in Wisconsin. The other two are at Point Beach Nuclear Plant in Two Creeks, about six miles south of Kewaunee Power Station. Point Beach is owned by NextEra Energy of Juno, Fla.

Nuclear power provides about 20 percent of the state's electricity, about the same percentage as for the nation.

A sale would require approval of the Nuclear Regulatory Commission, the Federal Energy Regulatory Commission, the state Public Service Commission, and possibly public service commissions in other states.

## **Kewaunee Power Station Nuclear Plant Up For Sale (MHTR)**

Manitowoc (WI) Herald Times Reporter, April 29, 2011

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### **Dominion Plans To Sell Kewaunee Power Plant (WASHEX)**

By Conn Carroll

Washington (DC) Examiner, April 29, 2011

Energy provider Dominion Resources Inc. said Thursday it will sell the Kewaunee nuclear power plant.

In a conference call with investors on first-quarter earnings, Dominion CEO Thomas Farrell II said the company's 2005 purchase of the Kewaunee plant was part of a strategic plan to acquire additional plants and "build a business around that portfolio."

Farrell says Dominion was unsuccessful in winning purchase auctions for other plants, so it makes sense to sell Kewaunee. He says that in nearly six years of owning the Kewaunee plant, Dominion has turned the plant's operations and safety performance to "among the best in the industry."

Dominion purchased Kewaunee from Wisconsin Public Service Corp. and Wisconsin Power & Light Co. for \$220 million. It received a 20-year renewal of its operating license in February, extending its license from 2013 to 2033. Its sale price was not disclosed.

### **Kewaunee Nuclear Plant Up For Sale Again (PIERCWIS)**

Pierce (WI) County Herald, April 29, 2011

For the second time in six years, the Kewaunee nuclear power plant is up for sale. Dominion Resources said today it would sell the facility because the company could not carry out a strategy to buy additional power plants and then quote, "build a business around that portfolio."

### **Wisconsin Nuclear Plant On The Auction Block (REU)**

By James B. Kelleher Matt Daily, Eileen Moustakis And Eileen O'Grady

Reuters, April 29, 2011

Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

### **Dominion Plans To Sell Kewaunee Nuclear Plant In Wisconsin (BLOOM)**

By Mark Chediak

Bloomberg News, April 29, 2011

Dominion Resources Inc. plans to sell the Kewaunee nuclear power plant in Wisconsin, Chief Executive Officer Thomas Farrell said.

Farrell spoke on an investor conference call today. The company, based in Richmond, Virginia, announced first-quarter results today that included a \$19 million loss from its Kewaunee operations.

### **Dominion Plans To Sell Kewaunee Power Plant (AP)**

Associated Press, April 29, 2011

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### **Dominion To Sell Kewaunee Power Plant (WISC)**

WISC-TV Madison (WI), April 29, 2011

KEWAUNEE, Wis. --

Dominion Resources Inc. will sell the Kewaunee nuclear power plant.

In a conference call with investors on first-quarter earnings, Dominion CEO Thomas Farrell II said the company's 2005 purchase of the Kewaunee plant was part of a plan to acquire additional plants and "build a business around that portfolio."

Farrell said Dominion was not successful in winning purchase auctions for other plants.

He said in the nearly six years of owning the plant, Dominion has turned Kewaunee's plant operations and safety performance to "among the best in the industry."

Dominion bought Kewaunee from Wisconsin Public Service Corp. and Wisconsin Power & Light Co. for \$220 million.

The company received a 20-year renewal of its operating license in February, and extended its license from 2013 to 2033.

The sale price of the Kewaunee nuclear power plant was not released.

To find out more on this, visit Channel 3000's Search page.

### **Dominion Plans To Sell Kewaunee Power Plant (AP)**

Associated Press, April 29, 2011

KEWAUNEE, Wis. (AP) - Energy provider Dominion Resources Inc. said Thursday it will sell the Kewaunee nuclear power plant.

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## **WJZ Investigates The Safety Of Nearby Nuclear Power Plants « CBS Baltimore (WJZ)**

WJZ-TV Baltimore, April 29, 2011

Recent power failures at nuclear plants in Tuscaloosa— where the backup system worked— and Fukushima, Japan— where it didn't— make you wonder what would happen here. Thousands of Marylanders live in the shadow of nearby nuclear power plants.

Denise Koch gives us a rare look behind the high-security gates of Peach Bottom nuclear power plant.

1979. Three Mile Island, Pennsylvania. 1986. Chernobyl in the Soviet Union. Now in Japan, radiation spews from the crippled Fukushima nuclear plant. The outcome: unknown.

It may be difficult to relate to catastrophes far away in Japan or the Soviet Union until you remember there are several nuclear plants about an hour from Baltimore.

Three Mile Island, Calvert Cliffs and Peach Bottom all are active nuclear plants. That leads WJZ to ask if the operators can ensure our safety.

WJZ was recently granted a rare opportunity to go behind the high-security fences at Peach Bottom— just 45 minutes from Baltimore. The plant operators agree to show us what they do to prevent an accident. Peach Bottom Vice President Tom Dougherty gives us a behind-the-scenes tour.

"We have a tremendous amount of backup equipment that is only here to combat a problem if one should occur," Dougherty said.

The emergency cooling tower is one of those. Dougherty says as far as he knows, they don't have those in Fukushima.

In Japan, the earthquake and tsunami sparked a power outage, allowing the problem to spiral out of control. Without electricity, any nuclear plant is at risk of a meltdown.

At Peach Bottom, they take extra steps to ensure the power supply.

"Our fuel oil storage tanks are buried," Dougherty said. "They're also at an elevation."

Dougherty showed us a building he says "is designed for tornados, floods and fires, so it's very robust."

That's important because if the plant lost power, it would need to use diesel fuel to keep those generators going, to keep electricity, to keep cooling those rods so that there is no meltdown.

Dougherty says that's why it's so well protected.

He showed us a simulation of what would happen in a control room if the nuclear power plant lost power.

"There's testing, there's training, there's casualty scenarios that we run through to prepare the operators," Dougherty said.

Still, not everyone is buying that America's nuclear plants can prevent accidents similar to Japan's.

"It doesn't need to be a tsunami or an earthquake to initiate a reactor failure," said Paul Gunter, of Beyond Nuclear, an anti-nuclear advocacy group. "Because of the inherent danger, any number of events could be the match that ignites the next nuclear fire."

But Peach Bottom is adamant its plant is different, with a greater focus on safety.

"What we do best is learn from these events. We learned from Three Mile Island, we learned from Chernobyl, we learned from 9/11, and in each case we got better," Dougherty said.

Peach Bottom tells WJZ that every two years experts take apart the twin reactors, inspect them, test them and put them back together. The plant is currently in the middle of a multi-year \$1.3 billion project to upgrade a host of critical safety systems.

## **Rep. Shimkus Calls Yucca Mountain 'Very Sad' After Trip (SLPD)**

By Bill Lambrecht

St. Louis Post-Dispatch, April 29, 2011

Senate Majority Leader Harry Reid, D-Nev., called the trip "a publicity stunt." A Nevadan in the US House said the travelers should have consulted Google Earth and stayed home.

But Rep. John Shimkus returned from Yucca Mountain this week saying it was well worth the trip to show colleagues in Congress how the government had wasted \$14 billion-plus in carving out a nuclear waste repository, then rejecting it.

"It was a great trip, but it was very sad to see this national asset that we've spent \$14.5 billion on that's vacant," Shimkus said.

Shimkus, R-Collinsville, and two Texans in the House, Gene Green, a Democrat, and Michael Burgess, a Republican, ignored criticisms about cost and warnings about safety to make the trip.

Rather than ride in a helicopter, the delegation made the 90-mile trip from Las Vegas by van. Shimkus said the vast emptiness in the region reaffirmed his belief that Yucca Mountain remains the best alternative to permanently storing highly radioactive spent fuel from the cores of nuclear reactors.

"If you can't put it on federal property in the desert under a mountain, you're not going to find anywhere," he said.

The Obama administration thought otherwise, citing earthquake potential and other safety concerns in announcing last year that it would authorize no more spending on the site. The administration says it is seeking alternatives for housing 60,000 tons of dangerous nuclear plant leavings amassed in pools and casks around the country.

Yucca Mountain has been steeped in politics since it was selected more than 20 years ago as the logical storehouse for the nation's atomic plant waste. Nevadans in Congress -- with Reid in the vanguard -- have vowed to prevent construction from going forward.

Shimkus, who chairs an Energy subcommittee in the new GOP-run House, is a leader in a campaign by House Republicans to revive the Nevada high desert project.

"Why am I passionate about this?" Shimkus asked rhetorically while describing his trip. "I was there ten years ago and it looked like this was the solution to our problem."

He has a parochial concern, with Illinois being the leading nuclear power state and home to Exelon, the nation's biggest nuclear operator.

"We have 11 reactors with six pools of high-level nuclear waste sitting around our state. It would be much safer on federal property," he said.

Shimkus said he will press his uphill campaign as soon as next week when Nuclear Regulatory Commission chairman Gregory Jaczko testifies in front of Energy Committee panels.

## **Ex-Hanford Guards Charged With Stealing Property (TRICITYH)**

By Annette Cary

Tri-City Herald (WA), April 29, 2011

Three former Hanford Patrol officers have been charged with second-degree theft after items went missing from the nuclear reservation.

Adam Blair Bowen, 38, and Dean Austin Badeaux, 33, were charged with one count each in Benton County Superior Court. Alfred Wayne Smith, Jr., 36, was charged with one count in Benton County District Court.

Second-degree theft covers thefts involving items worth \$750 to \$5,000. None of the three men is under arrest.

The items taken were small enough to be easily carried off, according to the Benton County Sheriff's Office, which investigated. Items at Hanford typically are federal property.

Bowen is accused of stealing two generators, a winch, a drill, night vision glasses, tools and a tool box, according to the probable cause statement by Deputy Prosecutor Terry Bloor.

The winch, valued at \$1,200, was reported stolen from the Hanford 100 Area -- which includes the area around Hanford's nine production reactors along the Columbia River -- by a Babcock and Wilcox employee Nov. 24, 2009.

A generator valued at \$1,200 was reported stolen from a central Hanford building Oct. 7, 2010.

Then several generators valued at \$1,700, and tools and a tool box valued at \$1,000 were reported stolen from the Hanford 100 Area by a Department of Energy employee on Jan. 3, 2011.

Badeaux acted as a lookout while Bowen stole the winch, according to the probable cause statement. Badeaux also is accused of stealing miscellaneous items, including safety glasses, a tool box, a flood light and a tool bag, according to the probable cause statement. That corresponds to the January 2011 report of missing items in the 100 Area.

No information was available on when those thefts occurred, only when they were reported.

Alfred Smith is accused of stealing a \$1,200 generator Sept. 8, 2006, from former DOE contractor Fluor Hanford. He returned the generator to the Benton County Sheriff's Office on March 10, 2011, according to the probable cause document.

DOE will be reviewing the security clearance of employees it believes may have information about the alleged theft or inappropriate conduct, said Geoff Tyree, DOE spokesman.

Hanford employees granted a security clearance can lose it, along with the ability to perform jobs that require it, if DOE believes their action or lack of action warrants it.

"We have been cooperating fully with the Benton County Sheriff's Office," Tyree said. "As a precaution, we've asked our contractor for security to conduct a review of the situation and evaluate whether there should be any modifications to the existing procedures and the contractor's security program."

Two of the accused employees resigned and the other was terminated, said Deanna Smith, spokeswoman for Mission Support Alliance, which has provided security services for DOE at Hanford since late August 2009.

The alleged thefts were discovered when a Hanford employee became suspicious, she said. The Hanford Patrol looked into the suspicions and contacted the Benton County Sheriff's Office with concerns Jan. 21, 2011, according to Deanna Smith and the sheriff's office.

The success of the investigation largely was because of the initial information provided by the Hanford Patrol administration and its continuing cooperation, according to the sheriff's office.

Mission Support Alliance already had launched a review to see if it could enhance its procedures before the directive from DOE, Deanna Smith said. It's looking at whether there are additional processes that can be put in place for items that a dishonest employee could easily remove.

## **Exelon-Constellation Deal: Exelon To Buy Constellation In \$7.9 Billion Deal (BSUN)**

Baltimore Sun, April 29, 2011

Even as executives of Baltimore's Constellation Energy Group and Chicago-based Exelon Corp. announced Thursday the marriage of the two power companies, they acted quickly to sell the \$7.9 billion deal to Maryland ratepayers, politicians and especially regulators, who must sign off on the agreement.

Constellation and Exelon emphasized a \$250 million incentive package that is part of the merger agreement, which includes a \$100 credit for each BGE household. Baltimore Gas & Electric, Constellation's regulated utility, has 1.1 million customers. And while the sale of Constellation would usher out Baltimore's last Fortune 500 company, Constellation Chairman and CEO Mayo A. Shattuck III said the deal was "really great news for Maryland."

While the combined company, to be called Exelon, will be based in Chicago, Shattuck said it would still have a large presence in Baltimore. Constellation is the largest publicly traded company in the Baltimore region, employing 7,500 workers locally and contributing significantly to the city's tax base. It also gives millions of dollars a year to city and state charities.

"We put together a package that has net benefits to our ratepayers and that's in the best interest of Maryland," Shattuck said.

But some consumer advocates reserved judgment on whether ratepayers would be getting a good deal. And local and state lawmakers said they would carefully monitor the deal's regulatory review before the Maryland Public Service Commission.

"Is that a drop in the bucket or is it a reasonable way to go, or are there other alternatives even better than that?" Hank Greenberg, director of advocacy for AARP Maryland, which monitors utility issues, said of the one-time, \$100 rebate.

The two companies "have a strong interest in merger activities," said Paula M. Carmody, the Maryland People's Counsel, whose office represents ratepayers. "From their point of view and shareholders, it may be a very good deal. The commission's job and our job is to make sure it's a good deal for residential ratepayers."

Baltimore Mayor Stephanie Rawlings-Blake said in a statement Thursday that Constellation had assured her that the deal would result in a "net positive job gain" for Baltimore.

Gov. Martin O'Malley, who was briefed on the deal before it was announced and has had a sometimes contentious relationship with Constellation, said in a statement that his administration would participate in the regulatory proceedings to "ensure that the transaction is in the best interest of Maryland ratepayers."

### **Greasing the skids**

The move by the two companies to outline financial incentives so early underscores a concerted effort to ease the regulatory process in Maryland. Regulators' opposition thwarted an earlier takeover attempt of Constellation; regulators have also often clashed with the Baltimore company over rates. Rancor over increasing electricity costs after price caps were lifted in 2006 became fodder during statewide elections.

"Electric power in Maryland is a highly politicized situation," said Paul Patterson, an analyst at Glenrock Associates in New York.

For Constellation, the deal to sell itself to Exelon comes less than three years after the Baltimore company narrowly averted bankruptcy amid the financial crisis and represents the company's third sale attempt since 2006.

Shattuck, who has been Constellation's chairman and CEO since 2001, will become executive chairman of the combined company. He will not get a severance or "change in control" payout related to the deal. But he is still eligible for \$20.6 million in previously owed incentive payments upon the merger's completion, according to a proxy statement filed this month.

Meanwhile, Exelon's CEO, John W. Rowe, will retire at the deal's closing. Christopher M. Crane, now Exelon's chief operating officer, will become president and chief executive of the combined company.

In an interview Thursday morning at Constellation's Pratt Street headquarters, Shattuck, Rowe and Crane played up what they called the deal's benefits not only for the two companies but also for Maryland's BGE customers.

Besides the one-time credit to residents, which is due within 90 days of the deal's closing, the combined company will provide \$5 million for a Maryland program that aids low-income electric customers.

Moreover, Constellation and Exelon agreed to invest \$4 million for Maryland's EmPower energy efficiency efforts; \$10 million for the state's electric vehicle infrastructure; and more than \$50 million to develop 25 megawatts of green energy in the state.

The two companies also agreed to maintain Constellation's annual charitable giving of about \$10 million for at least 10 years.

BGE workers

## **Maryland Politics: Rawlings-Blake: Constellation Deal A "Net Gain" For Baltimore (BSUN)**

By Annie Linskey

Baltimore Sun, April 29, 2011

. Previously, as a City Hall reporter, she wrote about the corruption trial of Mayor Sheila Dixon and kept a close eye on city spending. Originally from Connecticut, Annie has also lived in Phnom Penh, Cambodia, where she reported on war crimes tribunals and landmines. She lives in Canton.

Julie Bykowicz has been a reporter at The Baltimore Sun for 10 years. At the paper, she previously focused on criminal justice, juvenile services and legal matters. Julie is now on the state campaign trail, tracking the governor's race and other major matchups. She lives in Baltimore. Julie Scharper

covers City Hall and Baltimore politics. A native of Baltimore County, she graduated from The Johns Hopkins University in 2001 and spent two years teaching in Honduras before joining The Baltimore Sun

. She has followed the Amish community of Nickel Mines, Pa., in the year after a schoolhouse massacre, reported on courts and crime in Anne Arundel County, and chronicled the unique personalities and places of Baltimore City and its surrounding counties.

## **Baltimore Mayor: Constellation Deal To Bring Jobs (AP)**

Associated Press, April 29, 2011

BALTIMORE (AP) - Baltimore Mayor Stephanie Rawlings-Blake says the proposed Constellation Energy and Exelon Corporation merger will mean more jobs for the city.

The mayor says she spoke Wednesday afternoon with Constellation Chairman and CEO Mayo Shattuck III. Rawlings-Blake says Constellation Energy assured her the deal will mean more jobs for the city and the combined company's major growth businesses will remain in Baltimore.

Rawlings-Blake also says the deal will include the construction or renovation of a new office building in the city.

Baltimore-based Constellation Energy is the corporate parent of Baltimore Gas and Electric. The mayor says a substantial credit for BGE ratepayers and additional energy assistance for low-income families are important parts of the deal.

Constellation and Exelon have scheduled a news conference Thursday afternoon.

## **Md. Gov: PSC Active In Exelon-Constellation Deal (AP)**

Associated Press, April 29, 2011

Maryland Gov. Martin O'Malley says the proposed merger of Constellation Energy and Exelon Corporation is subject to the approval of the state's Public Service Commission.

The governor also says state regulators will participate actively to ensure the transaction is in the best interest of Maryland ratepayers.

Constellation has had a rocky history with the governor and state regulators.

The two companies announced Thursday that Exelon has agreed to buy Constellation Energy Group Inc. in a \$7.9 billion stock deal.

Baltimore Mayor Stephanie Rawlings-Blake says she spoke with Constellation's CEO on Wednesday and was told the proposed merger will mean more jobs for the city.

Baltimore-based Constellation is the parent of Baltimore Gas and Electric, which serves 1.2 million electric customers and 630,000 gas customers.

Online:

Exelon-Constellation merger \_ <http://www.exelonconstellationmerger.com>

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## **O'Malley Statement On Constellation-Exelon Merger (BALBIZ)**

Baltimore Business Journal, April 29, 2011

Gov. Martin O'Malley released a statement Thursday on the proposed \$7.9 billion merger between Constellation Energy Group Inc. and Exelon Corp.

The full statement is below:

"The announcement today of Exelon and Constellation Energy's intent to merge marks a significant development in the ever changing energy industry.

In addition to being the largest operator of nuclear plants in the United States, Exelon operates two utilities in Pennsylvania and Illinois. If the proposed transaction closes, ownership of the State's largest utility, Baltimore Gas and Electric, will change, thereby subjecting the transaction to the approval of the Public Service Commission.

We will participate actively in those proceedings to ensure that the transaction is in the best interest of Maryland ratepayers.

This announcement follows yesterday's news that BGE's rates will be falling even further beginning in June 2011."

## **Chicago Company Eyes Md. Utility In \$8 Billion Deal (WASHEX)**

By Hayley Peterson

Washington (DC) Examiner, April 29, 2011

Constellation Energy Group, the Maryland company that owns one of the state's largest power suppliers — Baltimore Gas & Electric — would be sold to a company in Chicago for roughly \$8 billion, under a deal announced Thursday.

The Baltimore energy company would be bought by Chicago's Exelon in a stock-for-stock transaction that would make Exelon the most powerful competitive energy supplier in the nation. (Constellation Energy Group made the news last year when it was vying for federal money to build another nuclear reactor at Calvert Cliffs).

Maryland's three-member Public Service Commission, which includes Gov. Martin O'Malley, must approve the merger — as do federal regulators — before it can be finalized.

"If the proposed transaction closes, ownership of the state's largest utility, Baltimore Gas and Electric, will change, thereby subjecting the transaction to the approval of the Public Service Commission," O'Malley said. "We will participate actively in those proceedings to ensure that the transaction is in the best interest of Maryland ratepayers.

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## **Constellation Agrees To \$7.9B Sale To Chicago Company (GAITHG)**

By Chris Huntemann

Gaithersburg (MD) Gazette, April 29, 2011

Constellation Energy of Baltimore agreed to be bought in a \$7.9 billion all-stock deal to Exelon of Chicago, the company's latest effort to sell itself.

Constellation, which owns Baltimore Gas and Electric and the Calvert Cliffs Nuclear Power Plant in Lusby, would see its retail and wholesale business consolidated with Exelon's power marketing business and operating under the Constellation brand, with Constellation headquarters staying in Baltimore.

"This merger creates the number one competitive energy provider with one of the industry's cleanest and lowest-cost power generation fleets and one of the largest commercial, industrial and residential customer bases in the United States," Exelon Chairman and CEO John W. Rowe said in a statement. "Both Exelon and Constellation have demonstrated their commitment to sustainability and competitive markets, helping drive innovation, efficiency, customer choice and better rates. Together, we will be an even stronger advocate for achieving these ideals."

Following the acquisition, Exelon "will have the scale and financial strength to drive expansion in competitive energy markets as well as new investment in the next wave of clean generation and sustainable products and services," said Constellation Chairman, President and CEO Mayo A. Shattuck III in the statement.

Exelon would become the top supplier of energy products and services to customers in 38 states, Washington, D.C., Alberta and Ontario, according to company information. The company also would be the top competitive power generator with more than 34 gigawatts capacity and an expected output of 226 terawatt hours, and would have the biggest nuclear fleet in the US with nearly 19,000 megawatts.

BGE would remain as a standalone organization, officials said in the statement. Exelon also owns electric utilities in the Chicago and Philadelphia areas.

Constellation Energy, with a market cap of \$7.25 billion, reported a net loss of \$931.8 million last year, versus a profit of \$4.50 billion in 2009. Revenues fell to \$14.34 billion from \$15.60 billion. Exelon, with a market cap of \$27.95 billion, reported its profit last year fell to \$2.56 billion from \$2.71 billion in 2009, as revenues rose to \$18.64 billion from \$17.32 billion.

The deal depends on approval by stockholders, plus several state and federal agencies, including the Maryland Public Service Commission, Federal Energy Regulatory Commission, Nuclear Regulatory Commission, the New York Public Service Commission and the Public Utility Commission of Texas.

Terry Romine, executive secretary of the Maryland commission, declined to comment on the Exelon deal. FERC officials also declined to comment. Constellation and Exelon officials did not immediately return phone calls seeking comment.

The terms call for Constellation shareholders to receive 0.93 shares of Exelon common stock in exchange for each share of Constellation common stock. Based on Exelon's closing share price on Wednesday, Constellation shareholders would receive a value of \$38.59 per share, or \$7.9 billion in total equity value. That's an 18.1 percent premium to the 30-day average closing stock prices of Exelon and Constellation as of Wednesday.

On Thursday afternoon, Constellation stock was up 5.8 percent, at \$36.26. Exelon stock was up nearly 2 percent.

Exelon shareholders would own 78 percent of the post-acquisition company, with Constellation shareholders owning 22 percent.

In 2006, Constellation agreed to a \$12.4 billion buyout by Florida Power and Light Group, but backed out, citing uncertainty over state judicial and regulatory matters. In 2008, the company agreed to a \$4.7 billion sale to MidAmerican Energy Holdings, a Des Moines, Iowa, energy holding company controlled by billionaire investor Warren Buffett. That deal fell through, too, after criticism that the price was too low and shareholders sued. Also, executives with EDF International, a Constellation shareholder and subsidiary of French energy giant EDF Group, said at the time that they had offered Constellation about \$6.2 billion in a buyout proposal.

Gov. Martin O' Malley (D) said in a statement Thursday that the Constellation-Exelon deal "marks a significant development in the ever-changing energy industry."

## **Constellation Deal Would Not Revive Push For New Reactor At Calvert Cliffs (Mainichi)**

By Ben Mook

Maryland Daily Record, April 29, 2011

The proposed merger between Constellation Energy Group Inc. and Exelon Corp. is not going to revive efforts to build a new reactor at the Calvert Cliffs nuclear power plant.

Exelon Chairman and CEO John W. Rowe said during a conference call Thursday that the \$7.9 billion deal would not include a push to pursue the abandoned expansion effort at Calvert Cliffs. He said speculation the company, which is the largest nuclear plant operator in the US, would look to build new plants was not accurate.

"That is simply not the case," Rowe said. "At today's [natural] gas prices, you can't build a new nuclear plant."

Constellation operates a joint venture with French power company Electricite de France SA to run three nuclear plants, including Calvert Cliffs. The joint venture was also to undertake new nuclear projects starting with the third reactor at Calvert Cliffs. The two companies abandoned a second joint venture to build new nuclear plants in the US after Constellation balked at the cost compared to the return.

EDF has kept the project alive and is working to secure a loan guarantee to help finance the project, which could cost more than \$8 billion. Additionally, as a foreign corporation, EDF must find an American partner for the project to meet federal regulations.

The French power company is the second-largest shareholder of Constellation and holds 7.2 percent of the company's outstanding stock. On Thursday, EDF officials said they were anticipating the joint venture to remain as it is.

"We are studying the proposed terms and, as all vigilant shareholders are undoubtedly doing, are evaluating the value proposition and our options," the company said in a statement. "EDF will also be mindful that the integrity of our existing nuclear joint venture with Constellation is preserved."

Exelon officials seemed inclined on Thursday to keep the status quo with EDF. In response to a question about whether Exelon would also look to buyout EDF's interest in the nuclear venture, Rowe said that was not in the plans.

"This transaction stands on its own," he said.

## **UPDATE:Exelon Expands Nuclear Operations With Constellation Deal (DJN)**

By Naureen S. Malik

Dow Jones Newswires, April 29, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

## **Constellation Plots New Baltimore HQ (BALBIZ)**

By Scott Dance

Baltimore Business Journal, April 29, 2011

Constellation Energy Group Inc. plans to leave its headquarters at 750 E. Pratt St. and the adjacent Candler Building for new downtown Baltimore digs if its proposed merger with Exelon Corp. closes, CEO Mayo A. Shattuck III said Thursday.

Along with the physical presence, the companies also pledged to maintain Constellation's level of charitable giving locally — about \$10 million a year — for the next decade.

Leaders of both companies spoke to the media at a press conference, assuring the region that this deal, unlike others, will increase economic activity in Greater Baltimore. Exelon (NYSE: EXC) plans to buy Constellation (NYSE: CEG) in an all-stock deal worth \$7.9 billion. If the deal goes through, it would take away local ownership of Baltimore's only Fortune 500 company.

Shattuck said the companies would be looking for something with a larger footprint than either of its two buildings, which sit side-by-side on Pratt Street between Market Place and the Jones Falls. The companies want a future home large enough to fit all of the company's downtown workers in one building, and also with room for large commodities trading floors, something that doesn't fit currently, Shattuck said.

Constellation currently has 3,500 employees downtown. The companies said the merger will result in a net gain in jobs, but they did not comment directly on possible layoffs.

Shattuck emphasized that the site search would not extend into suburban Greater Baltimore.

"We're committed to downtown," he said.

Shattuck said he, too, is committed to the region — the merger deal will allow his family to remain in Baltimore. Shattuck is slated to become executive chairman of Exelon's board of directors, while Exelon President Chris Crane would become CEO and current Exelon CEO John Rowe plans to retire.

"I will be going back and forth from Chicago," he said. "But I know [Crane] will be doing more back and forth than I will."

Baltimore would also be home to corporate activities including, from time to time, Exelon's annual meeting of shareholders, Rowe said. Exelon currently shifts the meeting between Chicago and Philadelphia each year, but under the merger, would add Baltimore to the rotation, he said.

POLL: Will Exelon's acquisition of Constellation Energy Group help or hurt Greater Baltimore's economy?  
sdance@bizjournals.com or (410) 454-0514.

## **Shattuck: Merger Will Result In 'Net Jobs' Gain For Baltimore (BALBIZ)**

By Ryan Sharrow

Baltimore Business Journal, April 29, 2011

Constellation Energy Group Inc. CEO Mayo A. Shattuck III said Thursday morning the company's \$7.9 billion merger with Chicago's Exelon Corp. will result in a "net jobs" gain for Baltimore.

But the specifics are still cloudy.

As part of the deal, the combined headquarters would be based in Chicago. However, the combined companies have pledged substantial commitments to invest in Baltimore, where the headquarters of both companies' retail energy sales businesses and renewable energy businesses will be based under the Constellation name.

The companies plan to build or renovate a new environmentally friendly office center in Baltimore, and utility Baltimore Gas and Electric Co. will retain its Baltimore headquarters. Constellation says there would be no involuntary job changes at BGE for at least two years after the deal closes.

Constellation CEO Mayo A. Shattuck III told WBAL Radio on Thursday the retail and renewable energy units are "the growth businesses" of both companies. (Download the entire interview)

Shattuck said a new building in Baltimore will also lead to construction jobs.

Constellation is one of the region's largest employes with nearly 6,400 workers.

Mayor Stephanie Rawlings-Blake said she spoke with Shattuck on Wednesday and he "assured me that it will result in a net positive job gain for Baltimore."

## **When Correctional Officers (WP)**

By Joe Davidson

Washington Post, April 29, 2011

Being a prison guard is dangerous work. But life could be a little less hazardous for federal correctional officers if the Bureau of Prisons provided more protective gear.

That's the word from the American Federation of Government Employees, which is using a Government Accountability Office report to press for additional resources.

"Correctional officers are unarmed, violence is increasing and the inmate population has increased," said Bryan Lowry, president of the union's Council of Prison Locals. "Protective equipment such as batons and pepper spray would greatly enhance officer safety."

This has been a long-standing complaint by the union, and the report gives them more ammunition:

"States have discretion over the equipment they make available to their officers, and officials in the 14 states with whom we spoke provided examples of three types of equipment they allow their officers to carry while on duty that BOP generally does not, including pepper spray and batons," GAO said. "In addition, officials from 9 of the 14 states reported that they allow their officers to store personal firearms that they have carried when commuting to and from work on facility property, which BOP generally does not."

It's worth noting, however, that GAO said it knows of no evaluations on the effectiveness of equipment in ensuring officer safety. And 14 states is far from a majority of the 50.

The union also urged the administration and Congress to continue the Federal Prison Industries work program for inmates.

"It helps keep 18,972 prison inmates productively occupied in labor-intensive activities, thereby reducing inmate idleness and the violence associated with that idleness," according to the labor organization. "It also provides strong incentives to encourage good inmate behavior."

The Bureau of Prisons did not respond to a request for comment.

The labor of telework

In its "Guide to Telework in the Federal Government," the Office of Personnel Management provides managers and employees with information on implementing the telework law that took effect in December.

As with everything in government, Uncle Sam has a series of hurdles that must be jumped before something as simple as working from home is allowed.

No matter if staffers work from home regularly or only on special occasions, they "must first successfully complete an interactive telework training program provided by the agency and must enter into a written agreement with his/her supervisor."

Although the law and the 40-page guide encourage telework, the OPM document also says, in boldface type, "telework is not an employee right."

In case employees had any other ideas, the booklet reminds them, again in boldface, "telework is primarily an arrangement established to facilitate the accomplishment of work."

By June 7, each executive agency is required to establish a telework policy and notify all workers of telework eligibility, according to the report. But don't confuse eligibility with participation. Determination of eligibility for individual workers is at the discretion of agencies.

There are only two categories of employees deemed ineligible by law: those who have been disciplined for being absent without permission for more than five days in a year, and those disciplined for downloading or exchanging pornography on a government computer.

Presumably that covers only a small number of workers.

IRS's plain-spokenness

You can say lots of things about the IRS, but don't accuse it of using bad language, though it has been the target of profanity more than once.

The agency was presented with a Grand ClearMark Award on Thursday night by the Center of Plain Language for easy-to-follow directions on two forms.

"The IRS has worked hard to overcome its image with Americans, and these two revised forms are a sign that the IRS has changed," said Annetta Cheek, who chairs the center's board.

The judges cited use of the active voice and the words "we" and "you" to help the agency personally connect with taxpayers as reasons for honoring the IRS. The forms, still with government code names CP08 and CP21A, can be found at [www.irs.gov](http://www.irs.gov).

The Defense Department also was cited by the center but as a finalist for the WonderMark Award, which is given for the most confounding language.

Read, if you can make your way through it, this 86-word sentence on the Defense Department form that caught the center's attention:

"In cases when the user has consented to content searching or monitoring of communications or data for personnel misconduct, law enforcement, or counterintelligence investigative searching, (i.e., for all communications and data other than privileged communications or data that are related to personal representation or services by attorneys, psychotherapists, or clergy, and their assistants), the US Government may, solely at its discretion and in accordance with DoD policy, elect to apply a privilege or other restriction on the US Government's otherwise-authorized use or disclosure of such information."

Enough said. Make that too much said.

## **INTERNATIONAL NUCLEAR NEWS:**

### **Task Force Plans Cleanup And Recycling System For Radioactive Water (MAINDN)**

Mainichi Daily News, April 29, 2011

The government's special task force dealing with the ongoing nuclear crisis said it plans to introduce a cleanup and recycling system for the highly radioactive water piling up at the disaster-hit Fukushima No. 1 Nuclear Power Plant by the end of June.

The task force, headed by Prime Minister Naoto Kan and comprised of officials with the government and plant's operator Tokyo Electric Power Co. (TEPCO), announced on April 27 that it will start setting up a facility to decontaminate highly toxic radioactive water filling up the turbine buildings of the crippled No. 1 through No. 4 reactors in early May, aiming to implement the operation by the end of June.

Water treated at the facility will not be discharged into the Pacific Ocean, but recycled to cool down the overheating reactor cores.

Emergency workers are currently transferring water containing high levels of radioactive materials to the tank of a nearby radioactive waste disposal facility. The task force plans to pump contaminated water from the tank, remove oil and separate radioactive cesium using zeolite absorbent. Other radioactive substances in the liquid will also be removed after precipitating them with chemicals.

According to the plan, the amount of radioactive substances in the polluted water will be reduced to about 1/10,000 of the original levels after the treatment -- a concentration similar to that of the water used to cool down a reactor in normal operations.

After reducing radioactivity, the water will be desalinated and injected into the nuclear reactors again, while seawater will be stored in tanks.

According to TEPCO, the system is capable of decontaminating about 1,200 metric tons of polluted water per day, and the company expects a total of 200,000 metric tons of radioactive water will be treated by the end of this year.

Furthermore, the plant operator is considering setting up a temporary underground tank capable of storing around 10,000 metric tons of liquid to avoid discharging contaminated water into the ocean in case the water treatment system fails to handle the amount of toxic water piling up at the nuclear power plant. It is believed the construction of the temporary water tank in the basement will also prevent radioactivity from being released into the air.

The treatment, however, will produce a large amount of highly radioactive waste, such as the zeolite containing cesium. With regard to how to deal with the toxic waste, Goshi Hosono, a special advisor to Kan and the chief of the crisis management task force, said, "We are planning to store the waste at the nuclear power plant for the time being," adding that they have yet to decide on the disposal method of the nuclear waste.

To date, a total of around 87,500 metric tons of radioactive water has been found piling up at the accident site as a result of pouring water into the buildings accommodating the nuclear reactors and spent fuel pools in a bid to avoid overheating. With the cooling operations continuing at the facility, contaminated water will continue to increase.

### **Japan Postpones Nuclear Cooling (WSJ)**

By Mitsuru Obe

Wall Street Journal, April 29, 2011

Full-text stories from the Wall Street Journal are available to Journal subscribers by clicking the link.

### **Global Warming Threat Amid Nuclear Doubts: IEA (AFP)**

AFP, April 29, 2011

A global warming target could be missed three times over if countries fail to promote clean energy, the International Energy Agency warned Thursday, amid a possible slowdown in atomic power growth.

Nuclear fuel does not emit carbon dioxide, making it a serious option for "clean energy" proponents over fossil fuels, but governments around the world have turned more cautious on it in the wake of the Fukushima crisis in Japan.

The IEA's deputy head Richard Jones however cautioned that global warming could accelerate much faster and lead to catastrophic consequences if the international community fails to adopt a more aggressive clean energy policy.

"We are not on the pathway to limit global temperatures," he told the Foreign Correspondents Club in Hong Kong, referring to an international goal to restrict warming to two degrees Celsius by the end of the century.

The target was set by countries at the Cancun meeting in December 2010.

"If you miss it by 0.1 degree Celsius nobody cares but the problem is it looks like we are on track for more than six degrees Celsius (rise)," he said.

"That is serious. We really don't know what will happen," said the deputy head of the Paris-based agency, set up to monitor energy use.

In its annual report last year, the IEA projected that 360 gigawatts of nuclear generating capacity would be added worldwide by 2035, on top of the 390 gigawatts already in use.

However fears over the use of nuclear power could see the IEA halve its projection to 180 gigawatts, its chief economist Fatih Birol told AFP earlier this month.

Jones said the earlier projection would be "overly optimistic in today's environment", and that the IEA will re-evaluate the statistic, but declined to give any figures.

Germany has announced the temporary shutdown of its seven oldest nuclear reactors while it conducts a safety probe in light of Japan's atomic emergency, triggered by an earthquake and tsunami that crippled the power station.

Switzerland suspended plans to replace its ageing atomic plants, while in France – where nuclear makes up 75 percent of electricity production – environmental groups have called for a referendum on the future use of atomic power.

## **Will Jimmy Carter's Latest North Korea Visit Change Anything? (CSM)**

**Former US President Jimmy Carter ended a quick visit to North Korea this week with a message that Kim Jong-il would be willing to hold a summit with South Korea's President Lee Myung-bak.**

By Donald Kirk, Correspondent

Christian Science Monitor, April 29, 2011

Former US President Jimmy Carter's 48-hour mission to Pyongyang this week leaves analysts wondering whether anyone, however well intentioned, can persuade North Korea's leader Kim Jong-il to relent on his hard-line policies and return to serious talk on giving up the North's nuclear program.

Mr. Carter, arriving in Seoul on Thursday along with the former leaders of three other countries, repeated the North Korean mantra of eagerness to negotiate "without preconditions" but acknowledged that he had again not succeeded in meeting Mr. Kim.

Instead, he and the other three, including Martti Ahtsari of Finland, Mary Robinson of Ireland, and Gro Brundtland of Norway, had to settle for a written message, said Mr. Carter, of willingness to negotiate "at any time and without any preconditions."

That statement, similar to many released by North Korean officials in recent months, "is a perfect example of the law of diminishing returns," says L. Gordon Flake, executive director of the Maureen and Mike Mansfield Foundation in Washington. It's "bromides that we've all heard before."

RELATED Former President Jimmy Carter arrived in North Korea amid hope for six-party talks

The great flaw in the message, say North Korean analysts, is that North Korea couples the message with what amount to conditions, including a demand that the United States must provide "security guarantees" and negotiate a peace treaty to replace the armistice that ended the Korean War in 1953. The US position is that North Korea must first negotiate with South Korea.

'Deep regret'

Carter reported that Kim Jong-il had said in his message that he would be willing to hold a summit with South Korea's President Lee Myung-bak. But South Korea has insisted on an apology first from North Korea for the sinking of a South Korean navy corvette the Cheonan in March of last year with a loss of 46 lives, and for the shelling of an island in the Yellow Sea last November in which four people were killed.

North Korea expressed "deep regret" over both incidents, according to Carter. But the North has repeatedly denied anything to do with the Cheonan sinking and accuses South Korean gunners of opening fire from the island before the North Koreans fired back.

Symbolism vs. substance

"Carter's visit may get some attention," says David Kang, director of the Korean Studies Institute at the University of Southern California, but "it's not really going to change anything." Mr. Kang sees "strategic patience" as "the only game" at this stage. "He may accomplish a little symbolically," he says, but "substantively very little will change in the short term."

The failure of the quartet of former leaders – they call themselves "elders" – to see Kim Jong-il comes as a special disappointment since Carter did meet Kim's father, Kim Il-sung, in an historic visit in June 1994 in the midst of an earlier nuclear crisis. That visit was seen as helpful in leading to the Geneva agreement of October 1994 in which North Korea shut down its nuclear reactor in return for the promise of twin nuclear energy reactors.

The Geneva agreement broke down eight years later with the revelation that North Korea had a separate program for fabricating warheads with highly enriched uranium, and the reactors were never built. Six-party talks, hosted by China, including the US, Japan, Russia, and the two Koreas, were last held in December 2008.

North Korea, however, clearly hopes for an infusion of food aid, provided by South Korea for a decade under the South's Sunshine policy of reconciliation before the conservative Lee Myung-bak took over as president in February 2008. South Korea and the US cut off such aid while waiting for the North to live up to agreements for ending its nuclear program.

In Seoul Carter said "one of the most important human rights is to have food to eat." He also decried the cut-off of food aid by the US as "a human rights violation."

RELATED Five key people to watch in North Korea

## **IAEA Chief: Syria Tried To Build Nuclear Reactor (AP)**

By Jamey Keaten And George Jahn

Associated Press, April 29, 2011

PARIS – The head of the International Atomic Energy Agency said for the first time that a target destroyed by Israeli warplanes in the Syrian desert in 2007 was the covert site of a future nuclear reactor, countering assertions by Syria that it had no atomic secrets.

Previous reports by the International Atomic Energy Agency have suggested that the structure could have been a nuclear reactor. Thursday's comments by IAEA chief Yukiya Amano were the first time the agency has said so unequivocally.

By aligning Amano with the US, which first asserted three years ago that the bombed target was a nuclear reactor, the comments could increase pressure on Syria to stop stonewalling agency requests for more information on its nuclear activities.

Amano spoke during a news conference meant to focus on the Fukushima nuclear disaster after a visit to the Paris-based Organization for Economic Cooperation and Development to discuss clean-up efforts at Japan's tsunami-ravaged nuclear plant.

"The facility that was ... destroyed by Israel was a nuclear reactor under construction," he told a full news conference in response to a question from The Associated Press, repeating to the AP in taped comments afterward: "It was a reactor under construction."

Suggesting that Amano had erred in making the public comments, the IAEA later put out a statement that he "did not say that the IAEA had reached the conclusion that the site was definitely a nuclear reactor."

The rollback reflected previous, more circumspect, IAEA language. In a February report, Amano had said only that features of the bombed structure were "similar to what may be found at nuclear reactor sites."

Israel has never publicly commented on the strike or even acknowledged carrying it out. The US has shared intelligence with the agency that identifies the structure as a nearly completed nuclear reactor that, if finished, would have been able to produce plutonium for the fissile core of nuclear warheads.

Syria denies allegations of any covert nuclear activity or interest in developing nuclear arms. Its refusal to allow IAEA inspectors new access to the bombed Al Kibar desert site past a visit three years ago has heightened suspicions that it had something to hide, along with its decision to level the destroyed structure and later build over it.

Drawing on the 2008 visit by its inspectors, the IAEA determined that the destroyed building's size and structure fit specifications that a reactor would have had. The site also contained graphite and natural uranium particles that could be linked to nuclear activities.

The IAEA is also trying to probe several other sites for possible undeclared nuclear activities linked to the bombed target but Damascus has been uncooperative on most counts, saying that most of the sites are restricted because of their military nature.

**From:** HalilBurcin.OKYAR@oecd.org  
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**To:** amcgarry@rpii.ie; patrick.smeesters@fanc.fgov.be; kaare.ulbak@sis.dk; edward.lazo@oecd.org; schneider@cepn.asso.fr; jean-francois.lecomte@irsn.fr; jurina@uvzsr.sk; suzuki51@mext.go.jp; shandala@srcibph.ru; apanfilov@uyrb.faae.ru; toshihiko.kamada@mofa.go.jp; perez@who.int; masa.takahashi@cao.go.jp; Milligan, Patricia; bruno.cessac@irsn.fr; david.duchesne@hc-sc.gc.ca; david.tredinnick@arpansa.gov.au; p.hedemann@dekom.dk; david.cancio@ciemat.es; jose.gutierrez@ciemat.es; tomoho.yamada@cao.go.jp; ian.robinson@hse.gsi.gov.uk; johannes.hammer@ensi.ch; boyd.mike@epa.gov; carvalho@itn.pt; wweiss@bfs.de; shizuyo.kusumi@cao.go.jp; ali.ghovanlou@hq.doe.gov; kazsakai@nirs.go.jp; saito-minoru@jnes.go.jp; andre.jouve@ec.europa.eu; wim.molhoek@minvrom.nl; antonis@eeae.nrcps.ariadne-t.gr; r.martincic@iaea.org; j.p.auclair@hc-sc.gc.ca; jerzy.mietelski@ifj.edu.pl; olivier.isnard@irsn.fr; brian.ahier@hc-sc.gc.ca; koblinger@haea.gov.hu; clindvall@hotmail.com; ckocar@hacettepe.edu.tr; kobayashi.hirohide@jaea.go.jp; clive.williams@environment-agency.gov.uk; carrz@who.int; jldelgado@cnsns.gob.mx; caroline.purvis@cnsccsn.gc.ca; sci.sec@icrp.org; eduard.metke@ujd.gov.sk; jpgc@csn.es; keith.binfield@defra.gsi.gov.uk; delphine.xicluna@asn.fr; ronald.rusch@ensi.ch; werner.zeller@bag.admin.ch; pcam@enresa.es; karla.petrova@sujb.cz; dominique.rauber@babs.admin.ch; saigusa@nirs.go.jp; jim.scott@arpansa.gov.au; kr.kase@stanfordalumni.org; yuinoue@mext.go.jp; okuno.hiroshi@jaea.go.jp; kanamori.masashi@jaea.go.jp; patrick.breuskin@ms.etat.lu; duranova@vuje.sk; decair.sara@epa.gov; d.h.byron@iaea.org; adriana.sokolikova@ujd.gov.sk; yamamoto.kazuya@jaea.go.jp; f.baciu@iaea.org; delphine.caamano@asn.fr; ysumika@mext.go.jp; ciska.zuur@minvrom.nl; smm@gr.is; carlos.sancho@ciemat.es; jack.valentin@ssm.se; rafal.frac@msz.gov.pl; khour@eeae.gr; ingemar.lund@ssm.se; augustin.janssens@ec.europa.eu; pedrovaz@itn.pt; ksmith@rpii.ie; jill.meara@hpa.org.uk; joerg.brauns@areva.com; ogoshi-harushige@meti.go.jp; acortes@cnsns.gob.mx; benjamin.stanford@oecd.org; mal.colm.crick@unscear.org; olli.vilkamo@stuk.fi; stuart.prosser@arpansa.gov.au; helmut.fischer@lebensministerium.at; krajewski@clor.waw.pl; peter.johnston@arpansa.gov.au; ayano.yoshida@oecd.org; johannes.kuhlen@bmu.bund.de; vera.starostova@sujb.cz; jmmc@csn.es; peter.hughes@hse.gsi.gov.uk; mike.griffiths@rimnet.gsi.gov.uk; paolo.zeppa@isprambiente.it; lynn.hubbard@ssm.se; nina.cernohlawek@ages.at; rvr@csn.es; sandra.little@hse.gsi.gov.uk; florence.gallay@asn.fr; marjan.tkavc@gov.si; salvatore.frullani@iss.infn.it; sychang@kaeri.re.kr; luciano.bologna@apat.it; sandro.sandri@enea.it; dana.drabova@sujb.cz; mrm@csn.es; florence.menetrier@cea.fr; hschoi@kins.re.kr; axel.boettger@bmu.bund.de; e.amaral@iaea.org; miroslav.pinak@oecd.org; barbara.vokal-nemec@gov.si; uichiro.yoshimura@oecd.org; jean-luc.godet@asn.fr; Bush-Goddard, Stephanie; halilburcin.okyar@oecd.org; finn.ugletveit@nrpa.no; hannele.aaltonen@stuk.fi; stig.husin@ssm.se; sep@gr.is; ann.heinrich@nnsa.doe.gov; vesa.tanner@ec.europa.eu; peter.hofer@lebensministerium.at; fgering@bfs.de; maekawa-yukinori@meti.go.jp; cmcmahon@rpii.ie; christian.vandecasteele@fanc.fgov.be; nakata@nustec.or.jp; isabelle.mehl-auget@asn.fr; fukumoto.masahiro@jaea.go.jp; gunnar.saxebol@nrpa.no; kevin.bundy@cnsccsn.gc.ca; sisko.salomaa@stuk.fi; alexandru.rodna@cncan.ro; hans.riotte@oecd.org; iharikan@taek.gov.tr; niu@ilo.org; kristiina.korhonen@oecd.org; shannounf@who.int; hefin.griffiths@ansto.gov.au; hiroito@mext.go.jp;

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**Subject:** GDR- 20 April 2011

**Attachments:** image001.gif; Results Compilation Emergency Response Governmental Decision and Recommendation Rev 15 20 April.doc; INEX\_A(2011)1 WPNEM34 EGIRES2 Agenda.pdf

Dear all,

As it was mentioned during the IACRNE meeting, please find enclosed updated version of Governmental Decisions and Recommendations (GDR) concerning the ongoing Fukushima accident.

In addition, I have attached the draft agenda of WPNEM meeting. It has not been finalized yet and I will keep you informed with a revision.

Thank you very much again for your co-operation.

Sincerely,

H.Burcin OKYAR



**Halil Burçin OKYAR**

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**Governmental Decisions and Recommendations (GDR) LAST UPDATED: 20 April 2011**

Country	Decision taken or Recommendation made	Applicable Date	Applicable Population
<p><b>Q1:</b> What has your government recommended with regard to your citizens living in or visiting Japan?</p>	<p><b>Australia</b></p> <p>As a precautionary measure, that Australians within an 80 km zone from the Fukushima nuclear power plant move out of the area.</p> <p>As the situation continues to develop, all Australians in Japan are strongly encouraged to follow the protective measures recommended by the Japanese and Australian Governments. This may include sheltering.</p> <p>Australians returning home from Japan are highly unlikely to be contaminated or exposed to significant radiation and will not require checks for radioactivity. However, if people wish to seek medical advice they should contact their local GP.</p> <p>ARPANSA and the Chief Medical Officer advise that iodine tablets are only required when exposed to substantial radiation doses from radioactive iodine. There is no current need for those returning from Japan or those in Japan outside the exclusion Zone to consider the use of potassium iodide tablets.</p> <p>At the present time, Australia's food standards Regulator, Food Standards Australia New Zealand (FSANZ), considers the risk of Australian consumers being exposed to radionuclides in food imported from Japan to be negligible.</p> <p>Australia does not import fresh produce from Japan. In fact Australia imports very little food from Japan. Imports are limited to a small range of specialty products, for example seaweed-based products, sauces etc.</p> <p>A joint communique for the World Health Organization, the International Atomic Energy Agency, the World Meteorological Organization, the International Maritime Organization and the International Civil Aviation Organization advises that there is no current restriction) on international flight and maritime operations can continue normally into and out of Japan's major airports and sea ports. Full text at <a href="http://www.arpansa.gov.au">www.arpansa.gov.au</a></p>	<p>Last Updated on 19 March</p>	<p>Various categories - Australians in Japan; Australian Passengers returning from Japan; Medical Practitioners; Food Imports; Advise to Airlines and Shipping</p>
	<p><b>Austria</b></p> <p>Partial travel warning for the north east of Japan. It is also recommended that Austrians should leave this area and in addition the Tokio Province.</p> <p>The Austrians in Japan are recommended to strictly follow the instructions of authorities in Japan.</p>	<p>Since 15 March</p>	<p>Travelers; Austrians in Japan</p>
	<p>The Austrians in Japan are recommended to strictly follow the instructions of authorities in Japan.</p> <p>The Austrian Foreign Ministry has issued an official partial travel warning for the north east of Japan. Austrians in this region have been recommended to leave this area.</p> <p>In addition it also has been recommended that Austrian families with children should leave the Tokio area. The Foreign Ministry has asked citizens currently in Japan to inform the Austrian Embassy about their whereabouts.</p> <p>The Austrian Foreign Ministry transferred the Austrian Embassy temporarily to Osaka.</p> <p>An Austrian expert team of the Ministry of Interior was sent to the Austrian embassy to make an on-site evaluation of the</p>	<p>15.03. Update 4 April</p>	<p>Travelers; Austrians in Japan</p>



Emergency Response Governmental Decision and Recommendations Information Exchange

	situation and to deliver personal protective equipment (PPE) for 30 persons.		
<b>Belgium</b>	Travel advice for Japan runs as follows:		
	All trips to Japan are advised against till further notice. Belgian citizens whose stay in Japan is not essential are being advised to leave the country. Consular assistance of Belgian citizens willing to leave Japan on a voluntary basis is organized.	16 March	
	All trips to the region of Tokyo and to the nord-east of Honshu (especially to the régions of Kanto and Tohoku) are advised against until further notice. Belgian citizens living in Tokyo or in the nord-east of Honshu are advised either to leave Japan or to move to other parts of the country.	24/3 still valid on 28/3	
<b>Canada</b>	The Government of Canada is advising against non-essential travel to Japan. An official warning has been issued advising Canadians in Japan against all travel within 80 km of the Fukushima Nuclear Power Plant. Recommendation to follow the directions of the Japanese government and local emergency response personnel. Canadians located within 80 km of the plant are advised that they should, as a further precautionary measure, evacuate this area.	25 March	Canadians in Japan
<b>Czech Republic</b>	Recommendation of the national regulatory authority (State Office for Nuclear Safety - SONS) and Ministry of foreign affairs (MFA - <a href="http://www.mzv.cz">www.mzv.cz</a> ): To travel to north-east parts of the island Honshu is not recommended in particular to the areas up to 80 km from Fukushima NPP. To travel to Tokyo and north – east parts of Japan should be limited only to urgent cases. The Czech citizens living in the affected areas should leave those areas. Czechs living in Japan should not consume the food from the affected areas and should avoid buying the food at local market places. SONS ( <a href="http://www.sujb.cz">www.sujb.cz</a> ) To travel to other parts of the Asia there is no restriction. The Czech embassy in Tokyo has been provided by iodine tablets, but no other protective means have been delivered. All Czechs in Japan are encouraged to follow and to respect the recommendations of the local Japanese authorities. Czechs returning home from Japan if wish could ask for the whole body measurement. There is a contact to the measuring facility ( <a href="http://www.suro.cz">www.suro.cz</a> ) SONS advise that iodine tablets for preventive use are not recommended. There is no current need for those returning from	Since 15.3.2011	Various categories – Czechs in Japan; Czechs returning from Japan; Food in Japan; Iodine tablets; Food Imports;

	<p>Japan or those in Japan outside the exclusion Zone to consider the use of potassium iodide tablets.</p> <p>At the present time, the Czech Agriculture and Food Inspection Authority (CAFIA) assure the measurement of all from Japan imported food stuff.</p> <p>The Czech Republic does not import fresh food from Japan. Only small range of foodstuff and food products is imported to the Czech Republic.</p> <p>Full texts on <a href="http://www.sujb.cz">www.sujb.cz</a>; <a href="http://www.mzv.cz">www.mzv.cz</a>; <a href="http://www.suro.cz">www.suro.cz</a>; <a href="http://www.szpi.gov.cz/en">http://www.szpi.gov.cz/en</a></p>		
<b>Denmark</b>	<p>The Danish Emergency Management Agency, and The National Institute for Radiation Protection together with The Danish Veterinary and Food Administration are following the development of the situation in Japan very closely.</p> <p>The Danish Emergency Management Agency in cooperation with The National Institute for Radiation Protection has made an official statement published on the homepages of the Danish Ministry of Foreign Affairs and the Danish Embassy in Japan asking Danish citizens in Japan to stay clear of a 80 km-zone around the Fukushima nuclear power plant. This protective distance also applies to Danish ships within the area.</p> <p>Danes residing in Tokyo and North of Tokyo have been advised to consider leaving the area.</p> <p>As of 16 March the initial recommendation from the Ministry of Foreign Affairs of making only necessary travels to Japan has been changed to not travelling to Japan.</p> <p>All Danish citizens in Japan - including ship crews - have been instructed to follow the local authorities' recommendations.</p> <p>Through The Ministry of Foreign Affairs instructions on safety precautions in case of a radioactive plume and instructions on intake of iodine tablets, if prompted, has been posted on the homepages of the Danish Embassy in Japan.</p> <p>The Ministry of Foreign Affairs on the homepages has posted links to The Danish Embassy in Tokyo and to The Danish Emergency Management Agency's homepage where a FAQ and a daily update on the situation at Fukushima can be found.</p> <p>A Danish assistance team consisting on two persons from The Danish Emergency Management Agency and The National radiation Protection Institute left 17 March for to support the Danish Embassy in Japan at their request.</p> <p>No planes have been specially reserved for transporting Danes out of Japan based on the information from The Danish Embassy in Tokyo saying that all Danes wishing to leave Japan had already done so on ordinary flight.</p> <p>The Danish Veterinary and Food Administration recommend Danish citizens to follow the advice of the local authorities according to food and drink.</p>	Last updated 24. March	<p>Danish citizens in Japan</p> <p>Danes considering travelling to Japan</p> <p>Danish sea vessels</p>
<b>Finland</b>	<p>Ministry for Foreign Affairs (MFA) urges Finns to withdraw from a radius of 80 km of Fukushima nuclear power plant.</p> <p>MFA recommends avoiding all travelling to the Tokyo-Yokohama area, Tohoku and Kanton area. If there is no mandatory need to stay in these areas, MFA urges considering moving to the safer areas of southern Japan.</p> <p>Unnecessary travelling to southern Japan should be avoided although the safety situation still is good in southern Japan.</p> <p>Iodine tablets have been distributed to Finns in Japan. The intake of the iodine tablets on request of the Finnish authorities.</p>	17 March, 2011	Finns living in or visiting Japan.

	<p>Ministry for Foreign Affairs (MFA) urges Finns to leave the area within a radius of 80 km of Fukushima nuclear power plant. MFA advices against non-essential travel to the Greater Tokyo area and the regions north of the metropolitan area (Tokyo-Yokohama, Tohoku and Kanto regions). Finnish citizens residing in this area are urged to follow closely any directions issued by Japanese authorities.</p>	<p>updated 30 March, 2011</p>	<p>Finns living in or visiting Japan.</p>
France	<p>Travel to Japan is strongly discouraged.</p> <p>For French living in Tokyo : they are recommended to leave the Tokyo area for the south of Japan or for France. In addition to the air capabilities of Air France, the French authorities have made available two government planes. Travel in the prefectures of Hokkaido, Aomori, Iwate, Miyagi, Fukushima, Ibaraki, Chiba, is strongly discouraged. Recommendation to follow the instructions given by the Japanese authorities in case of announcement of a worsening situation.</p> <p>Regarding the issue of KI, pills were sent last week to the French Embassy in Tokyo and were pre-distributed to our nationals. This doesn't mean that the French authorities recommend the ingestion of stable iodine.</p>	<p>Updated on March 21</p>	
	<p>Information from the French Government <a href="http://www.diplomatie.gouv.fr/fr/conseils-aux-voyageurs_909/pays_12191/japon_12268/index.html">http://www.diplomatie.gouv.fr/fr/conseils-aux-voyageurs_909/pays_12191/japon_12268/index.html</a>. (in French)</p>	<p>29 March</p>	
	<ul style="list-style-type: none"> <li>• Travel to Japan is discouraged unless imperative reasons and subject to the respect of instructions by Foreign Affaires Ministry.</li> <li>• For all citizens in Japon <ul style="list-style-type: none"> <li>- French citizens in Japan have to follow the recommendations of the Japanese health authorities and respect the instructions issued by the French Foreign Ministry (<a href="http://www.diplomatie.gouv.fr">www.diplomatie.gouv.fr</a> )</li> </ul> </li> <li>• For French having left the Tokyo area for the south of Japan <ul style="list-style-type: none"> <li>- They are recommended not to return to Tokyo unless imperative reason</li> </ul> </li> <li>• Prefectures of Miyagi, Fukushima, Ibaraki and Tochigi <ul style="list-style-type: none"> <li>- Travel in the prefectures of, Miyagi, Fukushima, Ibaraki et Tochigi, is strongly discouraged.</li> <li>- French citizens living in these prefectures are urged to follow the instructions issued by the Japanese authorities. Furthermore, some simple precautions are recommended regarding dietary and daily habits in order to reduce the risk of internal and external contamination.</li> </ul> </li> <li>• Prefectures of ,Niigata, Gunma, Saitama, Shiba, Tokyo, Kanagawa and Yamanashi : <ul style="list-style-type: none"> <li>- No restriction for travelling or staying at outdoor public espaces</li> <li>- The same simple precautions are recommended as for those living in Miyagi, Fukushima, Ibaraki and Tochigi</li> </ul> </li> <li>• General recommendation: It is indeed necessary to maintain a prudent attitude as the situation of damaged Fukushima nuclear power reactors is not stabilized.</li> </ul> <p>RECOMMENDATIONS ON IODINE TABLETS</p> <ul style="list-style-type: none"> <li>• Possibility to get iodine tablets at the French embassy (although information is given that Japanese authorities will proceed if needed to distribute iodine tablets to people)</li> </ul>	<p>Updated on 30 March</p>	

	<ul style="list-style-type: none"> <li>Information about the intake of iodine tablets and other recommendations for French citizens in Japan is available at <a href="http://www.diplomatie.gouv.fr/">http://www.diplomatie.gouv.fr/</a></li> </ul>		
<b>Germany</b>	The Federal Foreign Office is warning against visits to the north-east of Honshu island. Travellers are currently advised to avoid all non-essential travel to Japan. The Federal Foreign Office crisis unit is available round the clock at +49 30 5000 3000. In the light of the current situation, the German missions in Tokyo and Osaka-Kobe understand the concern of Germans in the Tokyo/Yokohama area. The Embassy and the Consulate-General are therefore offering to assist Germans and their families who are considering taking the precaution of moving to the south of Honshu island.(16.03.)		
<b>Greece</b>	The Ministry of Foreign Affairs advises not to travel to Japan. As a precautionary measure, Greek citizens within a 80 km zone from the Fukushima nuclear power plant are advised to move out of the area. The same recommendation has been addressed to Greek ships. Greek citizens are advised to follow the instructions of the local authorities.	Gradually since 14 March	Greek citizens, ships, citizens interested in travelling to Japan
<b>Hungary</b>	HU advises to defer non-essential travel to Japan and avoid all travel to certain areas, especially to Iwate, Miyagi and Fukushima prefectures. Hungarian citizens whose stay in Japan is not essential are being advised to leave the country. We advise Hungarian citizens, in particular families with children, to leave Tokyo (Kanto region) temporarily and move to a more secure part of the country. As a precautionary measure HU nationals are advised to remain outside an 80 km radius from the Fukushima nuclear facility. We are encouraging our citizens to closely follow all instructions from the Japanese authorities and to monitor the continuously updated website of our Embassy. HU citizens currently in Japan have been asked to make themselves known to HU Consular Services in Tokyo and Hamamatsu.		
<b>Islamic Republic of Iran</b>	No specific recommendation has been made. Iranian citizens living in or visiting Japan will follow the recommendation made by Japan authorities.		
	No restriction is made to visit the Japan, but visiting is not encouraged. All Iranian in Japan are strongly encouraged to follow the instructions of Japanese authorities. Some provisional measures are taken by Iranian Embassy to instruct the Iranian citizens and assure them of their safety. The Embassy is provided with Radiation Protection Devices. FAQ and a daily update information regarding Fukushima accident in Persian language is accessible for all Iranian in the website: <a href="http://www.aeoi.org.ir">www.aeoi.org.ir</a>	11 April	

Ireland	<p>[DFA] Advise avoiding non-essential travel to Japan, including Tokyo, and do not travel to affected areas in the north-eastern part of the main, Honshu island of Japan.</p> <p>[DFA] Advises against all travel to this area [ Fukushima prefecture including 30 km zone].</p> <p>Given the difficulties arising from the present situation, including potential disruptions to the supply of essential goods and services, [DFA] would encourage Irish citizens to consider leaving the north east of Japan and the Tokyo region. This is particularly the case for people with small children.</p> <p>[DFA = Dept of Foreign Affairs]</p> <p>In light of increased radiation levels found in certain food types in prefectures near the Fukushima Daiichi nuclear plant, the Japanese Government is restricting the sale of certain food types from affected areas. The foods affected include green leafy vegetables, broccoli, parsley and untreated milk although the list is constantly being revised. Irish citizens in Japan are encouraged to check with the Japanese authorities for a full up-to-date list of affected foodstuffs. Link given to list.</p>	<p>15 March</p> <p>Food advice added 23 March</p>	<p>Irish citizens considering travelling to Japan and those living in/currently visiting Japan</p>
Italy	<p>The Italian Embassy in Japan strongly recommends to the fellow countrymen to turn away from the four prefectures affected by the tsunami, from the prefectures to the north of the capital and from Tokyo itself</p>	<p>March 15, 2011</p>	<p>Italian fellow in Japan</p>
Latvia	<p>The Ministry of Foreign Affairs of the Republic of Latvia and the Embassy of the Republic of Latvia to Japan have issued the following recommendations/warnings in their web-sites:</p> <p>Avoid non-essential travel to Japan due to the damage caused by the 11 March earthquake and tsunami. Follow and act according to the instructions given by the local Japanese authorities. Taking into consideration the increased level of radiation around the Fukushima nuclear facility, leave the territory within 80km of the facility. Those who wish to leave Japan are encouraged to do so by commercial means. Latvian nationals who have not yet informed the Embassy about their presence in Japan, are asked to do so by sending E-mails or calling the Embassy. Should the iodine tablets be necessary, they are available at the Embassy.</p> <p>Avoid non-essential travel to Japan due to the damage caused by the 11 March earthquake and tsunami. Follow and act according to the instructions given by the local Japanese authorities. Taking into consideration the increased level of radiation around the Fukushima nuclear facility, leave the territory within 30km of the facility. Those who wish to leave Japan are encouraged to do so by commercial means. Latvian nationals who have not yet informed the Embassy about their presence in Japan, are asked to do so by sending E-mails or calling the Embassy.</p> <p>Avoid non-essential travel to Japan due to the damage caused by the 11 March earthquake and tsunami. Follow and act according to the instructions given by the local Japanese authorities. In cases of emergency contact the Embassy or the Consular Department of the Ministry of Foreign Affairs and/or the travel company. Consult the Embassy if necessary. Latvian nationals who have not yet informed the Embassy about their presence in Japan, are asked to do so by sending E-mails or</p>	<p>17.03.2011</p> <p>1. up to date</p> <p>13.03.2011</p> <p>1</p> <p>11.03.2011</p>	<p>101 person in total, including tourists and residents</p>



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	calling the Embassy.	1	
<b>Lithuania</b>	Ministry of Foreign Affairs of the Republic of Lithuania recommended to avoid travel north-east of Honshu island. People who are in Tokyo or northerly should stay away from this territory or out from Japan or stay when it is very important. People after accident in Fukushima nuclear power plant should immediately leave 100 km zone around power plant.		For Lithuanian people who live in Japan
<b>Luxembourg</b>	If presence is not necessary and if feasible, to move to the southern parts of Japan. Follow advices of Japanese authorities	14/03/2011	50 persons
<b>Norway</b>	Norwegians in areas less than 80 km away from Fukushima NPP are recommended to leave the area. Norwegians who stays in i Tohoku-, Chubu- and Kanto-regions should consider to leave the area. This includes Norwegians in Tokyo, which is a part of the Kanto-region Norwegian citizens are advised to follow recommendations from Japanese authorities and follow updated information on the embassy homepage.	Since 20 March	
<b>Poland</b>	Ministry of Foreign Affairs has recommended not to travel to Japan neither for touristic nor other not urgent reasons. <a href="http://www.msz.gov.pl/Sytuacja,kryzysowa,w,Japonii,%E2%80%93%20%0b,ostrzezenie,Ministerstwa,Spraw,Zagranicznych,41951.html">http://www.msz.gov.pl/Sytuacja,kryzysowa,w,Japonii,%E2%80%93%20%0b,ostrzezenie,Ministerstwa,Spraw,Zagranicznych,41951.html</a> (in Polish) Polish citizens staying in Japan Polish citizens have been advised to leave north-eastern area of Honshu island due to information on possible radioactive contamination.  Polish citizens have been urged to follow the instructions of the local authorities and information given on the official website of Polish embassy in Tokyo. Special emergency phone-lines for Polish citizens staying in Japan and their relatives have been established by Ministry of Foreign Affairs in order to facilitate public communication.  Information on current situation in nuclear power plants in Japan and some recommendations for public are also available on <a href="http://www.paa.gov.pl">www.paa.gov.pl</a> , <a href="http://www.gis.gov.pl/?news=238">http://www.gis.gov.pl/?news=238</a> (in Polish)	24 March	
<b>Portugal</b>	Recommendation was made to Portuguese citizens to leave Tokyo and "go south". No indications/recommendation to leave Japan were adopted. The Portuguese Embassy remains operational in Tokyo ITN is advising the staff of the Portuguese Embassy (electronically, by phone, email) on radiation-related matters  The Portuguese Ministry for Foreign Affairs has issued advice against non essential travels to Japan and those Portuguese citizens whose stay in Japan is not essential, to temporarily leave the country or move to the south of Japan, especially families with children or pregnant women. (available at <a href="http://www.secomunidades.pt">www.secomunidades.pt</a> )	17-18 March	Portuguese citizens living in Japan  Staff at the Portuguese Embassy

	<p>The Portuguese Ministry for Foreign Affairs has issued advice against non essential travels to Japan and those Portuguese citizens whose stay in Japan is not essential, to temporarily leave the country or move to the south of Japan, especially families with children or pregnant women. (available at <a href="http://www.secomunidades.pt">www.secomunidades.pt</a>).</p> <p>The Directorate General for Health has recommended that that the Portuguese citizens which cannot leave Japan should avoid the affected areas and follow the instructions of Japanese authorities (available at <a href="http://www.dgs.pt">www.dgs.pt</a>).</p> <p>The Portuguese Ministry for Foreign Affairs has been in straight and permanent contact with the Portuguese embassy in Japan in order to guarantee that all relevant preventive and protection measures are taken in due time.</p>	22 March	
	<p>The Portuguese Ministry for Foreign Affairs has been in straight and permanent contact with the Portuguese embassy in Japan in order to guarantee that all relevant preventive and protection measures are taken in due time</p> <p>The Directorate General for Health has recommended that that the Portuguese citizens which cannot leave Japan should avoid the affected areas and follow the instructions of Japanese authorities (available at <a href="http://www.dgs.pt">www.dgs.pt</a>).</p> <p>The Portuguese National Authority for Civil Protection has convened regularly the National Commission for Radiological Emergencies in order to assess the situation and to coordinate the measures taken by the Portuguese authorities</p>	24 March	
<b>Republic of Korea</b>	<p>(1) Prompt Dispatch of a "Reponse Team" with one health physicist - to account for citizens and to ensure their safety</p> <p>(2) Modification of "Travel Advisory by threat level" in Tokyo and Northeastern area of Japan - Tokyo and Chiba prefecture: Level 1 (precautious) - 5 Northeastern prefectures (Ibaraki, Iwate, Aomori, Fukushima, Miyagi): Level 2 (highly cautious) - Area within a 30 km radius in Fukushima: Level 3 (restricted)</p> <p>(3) Announcement of an Evacuation - Japanese Government imposed an evacuation within a 20 km radius and ordered to remain indoors within a radius of 20-30 km of the Fukushima Daiichi - According to the Japanese Government's order, Korean Government recommended an evacuation to citizens staying in the area</p> <p>(4) Extension of a 80 km radius evacuation zone - Korean Governmet recommended a 80 km raduis evacuation to citizens in the Fukushima area</p> <p>(5) Modification of a recommendation of 80 km radius evacuation -Korean Government recommended citizens staying outside a 80 km radius of Fukushima Daiichi to move to a safer area concerning factors such as the change of wind directions</p>	<p>(1) March 12, 2011</p> <p>(2) March 13, 2011</p> <p>(3) March 15, 2011</p> <p>(4) March 17, 2011</p> <p>(5) March 18, 2011</p>	
<b>Romania</b>	<ul style="list-style-type: none"> <li>• The intake of iodine tablets is not necessary in Romania. Strong advice against the prevention intake of iodine tablets</li> <li>• The National Inspectorate for Emergency Situations regularly update information (current situation in Japan – plant status, radiological situation and the possible consequences for Romania).</li> <li>• The National Commission for Nuclear Activities Control regularly issues updated information on the status of the</li> </ul>		

	<p>Japanese nuclear power plant.</p> <ul style="list-style-type: none"> <li>The Foreign Ministry issues travel and security advice for Japan. Person traveling to Japan should follow the advice of Japanese authorities. Contact of Romanian Embassy is recommended.</li> <li>The Romanian Embassy in Japan issues information for Romanian citizens in Japan</li> </ul>		
<b>Serbia</b>	<ul style="list-style-type: none"> <li>Serbian citizens who live and work in Japan have been recommended to leave Japan. Serbian citizens currently residing in Japan are recommended to respect the precautions that are in force, and to contact the Embassy of Serbia in Tokyo for more information and instructions to ensure their safety.</li> <li>The Ministry of Foreign Affairs has recommended that the citizens of Serbia should not travel to Japan</li> </ul>	As of 15 March	
<b>Slovakia</b>	<p>It has been recommended to leave the affected region, if possible go to the south of Japan or to return home. For those who will stay in potentially affected regions it was recommended to follow the recommendations of local crisis management and to obtain or to buy Kalium-iodine tablets, but to use them only in the case that it is recommended by the crisis management.</p> <p>Published on the web page of the Public Health Authority (PHA) and in the mass-media.</p>	17 March	Slovak citizens living or visiting Japan, probably few tents.
<b>Slovenia</b>	<p>Slovenian citizens living in Japan were recommended to follow the instructions issued by local authorities. They were warned that in case of bad weather condition the radioactive contamination might spread to central part of Honshu island including Tokyo region. People were recommended to take this information in to account when planning their stay in Japan.</p> <p>All travels to Japan were dissuaded. If a trip can not be postponed extra caution and follow up from other sources of information was recommended.</p>	15 March	Slovenian citizens in Japan and Slovenian citizens planning to visit Japan.
<b>Spain</b>	<p>The Spanish Government has decided to repatriate all the Spanish citizens that wish to return to Spain by plane. Aircrafts are available for flights from Japan to Spain. Passengers from these flights will be monitored. The control of foodstuffs from Japan is being conducted by the Ministry of Health. For those citizens who wish to remain in Japan, the Spanish Embassy has recommended to follow the advice by the Japanese Government.</p>	ECURIE Info msg 18/03/2011 1 - 14:00 UTC	
<b>Sweden</b>	<p>It is recommended that Swedish residents within 80 kilometers of the Fukushima reactors evacuate.</p> <p>Also, it is currently being planned by the Swedish government to offer to all Swedish citizens in Japan transport back to Sweden.</p>	16 March	
	<p>It is recommended that Swedish residents within 80 kilometers of the Fukushima reactors evacuate.</p> <p>Also, it is currently being planned by the Swedish government to offer to all Swedish citizens in Japan transport back to Sweden.</p>	19 March 18:30 UTC time	

	Update via IAEA	<ul style="list-style-type: none"> <li>To follow the recommendations made by the Japanese authorities (12/3)</li> <li>To avoid all travel to Japan (16/3, re-evaluated without change 25/3). The 28/3 was the recommendation revised and stated that only necessary travels to Japan should be conducted.</li> <li>To evacuate, if within a radius of 80 km from the Fukushima power plant (17/3, re-evaluated without change 25/3)</li> <li>If worried about the situation and wanting to be absolutely sure about not being affected by a radioactive release, to contemplate leaving Japan or travel to areas outside of a 250 km radius from the Fukushima nuclear power plant (19/3)</li> <li>If within a radius of 250 km and including the Tokyo region, as a precaution, to take iodine tablets every three days according to the instructions for dose that was sent with the tablets (19/3, re-evaluated without change 23/3 and 25/3). As of the 28/3, the recommendation to take iodine tablet revised and it was stated that intake of iodine tablets was not necessary.</li> <li>In the event of a radioactive release and within a radius of 250 km, including the Tokyo region, to stay indoors with closed windows and ventilation</li> </ul>		
		<ul style="list-style-type: none"> <li>To follow the recommendations made by the Japanese authorities (12/3)</li> <li>To avoid all travel to Japan (16/3, re-evaluated without change 25/3). The 28/3 the recommendation was revised and stated that only necessary travels to Japan should be conducted. On 12/4 the recommendation was revised and stated that from a radiological standpoint that non-necessary travel to the prefectures Miyagi, Yamagata, Fukushima, Niigata, Tochigi, Gunma, Ibaraki and Saitama should be avoided.</li> <li>To evacuate, if within a radius of 80 km from the Fukushima power plant (17/3, re-evaluated without change 25/3, 4/4 and 12/4 and )</li> <li>If worried about the situation and wanting to be absolutely sure about not being affected by a radioactive release, to contemplate leaving Japan or travel to areas outside of a 250 km radius from the Fukushima nuclear power plant (19/3)</li> <li>If within a radius of 250 km and including the Tokyo region, as a precaution, to take iodine tablets every three days according to the instructions for dose that was sent with the tablets (19/3, re-evaluated without change 23/3 and 25/3). As of the 28/3, the recommendation to take iodine tablet revised and it was stated that intake of iodine tablets was not necessary.</li> <li>In the event of a radioactive release and within a radius of 250 km, including the Tokyo region, to stay indoors with closed windows and ventilation</li> </ul>	Updated on 13 April	
	Switzerland	<p>The Foreign Ministry advises not to travel to the north-east of Japan and into the region of Tokyo and Yokohama.</p> <p>The Foreign Ministry advises not to travel to Japan, neither for touristic nor other not urgent reasons.</p> <p>For Swiss citizens staying in Japan: The Foreign Ministry recommends all Swiss citizens staying in the affected area in the</p>	Immediately	Swiss citizens living or staying in Japan

		<p>north-east of Japan and within the wider area of Tokyo/Yokohama, should temporary leave the region if safely possible, if their presence is not necessary.</p> <p>Swiss citizens are urged to follow the instructions of the local authorities.</p>		Swiss citizens intending to travel to Japan
		<p>The Foreign Ministry advises not to travel to the north-east of Japan.</p> <p>It advises not to travel to the region of Tokyo/Yokohama neither for touristic nor other not urgent reasons.</p> <p>For Swiss citizens staying in Japan: The Foreign Ministry recommends all Swiss citizens staying in the affected area in the north-east of Japan should temporary leave the region if their presence is not necessary and if it is safely feasible.</p> <p>Swiss citizens are urged to follow the instructions of the local authorities.</p>	Updated by MFA 4 April 2011	Swiss citizens living or staying in or intending to travel to Japan
	<b>Turkey</b>	<p>After the earthquake and tsunami incidents, Turkish citizens were advised to follow and observe instructions given by the Japanese authorities.</p> <p>Moreover, travel warnings were issued by the Turkish Ministry of Foreign Affairs advising Turkish citizens to avoid unnecessary travel to Japan. The Turkish Embassy in Tokyo also issued warnings advising in particular children and pregnant women living in Japan, as a precautionary measure, to consider leaving the region of Kanto and to relocate to the southern or south-western parts of the country.</p> <p>Additional charter flights were arranged by Turkish Airlines.</p>	16 March 2011 Ministry of Foreign Affairs (MFA)	Travelers, Turkish citizens in Japan
	<b>United Kingdom</b>	<p>Advising UK nationals within 80km of the Fukushima Daiichi Nuclear Power Plant to evacuate the area</p>		
	<b>United States</b>	<p>US citizens living within 50 miles (80 km) of the Fukushima Daiichi Nuclear Power Plant have been advised to evacuate the area or take shelter indoors if evacuation is not practical</p> <p>State Department has urged US citizens to defer non-essential travel to Japan at this time</p> <p>Voluntary departure of eligible family members of USG personnel in Japan has been authorized</p> <p>State Department message: <a href="http://travel.state.gov/travel/cis_pa_tw/tw_5398.html">http://travel.state.gov/travel/cis_pa_tw/tw_5398.html</a></p>		
	<b>EUROPOL</b>	<p>General recommendation on not travelling to Japan for business reasons unless strictly necessary with the advice to verify the public health situation in the destination before planning any such business trips.</p> <p>The potential impact on Europol's activities of this recommendation is minimal due to the fact that Europol is not very actively engaged in business relations with the Japanese competent authorities, with whom Europol does not yet have a cooperation agreement to allow for the exchange of information.</p>	March 2011	Europol staff on business trip



**U.S. Embassy - Tokyo, Japan**

**March 16, 2011**

Statement by U.S. Ambassador John V. Roos

The United States Nuclear Regulatory Commission (NRC), the Department of Energy and other technical experts in the U.S. Government have reviewed the scientific and technical information they have collected from assets in country, as well as what the Government of Japan has disseminated, in response to the deteriorating situation at the Fukushima Nuclear Power Plant. Consistent with the NRC guidelines that apply to such a situation in the United States, we are recommending, as a precaution, that American citizens who live within 50 miles (80 kilometers) of the Fukushima Nuclear Power Plant evacuate the area or to take shelter indoors if safe evacuation is not practical.

We want to underscore that there are numerous factors in the aftermath of the earthquake and Tsunami, including weather, wind direction and speed, and the

nature of the reactor problem that affect the risk of radioactive contamination within this 50 mile (80 km) radius or the possibility of lower-level radioactive materials reaching greater distances.

The U.S. Embassy will continue to update American citizens as the situation develops. U.S. citizens in need of emergency assistance should send an e-mail to [JapanEmergencyUSC@state.gov](mailto:JapanEmergencyUSC@state.gov) with detailed information about their location and contact information, and monitor the U.S. Department of State website at [travel.state.gov](http://travel.state.gov).

The United States is continuing to do everything in its power to help Japan and American citizens who were there at the time of these tragic events. To support our citizens there, the Embassy is working around the clock, we have our consular services available 24 hours a day to determine the whereabouts and well-being of all U.S. citizens in Japan and we have offered our Japanese friends includes disaster response experts, search and rescue teams, technical advisers with nuclear expertise and logistical support from the United States military.

	Country	Decision taken or Recommendation made	Applicable Date	Applicable Population
<b>Q2:</b> What has your government recommended with respect to the monitoring of passengers returning, by air, from Japan?	Austria	No recommendations by the Austrian government. Austrian Airlines organized contamination measurements for flights from Tokio to Vienna	Since 16.03.2011	travelers
	Update 4 April	Concerning the monitoring of passengers returning from Japan, no recommendations were given by the Austrian government. Austrian Airlines organized contamination measurements for flights from Tokio to Vienna.	16.03.	
	Belgium	Possibility for screening of the thyroid gland in Belgium on a voluntary basis for Belgian citizens planning to return, returning or returned from Japan If proven necessary from the voluntary screening, a total body count can be proceeded to.	18 March	
	Canada	There is no official statement on this issue at this time. Passengers arriving from Japan are not being screened	23 March	Air passengers arriving from Japan
	Czech Republic	No direct commercial flights from Japan to the Czech Republic. Approx. 100 Czech citizens have been transferred from Japan back by air force (after arrival all passengers and airplane were monitored and no contamination was estimated) Currently - all who wish could ask for whole body measurement after arrival from Japan	17 March	
	Denmark	At present it is not recommended that passengers arriving from Japan are monitored. Depending on the development of the situation, this recommendation may be changed.	24 March	Passengers arriving from Japan
	Finland	see point Q5 below	25 March	
	France	<ul style="list-style-type: none"> <li>• Notice issued from the French Foreign Ministry (<a href="http://www.diplomatie.gouv.fr">http://www.diplomatie.gouv.fr</a>) to passengers coming from Japan               <ul style="list-style-type: none"> <li>○ Possibility under voluntary basis of medical and radiological control</li> <li>○ Contact point to know more about radiation exposure from nuclear facilities</li> <li>○ Contact point to know about relatives in Japan</li> <li>○ A questionnaire is available for those French people who were in Japanese territory since 11 March so that they can be contacted if needed. Questionnaire available at <a href="http://www.invs.sante.fr">www.invs.sante.fr</a></li> </ul> </li> <li>• FAQ Document from the Health Ministry on the situation in Japan and associated health risks as well as nuclear accidents and health risks</li> </ul>	Updated on 30 March	



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	<p>People arriving from an area located up to 60 km from the Fukushima NPP are proposed to have a whole body counting at the IRSN facilities to check the absence/presence of internal contamination.</p> <p>People arriving from Tokyo are not proposed to have this in-vivo measurement.</p> <p>The situation might evolve; it is still under discussion within the French government.</p>	21 March	
<b>Germany</b>	<p>The Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) has issued an ordinance in order to determine contamination limits for monitoring airplanes arriving from Japan (1kBq/cm<sup>2</sup>). Upon decision of the competent authorities at airports with direct flight connections to Japan (Munich, Frankfurt etc.), incoming aircrafts are checked for external contamination. The BMU has advised German authorities to apply contamination limits for skin, clothes and cargo (4 Bq/cm<sup>2</sup>) in order to monitor passengers and goods arriving from Japan. Goods from Japan are monitored randomly by the German customs.</p> <p>Passengers from Japan are offered monitoring, if they were inside the contaminated area. In case of a contamination they will be offered examination for incorporation. So far, only a limited number of persons have been checked and results did not reveal health risks.</p>		
<b>Greece</b>	<p>There are no direct flights from Japan to Greece.</p> <p>The option of monitoring upon arrival from Japan is provided on a voluntary basis in two airports (Athens and Thessaloniki) and GAEC laboratories.</p> <p>Thyroid uptake and total body counting are performed in GAEC, if proven necessary from the screening.</p>	Since 18 March	Passengers coming from Japan.
<b>Hungary</b>	<p>No direct flights from Japan to Budapest, however, consular information is continuously provided on commercial flight options and flights operated by other Member States.</p> <p>According to our experience, citizens returning from Japan do not contact MFA or the HU Embassy in Tokyo anymore. Nevertheless, they can obtain updated information on necessary health safety measures on several Hungarian official websites.</p> <p>No monitoring station has been installed at the airports in Hungary.</p>		
<b>Islamic Republic of Iran</b>	<p>Passengers, baggage and cargo of Iran-air flight from Tokyo are monitored.</p>	25 March	Passengers returning from Japan
	<p>Passengers, baggage and cargo of direct- flights from Tokyo to Tehran are monitored.</p>	24 March	Passengers returning from Japan
<b>Ireland</b>	<p>No direct flights from Ireland to Japan.</p>		
<b>Italy</b>	<p>No specific recommendations so far, according to my knowledge</p>		
<b>Latvia</b>	<p>No direct flights from Latvia to Japan.</p> <p>The option of monitoring for citizens who returned from Japan through any airport in European Union is provided on a voluntary basis.</p>	17 March	Travelers
<b>Lithuania</b>	<p>Radiation Protection Centre at the Ministry of Health of the Republic of Lithuania recommended: for State Border Guard Service at the Ministry of Interior of the Republic of Lithuania to strengthen radiation control</p>	Since 18 Mar 2011	For Lithuanian people who

	<p>for incoming individuals and shipments from Japan.</p> <p>There is a possibility to check contamination with whole body counting and dose rate measurements in Radiation Protection Centre for people who came back from Japan.</p>	Since 21 Mar 2011	come back from Japan
<b>Luxembourg</b>	No recommendation		
<b>The Netherlands</b>	<p>The Netherlands took several (soft) countermeasures.</p> <ul style="list-style-type: none"> <li>- Assessment of our National Nuclear Emergency and Response Team ("EPAn")</li> <li>- Travel advices,</li> <li>- Japanese incoming airplane controls (passengers, cargo and workers) and "flyers" for passengers,</li> <li>- Foodstuff (Japanese) control in the Netherlands</li> <li>- Working on protocol's for the handling of Japanese shipping, incl. cargo/containers etc.</li> <li>- We also provided our Embassy in Tokio with some stockpile of Iodine tablets for Embassy and NL persons in Japan.</li> </ul>	25 March	
<b>Norway</b>	<p>The situation in most locations in Japan is that at present it is not necessary to measure people coming back to Norway.</p> <p>If however someone is worried that they may have been exposed to radiation they may contact NRPA for information. NRPA can offer measurements for persons who wish so.</p> <p>For norwegians who have been inside the 30 km-zone to Fukushima Daiichi after 11. march, and still is in Japan, may contact the embassy in Tokyo. If radioactive contamination are detected on persons they are recommended to change clothes and shower before returning to Norway. Those who have been inside the 30 km zone and already have returned to Norway may contact NRPA in office hours or send e-mail for further information.</p> <p>NRPA keep the offer about measurement open for persons who have been in Japan and wish to be measured.</p>	<p>Since 16.03.2011:</p> <p>Updated 25.03.2011:</p>	
<b>Poland</b>	<p>Please note that airports in Poland are equipped in radiometric devices. Monitoring of passengers is carried out on routine basis.</p> <p>There is no need to recommend additional monitoring of passengers returning by air from Japan or intake iodine potassium pills on returning to Poland (<a href="http://www.paa.gov.pl">www.paa.gov.pl</a>) (in Polish)</p>	24 March	
<b>Portugal</b>	No recommendations issued by the Authorities, but available for clarification of the radiological situation, upon request, for people returning from Japan	16/3/2011	
<b>Republic of Korea</b>	The contamination monitoring has been performed at four airports and four harbors for passengers from Japan.	March 17, 2011	People entering Korea from Japan: 71,967 persons as of March 27, 2011

<b>Romania</b>	Romania has no direct aircrafts to and from Japan. Radiological surveillance of the airplanes is not necessary. One single special travel was established from Japan on March 22nd. No radiological surveillance needed.		
<b>Serbia</b>	There are no direct flights from Japan to Serbia. Contamination monitoring and medical examination on voluntary basis is offered to passengers coming from Japan. If there is a need, customs officers informs the regulatory agency (SRPNA) who have organized a dosimetry unit and medical unit for internal contamination examination ready 24 hours a day.	18 March	Persons arriving from Japan
<b>Slovakia</b>	Information on the web page of the Public Health Authority (PHA) and in the mass-media: Recommendation to visit the PHA for screening measurements of the body surface contamination, internal contamination and for control of their articles and foodstuffs originated from Japan.	Published on 17 March 2011 for person coming from Japan since 14 March 2011	For those who are coming from Japan and who stayed or visited the affected region. Probably few tents.
<b>Slovenia</b>	No monitoring of passengers was introduced.		
<b>Spain</b>	There are not direct flights from Japan to Spain. Passengers from Japan have to make scale in Europea airports as Paris, London, Amsterdam.. As no provisions to check all flights from EU were considered , a general protocol was agreed between CSN and Health Ministry. A phone number and an e-mail from Health Ministry are available for all people coming from Japan to ask for advice. If any circonstance that warrants the adoption of additional measures are identified, the Ministry would get in touch with that person and carry out additional checks or other measures.  A questionnaire has been developed to determine wether actions (whole body counting..) need to be taken for each person contacting health Ministry. Selection criteria include location in Japan and information provided or meassures reccomended by Japanese authorities at those locations.  A direct flight has been sent to Bancock by Spanish Government to return people from Japan. Radiological checks using portable detectors have been performed for all passengers. Baggage and plane (cabin and cargo) have also been checked. All passengers, Baggage and plane resulted free from radioactive contamination.  For all people asking advice from Health Ministry after return form Japan some Radiation Protection recommendations are provided in written. Those include washing up of all clothes, take a long shower, throw away any food, wash or rub off any good brought from Japan.	24 March	
<b>Sweden</b>	Passengers from Japan who have been in the area within 80 kilometers from the Fukushima plant can, if requested, be offered monitoring through their ordinary caregivers.	2011-03-17	
	On a voluntary basis and if time has been spent within a radius of 80 km, passengers are referred to the Swedish health care services for advice and measurements (17/3)	Update via IAEA	
	-On a voluntary basis and if time has been spent within a radius of 80 km, passengers are referred to the	Updated on 13 April	



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		Swedish health care services for advice and measurements (17/3)		
	<b>Switzerland</b>	Reception centre for returning people who were staying in the evacuation zones Screening of crew members in Tokyo and Hong Kong Screening of cargo in Tokyo and in Zurich	Since 16.3. Updated 23 March	People arriving in Switzerland who were staying in the evacuation zones
	Updated on 13 April	Reception centre for returning people who were staying in the evacuation zones	Since 16.3.	People arriving in Switzerland who were staying in the evacuation zones
	<b>Portugal</b>	No monitoring is in place. However, representatives from the General Directorate of Health, ITN, and the emergency-related agencies provide at the Lisbon airport information upon arrival for passengers arriving from Japan  Clarification of the radiological situation, upon request, for people returning from Japan	Week 14-18 March  23 March	Passengers returning from Japan
	<b>Turkey</b>	Passengers are monitored voluntarily.	13 March 2011 TAEK	Air passengers arriving from Japan
	<b>United Kingdom</b>	No official statement to date Contingency plans for monitoring people at airports are being developed	March 19	
	<b>United States</b>	Radiation detection devices are routinely used by Customs and Border Protection to screen passengers Public messages and health alerts for travelers have been developed.	March 21	



	Country	Decision taken or Recommendation made	Applicable Date	Applicable Population
<b>Q3:</b> What has your government recommended with respect to the importing of food or goods from Japan?	Austria	Monitoring of food- and feedstuff from Japan based on EC recommendation.	Since 15.03.2011	----
	Update 4 April	Based on EC recommendation monitoring of food- and feedstuff from Japan has been started. Since 26. March 2011 this monitoring is based on EC regulation No. 297/2011.	15.03. 26.03.	
	Belgium	<p>The following actions are coordinated by the European Commission and have been decided upon by the 27 Member States on 24 March 2011. They are applicable to all food destined for human and animal consumption.</p> <ul style="list-style-type: none"> <li>• Products originating from 12 distinct Japanese prefectures, including the 4 prefectures currently most hit by the radiological contamination, will have to be tested by the Japanese authorities prior to dispatch. On dispatch, the products will be accompanied by a declaration by the Japanese competent authorities demonstrating that the products do not show levels above what is authorized within the EU.</li> <li>• Products originating from the 35 remaining prefectures will have to be accompanied by a declaration of origin.</li> <li>• All import of Japanese products into the EU will have to be notified at least 2 days prior to arrival by the importer to the competent authorities of the port of entry into the EU.</li> <li>• On arrival in the EU, products will be tested on an at random base by the competent authority.</li> <li>• Products that are not compliant with EU legislation and EU health requirements will be destroyed or sent back.</li> </ul>	Started on 24/03/11	
	Canada	<p>Enhanced import controls on milk products, fruits, and vegetables from areas of Japan affected by the ongoing nuclear crisis (Japanese prefectures of Fukushima, Gunma, Ibaraki, and Tochigi) are being implemented.</p> <p>These products will not be allowed entry into Canada without acceptable documentation verifying their safety.</p> <p>Measures will be adjusted, as warranted</p>	25 March	Canadians in Canada
	Czech Republic	Monitoring of food and foodstuff imported from Japan is based on EC recommendation, and performed by the Czech Agriculture and Food Inspection Authority and State Veterinary Administration. There is only a small range of the food/foodstuff imported from Japan. <a href="http://www.szpi.gov.cz/en">http://www.szpi.gov.cz/en</a>	17.03.2011	
	Cyprus	<ul style="list-style-type: none"> <li>• All Imports from Japan shall comply with the relevant national legislation and EU Regulations concerning radioactivity levels.</li> <li>• A Ministerial Order has been issued by the Minister of Health which prohibits the import of foodstuffs and feedingstuffs produced in Japan after 11 March 2011 unless these products are accompanied by a</li> </ul>		

	<p>certificate, signed by the Japanese Competent Authorities, showing compliance with the EURATOM Regulation 3954/87/EURATOM and its amendmends.</p> <ul style="list-style-type: none"> <li>• All importers form Japan have been informed about the situation and asked to ensure that products and goods imported from Japan are not contaminated.</li> <li>• The Radiation Inspection and Control Service of the Department of Labour Inspection, Min of Labour and Social Insurance, which has the responsibility for radiation protection and nuclear safety in Cyprus, in collaboration with all other Authorities involved , will also carry out checks for radioactivity levels at the points of entry.</li> </ul>		
<b>Denmark</b>	<p>There are not yet any restrictions on food from Japan to Denmark Denmark is ready to enforce restrictions if it will be necessary. No food has been imported to Denmark since the accident at the nuclear power plant. Food in Denmark imported from Japan is safe to eat, as it is imported before the earthquake and the tsunami and before the accident at the nuclear power plant.</p>	Last update 24 march	Danish citizens living in Denmark
<b>Finland</b>	<p>Finland follows the advice given by the European Commission; EC has advised EU governments to check levels of radioactivity in food and goods imported from Japan.  Authorities have advised the companies how to measure goods and what are the further activities, if needed.</p>	16 March, 2011 (EC)	People living in Finland.
	<p>Finland follows the advice given by the European Commission; EC has advised EU governments to check levels of radioactivity in food and goods imported from Japan.  Radiation safety authority has advised the companies and customs authority how to measure containers and goods and what are the further activities, if needed.  The Customs Authority has prepared their actions with internal advice on 8 April 2011.</p>	25 March, 2011 (EC) updated 11 April, 2011  Advise to customs and companies 22 March, 2011; Advise to customs 29 March, 2011 and updated 8 April 2011	People living in Finland.
<b>France</b>	<p>This point is still under discussion in the French government</p>	21 March	
	<p>Commission implementing regulation (EU) No 297/2011 in force since 26 March.  French authorities have decided to maintain a control rate of 100 % on all foodstuffs of animal originally produced after March 11 and fresh products (salads, vegetables, fruits, etc.) from Japan.</p>	30 March	

<p><b>Germany</b></p>	<p>The Federal Ministry for Food, Agriculture and Consumer Protection forwarded the recommendation of DG Sanco to analyze radioactivity in food / feed from Japan to the competent authorities and informed the customs to inform the competent authorities about the arrival of those imports referred to in the Commission's recommendation. According to regulation (EU) No. 297/2011 of 25 March 2011 currently no contaminated foodstuff or feeding stuff imported from Japan. The Federal Ministry for Food, Agriculture and Consumer Protection follows the situation, an early warning system is implemented (information available at <a href="http://www.bmelv.de">www.bmelv.de</a>). German vessels are requested to avoid the area of the nuclear accident of about 50 nautical miles (about 100 kilometers). The German Office for Radiation Protection (BfS) operates the Integrated Measurement and Information System (IMIS) for the monitoring of the radioactivity in the environment. Assessment of the contamination of the environment and the radiation exposure of man by measurements and calculations (available at <a href="http://www.bfs.de">www.bfs.de</a>).</p>		
<p><b>Greece</b></p>	<p>Following the relevant EC Recommendation, radioactivity measurements are organized for food and feeding stuff imported from Japan.</p>	<p>Since 16 March</p>	<p>Food and feeding stuff imported from Japan.</p>
	<p>Following the relevant EC recommendation, radioactivity measurements are performed for food and feeding stuff imported from Japan.</p>	<p>Update 30 March</p>	
<p><b>Hungary</b></p>	<p>No decision is taken yet, waiting for decisions at the European Union level.</p> <p>All consignments of food from Japan dispatched after March 11, 2011 are to be sampled and radioanalytically inspected at the Border Inspection Points and in the course of the domestic official controls in order to collect information on the radiological status of the imported foodstuffs.</p> <p>At the BIPs we are currently sampling fishery products (food and feed) originated from Asia and the Pacific area and performing radioanalytical inspection on them.</p>	<p>23 March</p>	
<p><b>Islamic Republic of Iran</b></p>	<p>Foodstuffs imported from Japan are subject to sampling and control at the borders.</p>		
	<p>On dispatch, the foodstuffs will be accompanied by a declaration by the Japanese competent authorities demonstrating that the products do not show levels above what is authorized within the I.R.Iran. All import of Japanese foodstuffs into the I.R.Iran will have to be notified at least 72 hours prior to arrival by the importer to the Iranian Nuclear Regulatory Authority.</p> <p>On arrival in I.R.Iran, foodstuffs will be subject to the random base examination for radioactivity measurement by the Iranian Nuclear Regulatory Authority.</p> <p>Foodstuffs that are not compliant with I.R.Iran Regulations and I.R.Iran health requirements will be destroyed or sent back.</p> <p>These foodstuffs will not be allowed entry into I.R.Iran without acceptable documentation verifying their</p>	<p>16 April</p>	



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	<p>safety.</p> <p>There are not any restrictions on products, other than foodstuffs, imported from Japan to I.R.Iran</p>		
Ireland	<p>Considering situation in light of EC (DG SANCO) recommendation to to the effect that Member States should analyse food and feed from Japan.</p> <p>Food Safety Authority of Ireland (FSAI) checking with Customs &amp; Excise re direct imports to Ireland and liaising with FSA (UK). FSAI/DAFF/RPII to discuss further in the next few days. (DAFF = Dept of Agriculture, Fisheries and Food; RPII = Radiological Protection Institute of Ireland)</p>		
	<p>Noting that Japan is only authorised to export four products of animal origin to the EU and no establishments in the Fukushima region are authorised to export products to the EU and that Ireland has very few direct imports from Japan. FSAI have stated that do not believe that monitoring for radioactivity in imports is warranted at this time. Nevertheless, FSAI is working with other agencies (including RPII and Customs &amp; Excise) to identify any products or ingredients that could be involved, so that if necessary, targeted monitoring would be introduced.</p> <p>Will implement European Commission regulation once adopted (expected 25 March) - proposed to harmonise monitoring and testing of food imports from Japan across EU. The proposal is likely to require a pre-export check to be carried out by Japanese authorities, combined with random controls at the points of import within the EU. Further details will placed on FSAI website tomorrow (24 March). (FSAI = Food Safety Authority of Ireland; RPII = Radiological Protection Institute of Ireland)</p>	Updated on 23 March	
	<p>Ireland has very few direct imports from Japan. As in other EU Member States, Ireland will be implementing the new EC regulation. The new EC regulation will apply to all feedstuffs and foodstuffs originating in or consigned from Japan, with the exclusion of products which have been harvested and/or processed before 11 March 2011.</p> <p>A range of measures will apply to all feed and food originating in or consigned from 12 localities of Japan, including the four most affected by the accident. All products from these localities will have to be tested before leaving Japan and will be subject to random testing in the EU. Feed and food products from the remaining 35 localities will have to be accompanied by a declaration stating the locality of origin and will be randomly tested upon arrival in the EU.</p> <p>Each consignment of food or feed from Japan has to be accompanied by a declaration – to be provided by the Japanese authorities – attesting that the product does not contain levels of radionuclides that exceed the EU's maximum permitted levels. Importers into Ireland are required to notify the FSAI or the Department of Agriculture, Food and the Marine two days before the arrival of each consignment of food and feed from Japan. Feed and food products that were harvested or processed before 11 March 2011 are not affected by the provisions of this regulation. Nevertheless, these products from all of Japan's territory would have to be accompanied by a declaration stating clearly that they were harvested/ processed before 11 March 2011.</p>	Updated on 25 March	

	<p>RPIL is the national food testing laboratory for radioactivity. Data will be shared with ECURIE and the EU's Rapid Alert System for Food and Feed.</p> <p>See <a href="http://www.fsai.ie/news_centre/press_releases/japancontrols25032011.html">http://www.fsai.ie/news_centre/press_releases/japancontrols25032011.html</a> for further information.</p> <p>(FSAI = Food Safety Authority of Ireland; RPIL = Radiological Protection Institute of Ireland)</p>		
<b>Italy</b>	<p>Italian Health Minister has ordered the ban on imports of food from Japan (fish and worked vegetables) dated after March 11, 2011</p>	<p>March 16, 2011</p>	<p>Italian</p>
<b>Latvia</b>	<p>Food and Veterinary Service (FVS) Border Control Department (BCD) is responsible for food and feed import control from third countries.</p> <p>Following the accident at the Fukushima nuclear power station on 11 March 2011, FVS receive NEWS notification from EC Rapid Alert System for food and feed (RASFF), where DG SANCO recommends to analyse food and feed (mainly fishery products) from Japan for radioactivity, imported from 15 March 2011.</p> <p>FVS inform business operators and consumer about increased import control for food, feed and water in website: <a href="http://www.pvd.gov.lv/lat/augi_izvzne/aktualitates/pvd_parbaudis_no_japanas_ievas">http://www.pvd.gov.lv/lat/augi_izvzne/aktualitates/pvd_parbaudis_no_japanas_ievas</a></p> <p>FVS perform import control for products from Japan according to Commission Implementing Regulation (EU) No 297/2011 of 25 March 2011 imposing special conditions governing the import of feed and food originating in or consigned from Japan following the accident at the Fukushima nuclear power station.</p> <p>FVS is ready to start implement increased official control measures with respect to sampling for radioactivity for fresh fruits and vegetables, fishery products, molluscs and crustaceans from Pacific Ocean region countries.</p> <p>P.S. From accident at the Fukushima nuclear power station on 11 March 2011 no one imported consignment from Japan.</p>	<p>15.03.2011.</p> <p>18.03.2011.</p> <p>27.03.2011.</p> <p>24.03.2011.</p>	<p>Food or feed business operators and consumers</p>
<b>Lithuania</b>	<p>State Food and Veterinary Service (hereinafter - SFVS) inform that although no foodstuffs and feeds of Japanese origin were imported into Lithuania in 2010 (all foodstuffs of Japanese origin are transported into Lithuania from other EU Member States) on the basis of RASFF notification No. 11-653 of 11 March 2010 on radioactive contamination in Japan, the SFVS has immediately strengthened the control on the foodstuffs of Japanese origin. Seaport Border Inspection Posts (BIP) have been supplied with mobile dosimetric instruments for performance of strengthened radiation control on the fishery products imported from the third countries (notably from the Pacific Ocean). Airport BIPs are equipped with very sensitive dosimetric instruments. Inspectors of BIPs are instructed to take samples from other foodstuffs and deliver them to the National Food and Veterinary Risk Assessment Institute (NFVRAI) for radiological testing. Furthermore, at all the border posts radiation control is performed by the officials of the State Border Guard Service. The SFVS will select</p>	<p>Since 5 Apr 2011</p>	<p>For Lithuanian people who live in Lithuania</p>

	<p>monitoring samples from animal and non-animal products of Japanese origin on the market and deliver them to NFVRAI for radiological testing. The radiological testing capacity of NFVRAI is 500 samples per day.</p> <p>The SFVS is in close cooperation with the Centre for Radiological Protection, the State Border Guard Service, the Customs Department and the Ministry of Health.</p> <p>The SFVS provides regular information to the public on all the strengthened control measures with respect to the foodstuffs of Japanese origin and the fishery products from the Pacific and on the findings thereof.</p> <p>In its activities the State Food and Veterinary Service Commission is guided by <i>Implementing Regulation (EU) No 297/2011 of 25 March 2011 imposing special conditions governing the import of feed and food originating in or consigned from Japan following the accident at the Fukushima nuclear power station.</i></p>		
<b>Luxembourg</b>	No direct importations	17/03/2011	
<b>Norway</b>	<p>Based on the recommendations from the EU-commission to perform measurements of radioactivity in foodstuff and feeds imported from Japan the Norwegian Food Safety Authority has chosen to follow these recommendations. It is underlined that it is the responsibility of the importer to secure that goods imported directly to Norway from Japan is safe with regard to health and that radioactivity levels are lower than limit values.</p> <p>Other goods, ships, airplanes etc.</p> <p>It is not considered necessary to do measurement on other goods, ships airplanes etc, and coming to Norway from Japan due to health, environmental or safety reasons etc. Actors who still wants further advice concerning possible contamination can contact NRPA.</p>	Since 28.03.2011	
<b>Poland</b>	<p>No special recommendations or measures so far.</p> <p>Routine monitoring of foodstuffs and feedingstuff is based on EC recommendation.</p>	24 March	
<b>Republic of Korea</b>	<p>(1) The radioactivity measurement has been implemented at every port of imported goods from Japan such as agricultural products, forest products, processed food, food additives and dietary supplements.</p> <p>(2) The importing of goods from Japan will be potentially suspended for the items specified as the suspension of shipment until the fear for the contamination of food with radioactive materials settle down.</p> <p>In the future, if the imported items from Japan exceed the guidance level of radioactivity concentrations specified below or the items newly specified by Japan contaminated, the suspension of shipment will be immediately taken into affect and included in the list of object of interruption of import.</p> <p>Guidance level: <sup>131</sup>I : milk and dairy : 150 Bq/kg, others: 300 Bq/kg</p> <p><sup>134</sup>Cs + <sup>137</sup>Cs : all food : 370 Bq/kg</p>	<p>1) March 19</p> <p>(2) From March 25</p>	
<b>Serbia</b>	<p>Control of radioactivity in food, water and feedingstuff importing from Japan is introduced.</p> <p>For other goods imported from Japan additional radiological controls are not required.</p>	24 March	
<b>Slovakia</b>	It is recommended to control the foodstuffs imported from Japan by competent national authorities as required by EC.	Published on the web page of the Public	Citizens of Slovakia.



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			Health Authority (PHA) and in the mass-media on 17 March 2011.	
<b>Slovenia</b>	Additional control of foodstuffs imported from Japan is introduced in agreement with common EU approach.			
<b>Spain</b>	<p>Health authorities have put in place radiological controls for all food imported from Japan both by plane and boat.</p> <p>For other goods, specially toys, clothes and shoes, radiological controls are also anticipated using both gate detectors ( at some seaports) and portable detectors (seaports and airports).</p>		23 March	
<b>Sweden</b>	Additional control of foodstuffs imported from Japan is introduced in agreement with common EU approach.		22/03/2011	
	<ul style="list-style-type: none"> <li>On March 24, the EU Member States jointly decided on the enhanced control of food imports from Japan in response to nuclear accidents. Shipments from the affected regions in Japan will be accompanied by a certificate and analysis report, showing that they are safe from a radiation standpoint. In Sweden, the National Food Administration is to make documentary and identity checks of all consignments of foodstuffs from Japan and also random checks for radioactivity. The regulation, which comes into force March 27, includes shipments that have been produced after March 11 and left Japan after March 28.</li> <li>To confirm that contaminated goods are not introduced in Sweden, the Swedish Customs on March 26 started to carry out random sampling tests on goods from Japan. The Swedish Customs and the Swedish Radiation Safety Authority have agreed on procedures for those controls.</li> </ul>		Update via IAEA	
	<ul style="list-style-type: none"> <li>On March 24, the EU Member States jointly decided on the enhanced control of food imports from Japan in response to nuclear accidents. Shipments from the affected regions in Japan will be accompanied by a certificate and analysis report, showing that they are safe from a radiation standpoint. In Sweden, the National Food Administration is to make documentary and identity checks of all consignments of foodstuffs from Japan and also random checks for radioactivity. The regulation, which comes into force March 27, includes shipments that have been produced after March 11 and left Japan after March 28.</li> <li>To confirm that contaminated goods are not introduced in Sweden, the Swedish Customs on March 26 started to carry out random sampling tests on goods from Japan. The Swedish Customs and the Swedish Radiation Safety Authority have agreed on procedures for those controls.</li> </ul>		Updated on 13 April	
<b>Switzerland</b>	<p>Foodstuffs</p> <p><i>Spot Checks of imported goods</i></p>		25.03.11	

		<i>Feeding Stuffs</i> Spot Checks of imported goods	25.03.11	
	<b>Portugal</b>	No decision is taken yet, waiting decisions at the European Union level.  Most likely the recommendation from DG-SANCO (RASFF - to analyse the level of radioactivity in feed and food from plant or animal origin (mainly fishery products) imported from today from Japan) will be adopted soon. Agricultural and veterinary authorities adopted measures to control of foodstuff and feedstuff coming from Japan	Next week ?  23 March	
		Agricultural and veterinary authorities adopted measures to control of foodstuff and feedstuff coming from Japan. The analysis will be carried out by the Nuclear and Technological Institute. The Portuguese National Authority for Civil Protection has convened regularly the National Commission for Radiological Emergencies in order to assess the situation and to coordinate the measures taken by the Portuguese authorities.	18 March	
	<b>Turkey</b>	A Circular Order has been issued that: 1. All goods from Japan are required to pass through assigned customs points equipped with radiation control devices and should be subjected to radiation controls. 2. Certificate of conformity of Turkish Atomic Energy Authority in terms of radioactivity content for all agricultural products and foodstuffs originated and/or imported from Japan is required to complete custom procedures.	24 March 2011 (Under secretariat for Foreign Trade)	1. All goods from Japan 2. Foods or feeding staff
	<b>United Kingdom</b>	No additional measures, Criteria being used by Japan are at least as restrictive as EU criteria	19 March	
	<b>United States</b>	Based on current information there is no risk to the US food supply Food & Drug Administration's is flagging all imports of FDA regulated products from Japan and is paying special attention to shipments from companies in the affected area US Custom & Border Patrol routinely use radiation detection equipment to screen food imports, cargo and travellers The Environmental Protection Agency has taken steps to increase the level of nationwide monitoring of mild, precipitation, drinking water, and other potential exposure routes FDA has posted fact sheet on food and medical goods importation from Japan: <a href="http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm247403.htm">http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm247403.htm</a> New restrictions on food arriving in the US coming from Fukushima, Gunma, Ibaraki, and Tochigi in Japan issued by the US Food and Drug Administration <a href="http://www.accessdata.fda.gov/cms_ia/importalert_621.html">http://www.accessdata.fda.gov/cms_ia/importalert_621.html</a>	20 March  11 April 24 March	

	Country	Decision taken or Recommendation made	Applicable Date	Applicable Population
<b>Q4:</b> What are your policies or plans with respect to KI distribution to nationals in Japan?	Austria	Prior to the earthquake the Austrian Embassy already got potassium Iodine tablets as part of the Austrian pre-distribution concept.		
	Belgium	Iodine tablets are put at the disposal of the Belgian community in Japan. Distribution is organised by the Belgian Embassy, giving clear instructions and stressing that the intake only happens at the advice of the Japanese authorities.	16/03/11	Belgian citizens in Japan
	Czech Republic	The Czech embassy in Tokyo was provided by iodine tablets; the intake of the tablets only after the notice of the local japanies authorities and in accordance with their instruction.	17.03.2011	Czech citizens in Japan
	Denmark	<p>As of 20 March Iodine tablets are put at the disposal of the Danish Embassy in Japan. Intake of iodine tablets should only be initiated at the advice of the Japanese authorities. Danish citizens at present residing in Japan may recieve the tablets upon request to the embassy.</p> <p>A special guide on how to administer iodine tablet including special precautions for children, pregnant woman etc. is supplied with the iodine tablets.</p> <p>The National Institute for Radiation Protection is keeping a close watch in the dose rate development especially within the Fukushima and Tokyo area and The Danish Emergency Management Agency are frequently updating the prognosis for a possible widespread radiation using dose rate assimilations in the prognosis model.</p> <p>At present, it is recommended not to take the iodine tablets unless recommended by the local authorities.</p>	Last update 24. March	Danish citizens in Japan
	Finland	The Finnish Embassy in Tokyo has provided iodine tablet to Finns living or visiting in Japan. Part of the iodine tablets have been distributed to Finns in Japan. The intake of the iodine tablets is recommended only on request of the Japanese or the Finnish authorities.		Finns living in or visiting Japan.
	France	<p>KI pills are being provided to French nationals in Japan</p> <p>They are being advised not to take KI and instead to follow the advice of Japanese authorities</p>	March 21	
		<p>Possibility to get iodine tablets at the French embassy (although information is given that Japanese authorities will proceed if needed to distribute iodine tablets to people)</p> <p>Information about the intake of iodine tablets and other recommendations for French citizens in Japan is available at:</p> <p><a href="http://www.diplomatie.gouv.fr/fr/IMG/pdf/Messages_pour_la_communaute_francaise_au_Japon.pdf">http://www.diplomatie.gouv.fr/fr/IMG/pdf/Messages_pour_la_communaute_francaise_au_Japon.pdf</a></p>		
	Germany	The intake of iodine tablets is not necessary in Germany. Strong advice against the preventative intake of iodine tablets. General Information on the iodine blockade in Germany are available at <a href="http://www.joblockade.de">www.joblockade.de</a> (also in English).	March 21	

	Persons travelling to Japan should follow the advice of the Japanese authorities. Contact to the German Embassy in Japan is recommended.		
<b>Greece</b>	Greek citizens and Greek ships crew members have been advised to follow the instructions of local authorities.	Since 16 March	
<b>Hungary</b>	Iodine tablets have been sent to the Embassy, their distribution starts as soon as authorities recommend it.  Any further decisions are to be taken based on constantly received and evaluated new information.	23 march	
<b>Islamic Republic of Iran</b>	Iranian citizens living in or visiting Japan will follow the recommendation made by Japan authorities.		
	KI pills have been provided for Iranian in Japan, but they are advised to follow the instruction of Japanese authorities for using them. Iranian living in or visiting Japan are advised to follow the recommendations of Japanese authorities.	5 April	
<b>Japan</b>	KI has been distributed to the public	March 21	
<b>Latvia</b>	The iodine tablets and two radiation dosimetres are available at the Embassy. Latvian competent authorities have warned against taking the tablets as precautionary measure. They only should be taken according to the instructions of the competent Japanese authorities. This information is also published on the public web-site of the Embassy.	18.03.2011. up to date	
<b>Lithuania</b>	The Ministry of Health of the Republic of Lithuania has sent 400 dose of KI to the Lithuanian embassy in Japan, and recommended for people who are located in 250 km distance from Fukushima Daiichi to prepare onetime dose of KI.	Since 21 Mar 2011	For Lithuanian people who live in Lithuania or who come back from Japan
<b>Norway</b>	Decision taken to make Iodine tablets available for Norwegian citizens in Japan. The tablets are available at the Norwegian embassy in Tokyo. It is underlined that the tablets shall be used only after advice from Japanese or Norwegian authorities. Follow advice from Japanese authorities and follow information in media.  For persons who intend to or must travel to Japan it can be relevant to have iodine tablets for personal use with them in case of worsening of the situation or new releases of radioactivity from the damaged NPP's. The tablets shall only be taken after advice from Japanese or Norwegian authorities. For travel to countries in areas around Japan it is not considered necessary with iodine tablets.	20.03.2011 , updated: 22.03.2011, 14:22	
<b>Portugal</b>	The Directorate General for Health strongly recommends that any intake of Iodine tablets should occur only	16 March	



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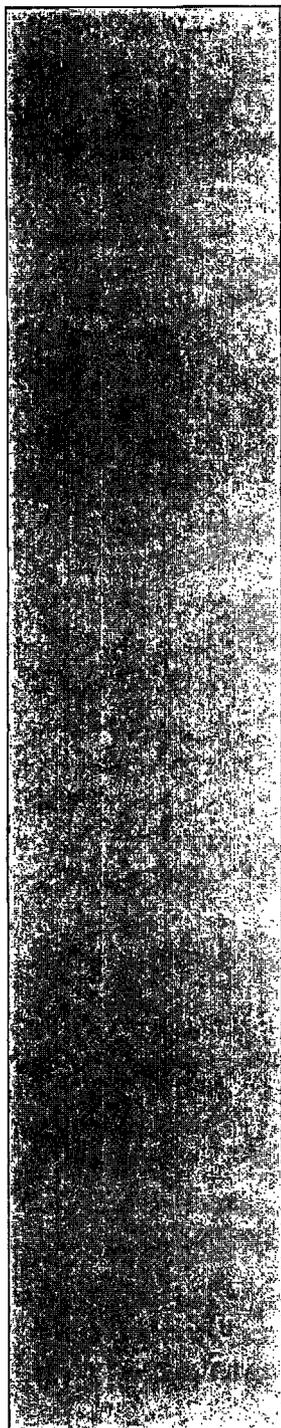
	when and where it is instructed by the Japanese competent authorities (available at <a href="http://www.dgs.pt">www.dgs.pt</a> ).		
<b>Republic of Korea</b>	<p>1) Korean nationals in Japan will follow Japanese government plans with respect to KI distribution.</p> <p>2) Korean embassy hold stokpiles of KI tablets to be distrubuted to the personnels as necessary.</p> <p>3) The Korean Government has dispatched one health physicist to the Korean embassy in Japan to protect Korean nationals in Japan since March 20, 2011.</p>	(3) From March 20, 2011	
<b>Serbia</b>	No KI is distributed to Serbian nationals in Japan. Serbian citizens are recommended to respect the precautions that are in force in affected areas.		
<b>Sweden</b>	KI has been distributed to Swedish nationals in Japan through the Swedish embassy in Tokyo since March 19 (se Q1 on recommendations).		
	KI has been distributed to Swedish nationals in Japan through the Swedish embassy in Tokyo since March 19 (se Q1 on recommendations).	Updated on 13 April	
<b>Turkey</b>	As a precautionary measure, KI (potassium iodide) tablets were sent to Turkish Embassy in Tokyo to be distributed (if and when necessary) to Turkish citizens in case of a release.	16 March 2011 MFA	
<b>United Kingdom</b>	Distributing KI to nationals in Japan with priority for children and pregnant or breast-feeding women Instructed not take KI unless advised to by Japanese authorities or UK government	20 March	
<b>United States</b>	US is making KI available to US government personnel and dependents in Japan as a precautionary measure Instructions are not to consume KI unless advised by US government Statement from State Department: <a href="http://travel.state.gov/travel/cis_pa_tw/tw/tw_5398.html">http://travel.state.gov/travel/cis_pa_tw/tw/tw_5398.html</a>	21 March	



	Country	Decision taken or Recommendation made	Applicable Date	Applicable Population
<p><b>Q5:</b> Have you established any recommendations regarding screening of passengers, baggage and transport arriving from Japan in terms of:</p> <ul style="list-style-type: none"> <li>• Screening of passengers and crew</li> <li>• Screening of baggage and cargo</li> <li>• Screening of cabins (on airplane or on ships)</li> <li>• Screening of outer surfaces (of airplanes or of ships)</li> </ul> <p>If you have established such recommendations, what are they, and what is their technical basis?</p>	Australia	<p>Australia has had advice and updating that advice as time changes since March 15. These were updated 6 hourly until March 23, now the update cycle is 12 hourly.</p> <ul style="list-style-type: none"> <li>• Screening of passengers and crew It is not considered necessary to introduce any radiation screening measures passengers arriving from Japan, at this point in time.</li> <li>• Screening of baggage and cargo It is not considered necessary to introduce any radiation screening measures for mail, sea or air cargo arriving from Japan, at this point in time. (food is different)</li> <li>• Screening of cabins (on airplane or on ships) Not required.</li> <li>• Screening of outer surfaces (of airplanes or of ships) Not required</li> </ul>	23 March	
	Austria	No general recommendations by the government of Austria.		
	Belgium	<p>There are no direct flights between Japan and Belgium. Message to custom officers, the risk of cross contamination by manipulating luggage's or being in contact with air passengers or crew is very limited. There are advise to carefully wash their hands before eating, smoking.</p>	18/03/11	Custom officers
		<p>Ship are recommended to avoid harbours and waters within a radius of 50 nautic miles (about 100 km) around the Fukushima I site. Crews are adised to carefully wash their hands before eating, smoking, to remove their workshoes and suits and have a shower before penetrating into their cabins, mess ... In order to reduce potential contamination on the decks, when reaching the open sea, water (firefighting equipment) should be used to wash surfaces exposed to direct deposit. For sea travel it takes 30 days between there and here and therefore no actions in the next three weeks.</p>	23/03/11	Ship crew  Custom officers
	Czech Republic	<ul style="list-style-type: none"> <li>• Screening of passengers and crew no (but who is willing - may ask for whole body measurement after arrival for Japan, contact available on web site)</li> <li>• Screening of baggage and cargo; no</li> <li>• Screening of cabins (on airplane or on ships): no (there are not direct flights form Japan)</li> <li>• Screening of outer surfaces (of airplanes or of ships): No</li> </ul>	25 March	

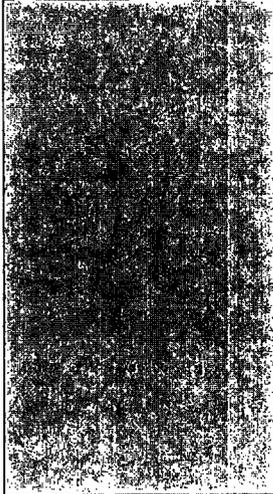
	<b>Denmark</b>	<p>Screening of passengers and crew is at present not recommended</p> <p>Screening of baggage and cargo is at present not recommended.</p> <p>Screening of airplanes is at present not recommended. The National Institute for Radiation Protection has on request from an airplane company screened filters from a plane arriving from Japan.</p> <p>Instructions for vessels operating in the area along the coast of Japan has been issued. No screening has been recommended at present.</p>	Updated on 24 March	<p>Passengers arriving from Japan</p> <p>Planes arriving from Japan</p> <p>Danish vessels in Japan</p>
	<b>Finland</b>	<p>In addition to normal procedure in Finland, special instructions have been given to customs and traffic authorities, Helsinki-Vantaa airport and Finnair regarding screening of passengers, baggage, cargo and airplanes coming from Japan.</p>	18 March	Passengers returning by air from Japan.
		<p>As part of normal surveillance, the Finnish Customs Authorities monitor radiation at borders and other entry points. The Finnish Customs Authorities have prepared, together with STUK (Radiation and Nuclear Authority in Finland), operational instructions for the different customs points for the case where exceptional radiation should be detected.</p>	18 March, 2011	
	<b>France</b>	<p><b>SCREENING OF PASSENGERS RETURNING BY AIR</b></p> <ul style="list-style-type: none"> <li>• No systematic screening for passengers and their baggage</li> <li>• Possibility under a voluntary basis of medical and radiological control</li> </ul> <p><b>SCREENING OF CARGO</b></p> <ul style="list-style-type: none"> <li>• French authorities have asked airlines flying from Japan to France to monitor surface radioactivity in cargo by air. Similar measures are being considered for maritime freight. Complementary controls on the content of these cargos remains the responsibility of the addressees of the packages.</li> <li>• A protocol for contamination control has been established for air transport. It only applies to cargos containing goods other than foodstuff.</li> </ul>	30 March	
	<b>Germany</b>	<p>As of today there is a legal requirement in Germany to screen outer surfaces of airplanes with an accepted level of 1 kBq/cm<sup>2</sup> as a constraint which corresponds to a dose constraint of 5 Microsievert/h in 1 m distance. This regulation is valid for 2 months. It has been implemented on a voluntary basis last week and no levels above the constraint have ever been observed. But the negative results observed are important for reassurance.</p> <p>I am aware of one case study last week in a plane coming from Tokio where the cabin and the personnel have been screened - no contamination has been observed. In the air filter of one plane traces of I-131 have been observed.</p>	23 March	

	<p>Our Government offers on a voluntary basis personal screening for people returning from the area near the reactor site. We have detected traces of the full spectrum of radionuclides as external contamination (sweater, pullover, etc.) and as internal contamination (whole body, iodines in the thyroid). The doses derived from the measured concentrations vary between 20 nSv and 100 microSv.</p>		
	<p><b>Greece</b></p> <p><u>Airplanes:</u></p> <ul style="list-style-type: none"> <li>• no direct flights from Japan to Greece.</li> <li>• the option of monitoring upon arrival from Japan is provided on a voluntary basis in two airports (Athens and Thessaloniki) and GAEC laboratories.</li> <li>• thyroid uptake and total body counting are performed in GAEC, if proven necessary from the screening.</li> <li>• Passengers baggage are also screened</li> </ul> <p><u>Ships:</u></p> <ul style="list-style-type: none"> <li>• For ships coming from the pacific Ocean (in general) no provisions are considered necessary</li> <li>• For ships coming from the affected area, the possibility of performing measurements for surface contamination mainly on the containers carried by open-top ships is under consideration.</li> <li>• Total body and thyroid uptake measurements will be performed on a voluntary basis to the crew members returning from the affected area.</li> </ul>	<p>Since 18 March</p> <p>To be applied upon ships arrival</p>	<p>Passengers coming from Japan.</p> <p>Ships and crew members coming from Japan affected area.</p>
	<p><b>Islamic Republic of Iran</b></p> <ul style="list-style-type: none"> <li>• Screening of passengers and crew - yes</li> <li>• Screening of baggage and cargo - Yes</li> <li>• Screening of airplane cabins - Yes</li> <li>• Screening of outer surfaces (of airplanes or of ships) - No</li> </ul>	<p>25 March</p>	<p>Passengers ,baggages and Cargo arriving from Japan</p>
	<ul style="list-style-type: none"> <li>• Screening of passengers and crew Yes, All passengers and crew, upon their arrival from Japan, are screened at Imam-Khomeini airport.</li> <li>• Screening of baggage and cargo Yes, Radiation monitoring of baggage and cargo is performed.</li> <li>• Screening of airplane cabins Yes, Radiation monitoring of airplane cabins is preformed.</li> <li>• Screening of outer surfaces (of airplanes or of ships) No, It is not considered necessary to perform radiation screening of outer surfaces.</li> </ul>	<p>25 March</p>	<p>Passengers ,baggages and Cargo arriving from Japan</p>
	<p><b>Latvia</b></p> <p>No direct flights from Latvia to Japan.</p> <p>Screening of passengers, and their baggage, who returned from Japan trough any airport in European Union is provided on a voluntary basis.</p> <p>For sea travel it takes 40-45 days between Latvia and Japan and therefore no actions in the next three weeks.</p>	<p>17 March</p>	

	Lithuania	<p>Radiation Protection Centre at the Ministry of Health of the Republic of Lithuania recommended for State Border Guard Service at the Ministry of Interior of the Republic of Lithuania to monitor screening for incoming passengers, baggage shipments from Japan.</p> <p>Radiation Protection Centre at the Ministry of Health of the Republic of Lithuania recommended for Klaipėda State Seaport Authority to monitor screening for ships.</p>	<p>Since 18 Mar 2011</p> <p>Since 31 Mar 2011</p>	
	Portugal	<p>There are no direct flights between Japan and Portugal</p> <p>Screening is not required at this point in time.</p> <p>Clarification of the radiological situation, upon request, for people returning from Japan.</p>	15 March	
	Republic of Korea	<p>The contamination criterion for determining if decontamination is warranted was established as 1 <math>\mu\text{Sv/h}</math> at 10cm from a monitored surface regardless of whether the survey's targets were people or objects.</p> <p>The criterion was based on the IAEA manual titled "Manual for First Responders to a Radiological Emergency".</p>	March 17, 2011	People entering Korea from Japan: 71,967 persons as of March 27, 2011.
	Serbia	<p>There are no direct flights from Japan to Serbia and screening of baggage, cargo, cabins and outer surfaces is not established.</p> <p>However, it is offered to passengers and crew members arriving from Japan to be checked for contamination. Passengers who wish to check for contamination should inform customs or police officers at the airport about their intention and officers call Regulatory agency for 24 hour on-duty technical service.</p>	18 March	Persons arriving from Japan
	Sweden	<p>So far no special screening recommendations have been issued other than the possibility for passengers from Japan who have been in the area within 80 kilometers from the Fukushima plant can, if requested, be offered monitoring through their ordinary caregivers.</p>	24 March	
		<ul style="list-style-type: none"> <li>Screening of baggage and cargo (see Q3 and Monitoring)</li> </ul>	Updated on 13 April	
	Switzerland	<p>Have you established any recommendations regarding screening of passengers, baggage and transport arriving from Japan in terms of:</p> <ul style="list-style-type: none"> <li>Screening of passengers and crew Passengers NO / crew YES</li> <li>Screening of baggage and cargo Baggage NO / cargo YES (in Tokyo and in Zurich)</li> <li>Screening of cabins (on airplane or on ships) YES</li> <li>Screening of outer surfaces (of airplanes or of ships) YES (Filters and tires)</li> </ul>	23 March	



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	Action taken mainly as a precautionary and reassurance measure as long as no elevated values are detected.		
	<p><b>Turkey</b></p> <ul style="list-style-type: none"><li>• Screening of passengers and crew Not mandatorily (but who is willing - may ask for whole body measurement after arrival from Japan, contact TAEK)</li><li>• Screening of baggage and cargo Automatically yes (There are radiation monitoring detectors at the Ankara and Istanbul Airports for baggage and cargo)</li><li>• Screening of cabins (on airplane or on ships) Yes, upon requested Turkish Airlines No of ships</li><li>• Screening of outer surfaces (or of ships) Yes, upon requested Turkish Airlines No for ships</li></ul> <p>No recommendation is suggested.</p>	13 March 2011 TAEK	

Monitoring of the radioactivity in the environment	Country	Decision taken or Recommendation made	Applicable Date	Applicable Population
	Austria	In the context of the regular monitoring program, aerosol sampling and iodine sampling was carried out. Since the arrival of the contaminated airmass in Europe the sampling has been intensified.	23.3.	
	Czech Republic	Continuous radiation monitoring ongoing and data available directly on SÚRO website (www.suro.cz). Special attention is given to: <ul style="list-style-type: none"> <li>- Measurement of air filters (4 measurement point with daily period, 6 measurement point with 3 day period)</li> <li>- Measurement food Japan origin</li> </ul> SÚRO provide measurement of: Gamma-emitting radionuclides using HPGe spectrometry, 20 measuring systems, including sample preparation techniques and analysis and evaluation software. SÚRO may provide measurement of: <ul style="list-style-type: none"> <li>• Alpha-emitting radionuclides (U, Pu, Am, Cm, isotopes and <sup>210</sup>Po) using radio-chemical preparation, 14 alpha-chambers with semiconductor detectors, including radio-chemical sample treatment (10 digestors) and analysis and evaluation software.</li> <li>• beta-emitting radionuclides using low-background alpha-beta detectors, low-background liquid scintillation systems (2 units) suitable especially for tritium monitoring and a LSC Triathler suitable for quick estimation of higher activities, including radio-chemical sample treatment (10 digestors) and analysis and evaluation software.</li> </ul> Internal contamination monitoring with: <ul style="list-style-type: none"> <li>• whole-body counters using HPGe detectors, 2 units</li> <li>• in-vivo <sup>131</sup>I and <sup>125</sup>I monitors using collimated scintillation detectors, committed dose calculation using the IMBA software.</li> </ul> SÚRO may provide whole body counting capabilities and interpretation of measured spectra, including: confirmation of radionuclide(s) intake, amount of radionuclide intake(s) (whole body, specific organs, wounds). SÚRO may provide identification and determination concentrations of specific radionuclides in excreta and in other biological samples such as blood, nasal mucus, saliva, exhaled breath or post-mortem tissue samples whole body counting capabilities and interpretation of measured spectra, including: confirmation of radionuclide(s) intake, concentrations of radionuclide(s) in biological samples. SÚRO may provide estimation (calculation) of the dose from internal exposure based on radionuclide intake data, including: estimates of committed dose from internal exposure, and dose distribution within the body.	Last update 24. 03. 2011	
	Denmark	Special attention is given to monitoring stations in Greenland and Denmark including air filter measurements for which the frequency has been increased. At present, no radionuclides attributed to the Fukushima nuclear power	last update	Danish and foreign

	plant or other nuclear power plants has been observed.	24. March	authorities
Finland	<p>Monitoring of airborne radioactive substances in eight sampling stations. Results of iodine-131 and cesium-137 are published in Finnish on STUK's web page <a href="http://www.stuk.fi/sateilytieto/ympariston-sateilyvalvonta/mittaustulokset/fi_FI/mittaustulokset/">http://www.stuk.fi/sateilytieto/ympariston-sateilyvalvonta/mittaustulokset/fi_FI/mittaustulokset/</a></p> <p>Highest iodine-131 concentration (circa 10 milliBq/m<sup>3</sup>) has been measured on 31.3-1.4.2011 in Helsinki (south Finland).</p> <p>Results are published in Finnish and English also on STUK's protected web page FINRI.</p> <p>Monitoring of fallout is done in 8 locations. Highest fallout measured from a weekly sample collected in Helsinki between 30.3. – 6.4. has been 18 Bq/m<sup>2</sup> of I-131 and 1.2Bq/m<sup>2</sup> of Cs-137.</p> <p>Monitoring of milk is continued in a minor scale and that of grass is planned when possible (not yet growing).</p>	daily since 19 March, 2011	
France	<ul style="list-style-type: none"> <li>• No detection above background levels for gamma dose rate</li> <li>• Traces of I-131 have been measured in France. The highest levels so far are in the range of 0.10 to 0.23 mBq/m<sup>3</sup> measured from samples between 26-27 March in the Paris region</li> <li>• Other radionuclides in the discharges from the accident Fukushima, especially cesium 137, have not yet been detected in airborne samples</li> <li>• Measurements of the presence of radioactive iodine in gaseous form from air samples have not revealed so far any significant activity;</li> <li>• I-131 (1.73 Bq / L) was detected in a sample of rainwater in the Paris region (26-27 March)</li> <li>• Traces of Cs-137 in soils and plants have been detected corresponding to levels often seen in this type of products (due to nuclear test and Chernobyl fallout)</li> </ul>	Updated on 28 March	
Hungary	<p>In Hungary several institutions are checking the radioactive components of the air in a coordinated way. The air filter sampling measurements showed that radioactive materials (iodine and cesium) originated from the Fukushima accident in Japan can be detected in Hungary. The results from the measuring institutions are collected and processed by the Hungarian Atomic Energy Authority and the summary of the results with some explanation is published on the HAEA website (<a href="http://www.haea.gov.hu">http://www.haea.gov.hu</a>). The measurement results of the national environmental radiation monitoring system do not show any increase in the ambient dose rate. (The ambient dose rate data can be observed at the website of the National Directorate General for Disaster Management - <a href="http://www.katasztrofavedelem.hu">http://www.katasztrofavedelem.hu</a>).</p>	13 April	
Islamic Republic of Iran	Routine Monitoring program is ongoing.		
	<p>Routine Monitoring program continuously is ongoing.</p> <p>Continuous gamma dose rate monitoring is on going (early warning system with 63 stations) and the data are available directly on website: <a href="http://www.aeoi.org.ir">www.aeoi.org.ir</a></p>	6 April	
Ireland	<p>Increased frequency of monitoring of air (filter and charcoal cartridge), rainwater and milk – data being uploaded on RPII website once checked. Being done as reassurance for public and Irish dairy industry. Plan to share with ECURIE and IEC if markers for plume detected.</p>	21 March	

	Continuous gamma dose rate monitoring ongoing and data available directly on RPII website.		
Lithuania	<p>Food and feed monitoring plan for 2011 is established and it is on implementation phase. In 2010 the National Food and Veterinary Risk Assessment Institute performed radiological analysis of 1193 food and feed products, and in 2011 of 173 ( including 2 of Japanese origin). No positive results have been obtained.</p> <p>Radiation Protection Centre at the Ministry of Health of the Republic of Lithuania has started people (volunteers) screening (thyroid, whole body counting), check for radiological contamination on belongings of people (on request) and increased frequency of air radiological air monitoring.</p> <p>The Environmental Protection Agency and Center for Physical Science and Technology increased the frequency of radiological air monitoring and measure composition of radionuclides.</p>	2011-04-05  Since 23 Mar 2011	For Lithuanian people who live in Lithuania or who come back from Japan
Portugal	Special attention is given to Portuguese monitoring stations (RADNET), including the ones in the Azores and Madeira Islands, and also to CTBTO radionuclides station RN53 in Azores .	23 March	
	<p>ITN (aerosols station ASS500 )is measuring on a daily basis the <b>concentrations</b> of Cesium, Iodine and Tellurium (first spectrum at <a href="http://www.itn.pt/pt/ev/2011/incidente/upsr-espectro.pdf">http://www.itn.pt/pt/ev/2011/incidente/upsr-espectro.pdf</a>)</p> <p>The measured concentration levels are very small and represent no hazard/risk for the public health.</p> <p>Updated information about the measured concentrations can be found at <a href="http://www.itn.pt/pt/ev/2011/incidente/estacao-ASS500-ITN-tabela.pdf">http://www.itn.pt/pt/ev/2011/incidente/estacao-ASS500-ITN-tabela.pdf</a></p>	5 April	
Romania	<ul style="list-style-type: none"> <li>The National Agency for Environmental Protection operate the National System for Environmental Surveillance for the monitoring of the radioactivity of the air, water and soil. The measured values are the natural background.</li> <li>Assessment of the contamination of the environment and the radiation exposure of humans by measurements and calculations are made by the National Institute for Public Health</li> </ul>		
Serbia	<p>Aerosol and wet and dry deposition measurement frequency is increased. Samples are collected and analysed daily. Monitoring of other media is as in routine situation.</p> <p>Continuous gamma dose rate monitoring ongoing and data available directly on SRPNA website (early warning system with 9 stations).</p>	17 March	
Sweden	<ul style="list-style-type: none"> <li>The Swedish Customs began monitoring goods from Japan on the 26 of March, 2011. (Q3)</li> <li>Sweden follows the EU-directive 297/2011 regarding foodstuffs from Japan. (Q3)</li> <li>Air filter stations in Sweden began picking up radioactive iodine from Japan on March 22, 2011</li> </ul>		
	<ul style="list-style-type: none"> <li>The Swedish Customs began monitoring goods from Japan on the 26 of March, 2011. (Q3)</li> <li>Sweden follows the EU-directive 297/2011 regarding monitoring of foodstuffs from Japan. (Q3)</li> <li>Air filter stations in Sweden began picking up radioactive iodine from Japan on March 22, 2011</li> </ul>	Updated on 13 April	
Switzerland	Special attention to the high volume sampler measurements	14.03.11	
	<i>Measurement of additional air filters and precipitation samples</i>	21.03.11	
	<i>Collection and measurements of high altitude air samples</i>	23.03.11	
Greece	<ul style="list-style-type: none"> <li>Telemetric network for monitoring total-gamma dose in air (24 stations) and aerosols (3 stations)</li> </ul>		

	<ul style="list-style-type: none"> <li>• High volume sampler measurements</li> <li>• Passengers coming from Japan (optional)</li> <li>• Food and feeding stuff imported from Japan</li> </ul>		
	<ul style="list-style-type: none"> <li>• Telemetric network for monitoring total-gamma dose in air (24 stations) and aerosols (3 stations), on-line with GAEC web-site and EURDEP</li> <li>• High volume sampler measurements</li> <li>• Activation of the network of collaborating laboratories for performing sampling and measurements</li> <li>• Measurements are continuously performed in environmental samples (air filters, rain water, grass, milk, water)</li> <li>• There are no direct flights from Japan to Greece. However, the option of passengers screening upon arrival from Japan has been provided on a voluntary basis in two airports (Athens and Thessaloniki) from 18 to 26 March 2011.</li> <li>• Thyroid uptake and whole body counting are performed in GAEC, if proven necessary from the screening.</li> <li>• GAEC laboratories are available to persons coming from Japan, wishing to be monitored.</li> </ul> <p>Results:</p> <ul style="list-style-type: none"> <li>• The telemetric network has not detected increased levels of radioactivity</li> <li>• Small concentrations of iodine-131 and Cesium (mean values: 125 <math>\mu\text{Bq}/\text{m}^3</math> and 100 <math>\mu\text{Bq}/\text{m}^3</math> respectively) have been detected in air-filter measurements performed between 24 to 27 March 2011.</li> <li>• In total, 56 passengers have been monitored. Low concentrations of radioactivity were detected in the personal belongings of 2 persons, In these cases, thyroid uptake and whole body measurements were performed. Iodine in low concentrations has been detected, resulting in extremely low doses.</li> </ul> <p>Ships:</p> <ul style="list-style-type: none"> <li>• For ships coming from the Pacific Ocean (in general) no provisions are considered necessary.</li> <li>• For ships coming from the affected area, the possibility of performing measurements for surface contamination mainly on the containers carried by open- top ships in under consideration.</li> <li>• Whole body and thyroid uptake measurements can be performed on a voluntary basis to the crew members returning from the affected area.</li> </ul>	Update 30 March	
Norway	Monitoring running. (air samplers and gamma stations)		
Turkey	<p>1. Continuous gamma dose rate monitoring ongoing (national early warning system network, which is also a part of EURDEP).</p> <ul style="list-style-type: none"> <li>• No detection above background levels for gamma dose rate</li> </ul> <p>2. Measurements of additional air filters at 4 stations</p>	25 March 2011 TAEK	
EUROPOL	<p>Europol's O4-Counter Terrorism Unit is monitoring the IEC communications on a routine basis during office hours. However, Europol is only concerned with emergencies stemming from malevolent acts, particularly by terrorist and organised crime actors.</p> <p>Consequently, no specific actions or extraordinary measures are being implemented by Europol with regard to this incident.</p>		



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Activation of a call center for information of the public	Austria	Information for concerned public	Since 12.03.2011	Persons concerned
	Updated on 4 April	Activation of a call center within the Austrian Ministry of Interior which is still operating. Information input comes from the responsible ministries (ministry of environment, ministry of health, ministry of interior and ministry foreign affairs).	12.3.	
	Belgium	Given the predistribution campaign of KI (planned long before the earthquake in Japan) an information number was available immediately. The website of the campaign and more specific the website of FANC were updated on a daily base	14/03/11	
	Canada	Call centre activated	March 18	Canadian public
	Czech Republic	Information available on web sites: www.sujb.cz www.suro.cz www.szpi.cz www.mzv.cz Radiation protection issues – call center - during working hours (SÚJB), media, news	15.03.2011  Updating every day	
	Denmark	As per 16 March a hotline at The Danish Emergency Management Agency was established. The hotline is open for calls during the day time all week. The Danish Emergency Manage Agency has established a special homepage concerning the situation in Japan. This includes a FAQ with Q&A's continuously updated by the Danish Emergency Management Agency in cooperation with The National institute for Radiation Protection and The Danish Veterinary and Food Administration The media coverage is frequent with updates from The Danish Emergency Management Agency and The National Institute for Radiation Protection. A citizen's meeting using Skype broadcast from The Danish Embassy in Japan has taken place with the possibility for the Danish citizens in Japans to communicate directly with experts from the Danish Emergency Management Agency and The National Institute for Radiation Protection.	Last update 24. March	Danes just arrived from Japan or with friends and relatives staying in Japan
	Finland	Radiation and Safety Authority in Finland (STUK) provides 24/7 phone number for media and citizens as a normal procedure (so it was available on 11 March) The Ministry for Foreign Affairs (MFA) activated call centre on 11 March. STUK's and MFA's web pages, Facebook and Twitter were available since 11 March.		Radiation and Safety Authority in Finland (STUK) provides 24/7 phone number for media and

				citizens as a normal procedure (so it was available on 11 March) The Ministry for Foreign Affairs (MFA) activated call centre on 11 March. STUK's and MFA's web pages, Facebook and Twitter were available since 11 March.
	<b>France</b>	Call centres have been activated in France, e.g. at IRSN where answer questions via 7 different phone lines and dedicated email boxes since the beginning of the event.	13 April	
	<b>Hungary</b>	In Hungary no separate call center was activated for the purpose of public information corresponding to the Fukushima accident. However the usual lines and websites of the authorities (mainly the Ministry of Foreign Affairs - <a href="http://www.kum.gov.hu">http://www.kum.gov.hu</a> ) are available and used.	13 April	
	<b>Islamic Republic of Iran</b>	Issue of regularly updated information of the radiological situation in Japan (available at <a href="http://www.aeoi.org.ir">www.aeoi.org.ir</a> ).	17 March	
		Updated information of the radiological situation in Japan and FAQ are available at website: <a href="http://www.aeoi.org.ir">www.aeoi.org.ir</a> .	17 march	
	<b>Ireland</b>	Information available on <a href="http://www.rpii.ie">www.rpii.ie</a> , <a href="http://www.envron.ie">www.envron.ie</a> , <a href="http://www.fsai.ie">www.fsai.ie</a> , <a href="http://www.emergencyplanning.ie">www.emergencyplanning.ie</a> , <a href="http://www.met.ie">www.met.ie</a> , <a href="http://www">www</a> . [all agencies coordinating information provided]  Radiological Protection Institute has been taking calls from public; alternate number provided on answering machine for calls during weekend and national holiday [17 March] Frequent media coverage with interviews of RPII staff, including programme for children's new television programme.	12 March	Public and media
	<b>Latvia</b>	Information about radiological situation in Japan is available on Radiation Safety Centre of State Environmental Service web site – <a href="http://www.vvd.gov.lv">www.vvd.gov.lv</a> Radiation Safety Centre of State Environmental Service has been taking calls from public through routine phone and e-mail	12 March 2011	Public and media



Emergency Response Governmental Decision and Recommendations Information Exchange

	<b>Lithuania</b>	Radiation Protection Centre at the Ministry of Health of the Republic of Lithuania announced official phone numbers, which were available 24hours/7days for people calling and getting proper information and consultation.	Since 12 Mar 2011	
	<b>Portugal</b>	Phone line available for clarifications "Linha Saúde 24". Issue of informative document for the population (available at <a href="http://www.dgs.pt">www.dgs.pt</a> ). Issue of regularly updated information of the radiological situation in Japan (available at <a href="http://www.apambiente.pt">www.apambiente.pt</a> ).	16 March Updated on 23 March without change	
	<b>Greece</b>	<ul style="list-style-type: none"> <li>• GAEC has extended its working hours (18 hours daily)</li> <li>• Phone line available</li> <li>• Issue of press releases</li> <li>• Information in GAEC's web page including press releases, FAQ, link to the national telemetric network, link to the EURDEP.</li> </ul>	12 March  Update 30 March (no change)	The general public
	<b>Norway</b>	Call centre available (NRPA) and website with news ( <a href="http://www.nrpa.no">www.nrpa.no</a> )		
	<b>Serbia</b>	All relevant information and announcements are available on the web site: Serbian Radiation Protection and Nuclear Safety Agency - <a href="http://www.srbatom.gov.rs">www.srbatom.gov.rs</a> SRPNA has been taking calls from public; frequent media coverage with interviews and information by SRPNA staff.	13 March	
	<b>Sweden</b>	No, but emergency response and press call activities have been in operation since March 11, on government level and at national authorities such as the Swedish Radiation Safety Authority, the Swedish Civil Contingencies Agency and the National Board of Health and Welfare.		
		No, but emergency response and press call activities have been in operation since March 11, on government level and at national authorities such as the Swedish Radiation Safety Authority, the Swedish Civil Contingencies Agency and the National Board of Health and Welfare.	Updated on 13 April	
	<b>Turkey</b>	<ol style="list-style-type: none"> <li>1. There is a call center in TAEA, for information of the public which available 24 hours. Progression of the accident situation publishing in TAEK's web page.</li> <li>2. A call centre was also established in the Ministry of Foreign Affairs for Turkish citizens wishing to obtain information on friends and relatives living in Japan</li> </ol>	12 March 2011 TAEK MFA	

**General Questions:**

It is likely that, in the coming weeks, there will be discussion of the collective dose received by the Japanese population. I also feel that it is likely that there will be, in the press, discussion of the number of projected cancer deaths, using the collective dose and the 5%/Sv risk factor. Given this situation, I feel that it would be useful for the RP community represented by the CRPPH to consider how such claims could be addressed.

- Do you agree that we could address this issue?
- If so, what would be your response should you be asked about an estimate of projected deaths based on a collective dose estimate?

**Austria**

- Do you agree that we could address this issue? YES
- If so, what would be your response should you be asked about an estimate of projected deaths based on a collective dose estimate?

**Canada**

- Further thought and discussion would be required, but there is some concern that collective dose estimate is not the proper way to estimate projected death.

**Italy**

- Yes
- I'd need some more time to formulate this answer. I think the right way is that proposed by the Chernobyl forum for that accident

**Luxembourg**

- In respect for what is at stake in Japan, we are not willing to enter such a discussion right now. If really a need, it should be postponed to a more adequate date.

**Slovakia**

- Yes.
- The individual doses will be probably very low, but the number of exposed persons will be high. Using a collective dose in this case is not the preferred way how to calculate or assess the number of projected cancer deaths mainly for community information purposes.

**Slovenia**

- It should be stressed that 5%/Sv refers to cancer incidence risk and not to cancer deaths risk.

**Sweden**

- Concerning the General Question we prefer not to address that right now, but are all in favour of co-ordination in these topics.

**Portugal**

- Do you agree that we could address this issue? YES
- If so, what would be your response should you be asked about an estimate of projected deaths based on a collective dose estimate? As you are well aware, the correctness of using "collective dose" for these purposes is disputed by some experts... but in my very personal opinion, the number obtained should be used as an estimation – better than no number !

**Denmark**

- No.
- This is believed to be the task and responsibility of the Japanese authorities.

**Greece**

- Yes
- We consider that this issue is better to be discussed in due time.

**Hungary**

(1) The ICRP warned us several times that the collective dose should not be used as an estimate of harms!

(2) We have the problem with the background. The natural external radiation background in Tokyo is about 40% lower than e.g. in Budapest. So, for an increase by this 40% in Tokyo one can calculate an extra cancer rate, which is surely meaningless – if I take that 'elevated' radiation as the normal background here!

(3) There was a terrible natural disaster in Japan which resulted in the loss of at least 10,000 identified deaths (March 25 figure, another 10,000 people still missing!). These people died from objects falling on them or were taken away by the cunami. In the

view of these figures there is no real importance if we add 1, or 5, or 10 hypothetical additional cancer cases in 50 years!  
(4) At the same time I understand that if later some anti-nuclear activists declare in the media thousands of people dying from radiation, we should answer something. In such a case we can give the – most probably very low – figures calculated from the collective doses by emphasizing that these are estimates of upper limits of cancer incidence risks.

**Practical points:**

I think at this time we have no data on the actual doses and on the number of people exposed – especially, in the critical areas, i.e. in Japan. We cannot do any reasonable estimate before receiving data from Japan. So, all we can do is to ask our Japanese friends to provide data when available."

## ANNEX-1 EU PRESS RELEASE

Brussels, 24 March 2011

### Food safety: the EU reinforces controls on imports from Japan

*In order to further limit possible risks to the safety of its Food Chain, the European Union decided today to reinforce controls on imports of food and feed from certain regions of Japan, where production could be affected by the accident at the Fukushima Daiichi nuclear power plant. Member States endorsed, at a meeting of the Standing Committee on the Food Chain and Animal Health (SCoFAH), a Commission proposal to impose special import conditions. The measures apply to all feed and food originating in or consigned from 12 prefectures of Japan,<sup>1</sup> including the four most affected by the accident. All products from these prefectures have to be tested before leaving Japan and will be subject to random testing in the EU. Feed and food products from the remaining 35 prefectures will have to be accompanied by a declaration stating the prefecture of origin and will be randomly tested upon arrival in the EU. The Union will review these measures every month.*

In particular, the regulation adopted today stipulates that each consignment of food or feed from the 12 prefectures has to be accompanied by a declaration –to be provided by the Japanese authorities– attesting that the product does not contain levels of radionuclides that exceed the EU's maximum permitted levels<sup>2</sup>. Radionuclides are radioactive elements and the Commission regulation makes specific reference to *iodine-131, caesium-134 and caesium-137*.

Furthermore, importers are required to notify the national competent authorities two days before the arrival of each consignment of food and feed from Japan. Feed and food products that were harvested or processed before March 11 are not affected by the provisions of this regulation. Nevertheless, these products from all of Japan's territory would have to be accompanied by a declaration stating clearly that they were harvested/ processed before March 11.

As regards food and feed harvested/produced after March 11, the measures provide that:

- **Upon arrival in the EU**, the competent authorities of the Border Inspection Posts (BIP) or of the consignment's Designated Point of Entry (DPE) will carry out document and identity checks on all food and feed consignments from Japan;
- Physical checks, including laboratory analysis, will be carried out on **at least 10%** of the consignments of food or feed coming from 12 prefectures mentioned above. Physical checks will also be carried out on **at least 20%** of the consignments coming from the remaining 35 prefectures;
- Pending the availability of the test results, products shall be kept under **official control for a maximum of five working days**. The consignments will be released when the importer will present to the custom authorities the favourable results of the official controls mentioned above;
- **Products that are found to exceed the maximum permitted levels** shall not be placed on the market and will either be safely disposed of or returned to Japan.

The Commission proposal, endorsed today by SCoFAH, will be formally adopted tomorrow. The resulting implementing regulation will enter into force one day after its publication in the European Union's Official Journal. It is expected to be published in the OJ on Saturday, March 26.

#### Background

Currently, there is no evidence of risk for the EU consumer by increased radiation levels in food and feed products imported from Japan. However, the Commission decided to reinforce its measures in order to further limit possible risks to its own Food Chain and, thus, ensure better protection for the health of EU citizens.

The Commission has been following closely developments in Japan. On 15th March, it asked the Member States, through the Rapid Alert System for Food and Feed (RASFF), to step up controls on food products arriving from Japan.

Food safety risks for EU citizens due to the Japan nuclear crisis are low for a series of reasons. They include:

- Japan is authorised to export to the EU only four products of animal origin, namely: **Fishery products; Bivalve molluscs; Casings; Petfood.**

- **Vegetables/fruits** may also be exported to the EU, but such exports from Japan into the EU are small in volume – they stood at about **9,000 tons from all of Japan's territory in 2010**.
- According to the latest information, the **Japanese authorities have taken the necessary measures** to ensure that food (and drinking water) testing above their established acceptable levels of radio-activity is neither sold to the Japanese public nor exported.
- Imports to the EU of Japanese agricultural products (i.e. products of animal origin, fish and of plant products) are relatively small. In 2010, the **total value of agricultural products imported to the EU from Japan stood at €187 million for agricultural products and €18 million for fishery products**.

<sup>1</sup> : Fukushima, Gunma, Ibaraki, Tochigi, Miyagi, Yamagata, Niigata, Nagano, Yamanashi, Saitama, Tokyo and Chiba

<sup>2</sup> : Council Regulation (Euratom) No. 3954/87 (OJ L 371, 30, 12, 1997, p. 11)

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