



NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

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Online Version

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NRC NEWS:

NRC Said To Be Too Close To Nuclear Industry. Examining the 2002 incident at Davis-Besse station, when NRC regulators agreed to delay an emergency

order to shut down for inspection, only to later find "a football-sized hole in the reactor vessel's steel side," ProPublica (4/14, Sullivan) reports that according to an NRC inspector general's report, "senior officials at the agency held off – in part because they did not want to hurt the plant's bottom line." NRC critics say the problems at Davis Besse, are "prime

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example of the agency's deference to industry." According to those critics, the nuclear industry "routinely exercises its muscle in a more pervasive way: through contributions to NRC regulatory guides that advise nuclear companies about how to best follow the agency's rules." ProPublica says the guides are written by the Nuclear Energy Institute and contain detailed technical procedures and reference material and "are a key part of NRC's oversight."

Senate Panel Questions NRC Chairman On Nuclear Reactor Reviews. E&E Daily (4/14, Northey) reports the Senate Environment and Public Works committee "grilled" NRC Chairman Gregory Jaczko "on emergency actions he took in the wake of Japan's nuclear crisis and how regulators are weighing the safety of US reactors." Committee Chairwoman Barbara Boxer (D-Calif.) questioned Jaczko on whether the NRC "is prioritizing the review of nuclear reactors in seismically active areas, notably California's Diablo Canyon Nuclear power plant and San Onofre nuclear generating station." Jaczko said the NRC is evaluating the two plants as part of short term and longer-term reviews, but "said the agency will not do 'anything specific' for the two California plants."

NRC Chairman Says Japanese Plant Situation "Static" But "Not Stable". International Business Times (4/14, Francheska) reports, NRC Chairman Jaczko "told a Senate committee hearing on Tuesday that Japan's damaged nuclear reactors at the Fukushima Daiichi power plant is 'static' but remains 'unstable' with just an improvised cooling system." At the hearing, Jaczko told Senate lawmakers "that Japanese engineers have not yet re-established a long-term regular cooling of the reactors or a regular system to deliver water to the spent-fuel pool." In his assessment, the situation "is 'not stable' and this would prevail until 'that kind of situation would be handled in a predictable manner.'"

WJRT-TV Flint, MI (4/13, 4:06 p.m. ET, 27,116) reported that nuclear experts are warning that things could become far worse than what's been currently reported. Nuclear expert Joseph Cirincione said that this is a "major environmental catastrophe" and that it is "Chernobyl in slow motion." However, Nuclear Regulatory Commission Chairman Gregory B. Jaczko "offered a less alarming analysis." He said that they "believe the situation currently is static, namely we don't see significant changes on a day-to-day basis with the reactors. It is not yet, however, what we believe to be stable. Namely that given additional events or other circumstances, that there would not be the potential for significant additional problems at the reactors."

Gundersen Discusses Fukushima Plant Crisis. In a video caption appearing on its website, Huntington News

Network (4/14) reports how Fairewinds Associates nuclear engineer, Arnie Gunderson "discusses why the Toyko Electric Power Company announcements of increased accident severity should not be a surprise. He discusses similarities of Chernobyl, Three Mile Island, and Fukushima." Gunderson also "tells how governments limit public access to radiation dose data" and he answers "numerous email inquiries regarding the Fukushima accident."

NRC Discusses St. Lucie Plant Safety Concerns With Anxious Residents. On its website, Florida's Treasure Coast Palm (4/14, Treadway) reports on Wednesday's public meeting with NRC staff and Florida Power and Light Co., representatives, during which "several residents voiced concerns about the safety of the St. Lucie Nuclear Power Plant" and particularly, the "safety of storing spent fuel rods at the nuclear plant on Hutchinson Island, the same type of rods that, in the aftermath of Japan's March 11 earthquake, released radioactivity at Japan's Fukushima Daiichi nuclear facility." Bonnie Howard of Lakewood Park asked: "Why do we continue to use a dangerous source of energy?" while Fort Pierce resident Marty Tormey, suggested that because wind and solar power account for such small percentages of the power produced, "Until a better alternative is found, I need this facility."

The Palm Beach (FL) Post (4/14, Salisbury) reports that resident Herman Berg lives close to FPL's St. Lucie plant, "and he's worried about how the island would be evacuated if there were some type of disaster." Berg told FPL and NRC officials, "There's only one way off this island." He was among about 40 South Florida residents attending the meeting, most of whom sought "answers about the plant's readiness in case of a disaster." According to the NRC, St. Lucie plant "met all safety requirements in its 2010 review," but as former Lake Worth City Commissioner Cara Jennings and another resident "unfurled a 'Don't Nuke Florida's Future,' hand-painted banner across the front of the room," Jennings said, "I am sure they had similar meetings in Japan."

On its website, WPTV-TV West Palm Beach, Florida (4/13, Gonzalez) reported, NRC officials "were in town offering their annual assessment of the plant, and paused to answer questions from the public. Rick Croteau with the NRC explained, 'The plant is designed for earthquakes within the large area but this is a very low seismic zone so it's a very small earthquake.'" The plant is also able to withstand the strongest hurricanes, Florida Power and Light officials said, "and is built 20 feet above sea level, which is several feet higher than what experts estimate a storm surge could ever be the in the area."

WPBF-TV West Palm Beach, Florida (4/13, Parker) added on its website that FPL's Michael Waldron said that "in the case of our Turkey Point plant, in 1992 it got a direct hit

from hurricane Andrew and performed exactly as expected. Here at St. Lucie, hurricanes Jeanne and Frances, one after another, hit this plant directly and it survived just fine,' said Waldron." Still, the report noted, some residents were unconvinced and called some answers "vague."

WPBF-TV West Palm Beach, FL (4/14, 4:34 a.m. ET, 5,114) reported that the "Nuclear Regulatory Commission held its annual meeting and review" of the Saint Lucie County Nuclear Plant "and gave it a green light for safety." The NRC also said that the "Saint Lucie County Plant is also built high enough to withstand a tsunami or a category five hurricane with no danger of water damaging the reactors or spent fuel storage." WFLX-TV West Palm Beach, FL (4/14, 1:33 a.m. ET, 11,087) and WPTV-TV West Palm Beach, FL (4/13, 6:05 p.m. ET, 139,384) provides similar coverage.

Lochbaum Faults Spent Fuel Storage Management.

Prior to the meeting, the Palm Beach (FL) Post (4/13, Salisbury) reported that while FPL spokesman Michael Waldron said the "federal regulatory and operating history proves that this can be done safely and securely," David Lochbaum, of the Union of Concerned Scientists, "said spent fuel pools are among the most vulnerable spots at a nuclear plant," housed as they are in structures that aren't as strong as reactors containment buildings. "It would be hard to manage this hazard (more) foolishly. The federal government's ineptitude in disposing of spent fuel has left Americans across the country exposed to elevated and undue risks,' Lochbaum said."

New England Leaders Want NRC To Answer Questions About Pilgrim Plant Safety.

Massachusetts' Old Colony Memorial (4/14, Mand) reports, "As the state met with representatives of New England's nuclear power plants and their critics last Wednesday, Gov. Deval Patrick, Senate President Therese Murray and Speaker of the House Robert DeLeo released a series of 22 questions legislators are asking Nuclear Regulatory Commission Chairman Gregory Jaczko to address." Of the 22 questions, 10 had to do with spent-fuel rods and their storage. "Patrick, Murray and DeLeo also want Jaczko to comment on whether there are plans to strengthen the fuels stored in the upper levels at Pilgrim against aerial attack, or relocate the wet pool to a more secure location." Mary Lampert, of Pilgrim Watch, said the first priority was to reduce the "catastrophic" risk of a spent-fuel fire, by pressuring the NRC "require licensees to reduce the density of assemblies in the spent fuel pool, allowing only the fuel discharged in the previous five years,"

The Boston Globe (4/14, Knox, 244K) reports, "Seeking to douse worries over nuclear safety sparked by failures in Japanese plants, Pilgrim officials recently announced they plan to begin storing the Plymouth power plant's nuclear

waste in hardened dry containers." In the wake of the Fukushima Daiichi plant crisis, in which cooling water pumps for the spent fuel pools failed, nuclear industry officials told lawmakers at a State House that "multiple backup cooling systems" would prevent such a failure "here, even in plants of the same design. And the decision by Entergy, Pilgrim's owner, to move to dry-cask storage for used fuel accords with the views of Attorney General Martha Coakley and many experts that such storage of nuclear waste outside the plant is a safer alternative than water storage."

Critics Fault Rule For 10-Mile Evacuation Zone. The Cape Cod (MA) Times (4/14, Cassidy) reports that in contrast to the early days of the Fukushima plant crisis, when the NRC urged Americans living within 50 miles of the stricken plant to evacuate, the NRC and "state emergency officials prepare communities within only 10 miles of nuclear power plants for evacuations related to the facilities, leaving Cape Cod and other areas around the Pilgrim Nuclear Power Station in Plymouth on the outside of the emergency planning process looking in." The Times says the "basis" for that rationale lies in a "nearly 40-year-old decision" that even predates even the 1979 partial meltdown at Three Mile Island Nuclear. "The so-called plume exposure pathway, which the 10-mile zone is based on, is a planning tool used nationwide to prepare and evacuate populations most likely to be affected by the release of radioactive material at a nuclear plant." But Mary Lampert of Pilgrim Watch says the zones are "arbitrary."

Activist Praises Opponents Of Nuclear Power. In a letter to the editor of the Quincy (MA) Patriot-Ledger (4/14), Audrey Richardson of Environment Massachusetts, wrote to say she was glad to "see the movement opposing risky nuclear power is alive and well. Nuclear power – and, especially, old nuclear power plants, like Pilgrim in Plymouth – is inherently dangerous." Elected officials "supporting anything other than a 'no' on relicensing by the NRC should imagine themselves in the shoes of the mayor of Dai-ichi in Japan for one moment."

NRC, FEMA To Oversee Emergency Response Exercises At Callaway Plant.

According to its "D.C. Backroom" political blog, the St. Louis Beacon (4/14, Koenig) says, Tuesday "the Federal Emergency Management Agency announced that state and federal officials – along with county and local emergency experts from Callaway, Osage, Montgomery and Gasconade counties – will conduct a 'routine exercise' on May 11 that aims to 'test their ability to protect the health and safety of the public living in the vicinity of the [Callaway] plant.'" Ameren Missouri is planning to conduct a full-scale safety exercise at the power plant itself the same day, a drill that will be "evaluated by regional experts from the Nuclear Regulatory Commission, federal officials say." The St. Louis Business Journal (4/13,

Subscription Publication) ran a brief excerpt of the St. Louis Beacon story.

Asbury Park Press Calls For New Tritium Release Penalties.

In an editorial, the Asbury Park (NJ) Press (4/13) argues, "When it comes to the release of carcinogenic tritium, the Nuclear Regulatory Commission clearly has failed in its role to ensure the safety of a public at the mercy of nuclear power plants, an Asbury Park Press investigation published Sunday found." The Press says that "current regulations don't provide for penalties" for tritiated water releases at nuclear plants, which are "threatening water supplies in New Jersey and other states." The Press is calling on New Jersey Reps. Chris Smith and Jon Runyan, and Sens. Frank Lautenberg and Bob Menendez, "to push for regulations that will set new, tough standards for tritium contamination and establish penalties harsh enough to deter violations."

Local Officials Call For Oyster Creek Station To Be Closed.

According to the Lacey (NJ) Patch (4/13, Miller), Berkeley Mayor Jason J. Varano and Township Council members called on the NRC and the owners of Oyster Creek station to close the plant immediately. "Council members plan to pass a resolution at the next regular meeting calling for the closure of the plant," and Council Vice President Carmen J. Amato Jr. said "We want it closed immediately. Now we are also concerned about natural disasters." Mayor Varano said, that "Japanese nuclear experts were now comparing the situation at the Fukushima Daiichi nuclear complex to the Soviet Chernobyl disaster in the 1980s. 'It's at the Chernobyl category level in Japan, and that's pretty scary.'"

County Board Calls On PG&E To Halt All Diablo Canyon Relicensing Efforts.

The AP (4/14) reports that the Board of Supervisors for San Luis Obispo County "want a halt to the relicensing process for the Diablo Canyon" and voted unanimously to send a letter to PG&E "asking the operator of the south county plant to withdraw its relicensing application." The AP notes that PG&E asked the NRC earlier to "delay issuing new licenses, even if approved by the agency, until after [seismic] testing is completed," expected sometime in 2015, but the "company has been under pressure from area lawmakers to conduct extensive, three-dimensional testing in the area before seeking new licenses, a concern heightened by the Japanese nuclear crisis."

On its website, KTVU-TV San Francisco (4/13) noted that the fear is that the Hosgri Fault and the Shoreline Fault "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."

KKFXCA-TV Santa Barbara, CA (4/13, 10:00 p.m. PT, 6,524) reported that PG&E had a meeting with local residents over if their plant, Diablo Canyon Nuclear Power Plant, is safe if a disaster similar to what took place in Japan. During the meeting, Diablo Canyon's Jim Becker described the differences between their plant and Fukushima's plant. Some of the differences were that Diablo "is 85 feet above sea level" and "Fukushima is much lower" Becker also said that "Diablo can provide cooling without electricity," while "Fukushima didn't appear to be able to." Some viewed the meeting as informative and others did not see it that way.

KKFXCA-TV Santa Barbara, CA (4/13, 10:02 p.m. PT, 6,524) reported that the final renewal procedures for re-licensing the Diablo Canyon Nuclear Power Plant has been put on hold, pending seismic studies. The NRC called Senator Sam Blakeslee of San Luis Obispo to give "his input on seismic safety." KKFXCA-TV adds that "Blakeslee along with the San Luis Obispo County board of supervisors has called for the NRC to delay re-licensing the power plant all together."

KNTV-TV San Francisco, CA (4/13, 6:12 p.m. PT, 49,388) provides similar coverage.

KSBW-TV Monterey, CA (4/13, 5:06 p.m. PT, 41,239) added that the San Luis Obispo County Board of Supervisors voted last night to "send an official letter to Pacific Gas & Electric asking" them to "withdraw its re-licensing application. PG&E applied to the NRC to extend the power plant's current operating licenses an additional 20 years."

PG&E Hosts Open House About Diablo Canyon.

KEYT-TV Santa Barbara, California (4/13) noted on its website that PG&E officials had planned to host an "open house" Wednesday "to better inform residents about the Diablo Canyon Nuclear Power Plant. The event will address the plant's operations, security, and how the US nuclear industry is responding to events in Japan."

Officials Observe Emergency Drill At San Onofre Station.

Fox News' "Special Report with Bret Baier" (4/14, Baier) reports, "Imagine if a fire broke out causing explosion at the nuclear power plant like the one that crippled the Fukushima plant in Japan last month. That is the mock scenario playing out at the joint information center in Irving, California. The world watched as the Japanese utility officials held press conferences and did the best to report on catastrophe."

LATimes Opinion Writers Weigh In On Nuclear Power.

On its "Opinion LA" blog, the Los Angeles Times (4/12, 657K) carries excerpts from the Times' opinion staff on the merits of nuclear power, especially in the wake of the

accident at Fukushima. Mark Lynas wrote on how fears of nuclear power seem to be rooted in propaganda, and how "science on radiation tells us that the effects of Fukushima are serious but so far much less so than some of the more hyperbolic media coverage might suggest." Joel R. Reynolds wrote on risks of atomic energy and how it "isn't cheap or clean or accident-free, and, for the relentless claims to the contrary, the credibility of nuclear utilities and the NRC has taken a beating." Robert Alvarez wrote on the vulnerabilities inherent in spent fuel storage technologies and while "The cost of fixing America's nuclear vulnerabilities may be high," the "price of doing too little is incalculable."

Top Delaware DHS Official Touts State's Nuclear Preparedness.

The Wilmington News Journal (4/14, Gaudiano, 87K) reports that during a Tuesday Senate Environment and Public Works subcommittee hearing, Delaware Secretary for the Department of Safety and Homeland Security Lewis Schiliro submitted written testimony stating "he has no 'specific concerns' regarding the Salem-Hope Creek nuclear complex in New Jersey, or other nearby nuclear energy facilities." The hearing was chaired by Sen. Tom Carper (D-DE), who said it "is one of many aimed at making sure the nation is prepared for the worst." Schiliro added during oral testimony that federal officials have given Delaware officials "high marks" for planning related to potential nuclear disasters near the state's borders. NRC chairman "Jaczko testified earlier that his commission will examine whether evacuation plans around nuclear plants should cover a 50-mile radius." Schiliro agreed with this sentiment.

NRC Comments On Safety Of Michigan's Nuclear Plants.

The Tri-County (MI) Times (4/14) overviews the Japanese nuclear disaster, Michigan's nuclear plants, and meltdown-safety tips. "According to the US Nuclear Regulatory Commission (NRC), the combined effects of the earthquake and tsunami in Japan exceeded the Fukushima Daiichi nuclear plant's design limits." According to NRC public affairs officer Prema Chandrathil, "three plants in Michigan are operating safely and in accordance with their operating license," an equivalent to an A-letter grade. Chandrathil added NRC updates regulations as studies and incidents provide new insights, adding, "Regulations are not written in stone. We learned a lot from Three Mile Island and 9-11." Chandrathill added

Catawba Station Sirens Being Tested. The Rock Hill (SC, 21K) Herald (4/14, 23K) reports that Duke Energy plans to conduct their quarterly test of sirens at the Catawba Nuclear Station today. "The sirens will sound for about three

minutes, giving Duke officials a chance to make sure the emergency notification system is working."

Water Plays Important Role In Energy Production.

In a short article, The Atlantic (4/14, Dickson, 457K) observes that a Fast Company report says "it takes the same amount of water required by a city of 5 million to fuel a typical US nuclear power plant for one hour: 30 million gallons." More broadly, author Charles Fishman writes that "As the world's largest energy consumer, '49% of the water used in the US goes to generate electricity," which represents the largest use of water in the nation.

Three Mile Island Conducts Emergency Drill.

On its website, WTAJ-TV Altoona, Pennsylvania (4/14, Preval) reports that Three Mile Island recently conducted a "scheduled drill." FEMA will assess the drill's results. From there, the NRC will review drill results "and a final report will be made public in about four months."

The Chambersburg (PA) Public Opinion (4/14, Hook) adds that Franklin County, PA participated in the drill, as the county's schools and churches would be housing many evacuees from a Three Mile Island meltdown.

Braidwood Begins Refueling Unit 2 Reactor.

The Kankakee (IL) Daily Journal (4/14) reports, "Steam containing trace amounts of radioactive tritium will be released Thursday as the Braidwood Generating Station nuclear plant begins preparations to refuel its Unit 2 reactor." Exelon spokesman Neil Miller explained, "Several high pressure steam systems will begin to be tested and depressurized. Residents may see steam or hear a loud noise from time to time as this takes place." Miller added that the emissions pose "health or safety implications to employees or the public and is part of normal, permitted operations."

Arkansan Hospital Conduct Drills To Test Nuclear Response.

On its website, KTHV-TV Little Rock, Arkansas (4/14, Duff) reports that only two Arkansan hospitals, St. Mary's Regional Medical Center in Russellville and UAMS in Little Rock, are "equipped to handle radiation emergencies in the event something goes wrong at Nuclear One." Officials note that they conduct "decontamination" yearly and are evaluated by federal officials every two years.

Limerick Worker Injured In Fall.

The Pottstown (PA) Mercury (4/13, Brandt, 25K) reported, "A contracted worker in Exelon Nuclear's Limerick Generating station was knocked unconscious early Monday morning during the plant's refueling outage, but was determined not to have been contaminated by radioactivity." NRC spokesman Neil Sheehan, said the employee "was working in the 'secondary

containment area' of Limerick's Unit 2, which is shut down for re-fueling. ... He was 'climbing a ladder when he hit his head on a scaffold pole,' according to the notification Limerick sent to the NRC." According to Sheehan, the worker "injured 'the back of his head,'" and was rendered unconscious for about a minute.

Former GE Engineer Said Mark 1 Reactor Less Forgiving Than Other Reactors. In an opinion piece for the Ventura County (CA) Reporter (4/14, 4K), Grant Marcus of the Abalone Alliance, writes, "The Fukushima nuclear energy site, with nine reactors and six spent-fuel holding ponds, had a history of several near misses" and it "was built among several fault systems, all having the seismic potential that plant designers thought they had prepared for, but hadn't." Marcus says that for nearly four decades the Fukushima plant operated better than expected, "considering that nuclear engineers had resigned from GE because of the Mark I reactor design flaws. ... Ken Bridenbaugh, one of the engineers who quit GE, put it this way: 'The Fukushima situation is a direct result of Mark I containment' which he said "is less forgiving than some other reactors."

TVA To Discuss Nuclear Safety. The Tennessean (4/14, 129K) reports, "Nuclear issues are high on the agenda of the Tennessee Valley Authority's board meeting today in Chattanooga." According to the report, "TVA, the nation's largest independent power producer, has been aggressively pursuing building more nuclear power into its system." The Tennessean mentions that the "meeting, which is open to the public, begins with an opportunity for public comment at 8:30 a.m. EDT."

TVA May Delay MOX Use Decision. The Augusta Chronicle (4/13, Pavey, 64K) reported the TVA could seek "more time to determine whether its commercial nuclear reactors can use mixed oxide fuel to be made at Savannah River Site." Ray Golden, TVA's senior nuclear spokesman, said: "All of our nuclear programs now have to be looked at through the lens of what's going on in Japan." The Chronicle said the TVA "has an interagency agreement with the National Nuclear Security Administration to evaluate using MOX fuel at its two Sequoyah reactors in eastern Tennessee and at Browns Ferry's three reactors in Alabama."

Bellefonte Proposal Criticized. In an entry for the Clean Energy News (4/13) "Footprints" blog, Stephen Smith of the Southern Alliance for Clean Energy criticizes the proposal to revive TVA's moth-balled Bellefonte nuclear reactor. He said the reactor was "designed in the late 1960s" and "in many ways Bellefonte is similar to another relic of the era, the antique Ford Pinto," which is widely believed to be one of the worst cars of all time. The blog posting said "aside

from cost considerations, many safety and technical issues loom large at Bellefonte," and "all of these factors make completing the antique Bellefonte nuclear 'Pinto' reactors a risky proposition for TVA management."

Long Island Officials Concerned About Millstone Station. Newsday (4/14, Altherr, 321K) reports, "With the shadow of the Millstone nuclear power plant at its doorstep, Southold Supervisor Scott Russell has asked the town's congressional representatives for a community meeting with federal Nuclear Regulatory Commission officials to talk about the health of the Connecticut facility. At the top of the agenda would be a possible expansion of evacuation routes in the wake of Japan's recent nuclear disaster." He "joins a list of elected officials taking another look at Millstone, which sits across the Long Island Sound in Waterford, Conn., after radiation leaks from the Fukushima Dai-ichi power plants in Japan followed last month's earthquake and tsunami."

Connecticut Tax Plan On Nuclear Generation Draws Opposition. The Connecticut Mirror (4/14, Becker) reports, "A legislative plan to tax the state's two active nuclear power plants could threaten jobs, send the wrong message to businesses and lead to higher electricity rates, lawmakers, municipal officials, business and labor leaders and the operators of the plants warned Wednesday." Sen. Andrea L. Stillman said, "This targeted, seemingly vindictive initiative would undermine and destabilize an entire region of our state." Dominion's David Christian adds, "One would be that rates would go up due to the fact that the higher cost would be passed on to the consumers through higher electric rates. ... Or the plant would become uneconomic to operate and it would be forced into closure, following which electric rates would increase as well."

The WFSB-TV New Haven (4/14) website reports, "The bill would tax generators of electricity to provide relief for ratepayers, finance alternative energy and raise \$340 million in revenue - including \$332 million from Millstone nuclear plants." Dominion's Dan Weekley said, "Dominion is not threatening to close Millstone. What we are saying if Senate bill 1176 were to be passed, the Legislature would be forcing us to shut down."

The AP (4/14) reports, "Sen. John Fonfara, co-chairman of the Energy and Technology Committee that approved the legislation in its first legislative test, said Dominion 'is going to say the sky will fall' if the tax ultimately becomes law." He contends, "Ratepayers are overpaying for electricity and will benefit from a portion of the revenue that would be returned." The AP article also appeared on the websites of the Hartford Business Journal (4/14), the Boston Globe (4/14, Singer, 244K) and MSNBC (4/14).

The New London Day (4/14, Reindl), WTNH-TV New Haven (4/14, Davis), New England Cable News (4/14), Reuters (4/14) also provide coverage of this story.

In a letter to the New London Day (4/14), New London resident Kathy Cole writes, "I urge the legislators not to pass the proposed \$332 million tax on Dominion."

Safety Grades At Wisconsin Plants Markedly Improved In Recent Years. An article in the Milwaukee Journal Sentinel (4/14, Content, 202K) reports that the safety grades at the three nuclear reactors in Wisconsin have improved "markedly in the past few years" and "as a result, the two-reactor Point Beach plant and the single-reactor Kewaunee plant won't be subjected to extra scrutiny from regulators this year, even as public interest in the safety of nuclear energy has been heightened following the disaster at the Fukushima Dai-ichi plant in Japan." For the plants, "the improved safety ratings mean they won't face the additional layer of examinations they were subjected to for parts of the past decade." According to Dominion's Mark Kanz "the plant has worked to improve its safety performance in recent years, earning the NRC equivalent of an 'A' grade the past two years." He adds, "It's taken a lot of hard work for us to get there, and that's where we intend to stay."

Vermont Yankee Opponent Says Consumers Should Use Less Energy. Vermont's Commons (4/14, Peters) reports, "Robert 'Jake' Stewart, one of the charter members of the New England Coalition on Nuclear Pollution (NEC), believes that the economic impact of Vermont Yankee's closure cannot outweigh the consequences of a disaster at the plant" and he reminds people that the "decommissioning process will require skilled employees." Even so, he said, "people need to conserve energy. 'We need to stop the increase of energy use,' said Stewart," who said people should "develop more 'energy efficient systems,' and governments could provide more incentives to people developing alternative energy and technologies."

Texas Senate Approves Radioactive Waste Oversight Bills. According to the Texas Tribune (4/14 Gonzalez), the "Texas Senate passed a couple of bills that outline how the Texas Low Level Radioactive Waste Disposal Compact Commission will oversee the Texas Low Level Radioactive Waste Disposal Compact, which was established" by SB 1504 and would allow the "compact, which currently consists of only Texas and Vermont, to bring domestic waste to a facility in Andrews County." Also, SB 1605 "establishes the compact commission as an independent entity answering to the Texas legislature,

according to State Sen. Kel Seliger, R-Amarillo, the bill's author."

Output Increased At Beaver Valley, Browns Ferry Plants. Bloomberg News (4/14, McClelland) reports, "US nuclear-power output rose for a third day as plants in Alabama and Pennsylvania boosted energy production, the Nuclear Regulatory Commission said." Production across the country "increased 514 megawatts," to "77,568 megawatts, or 76 percent of capacity, according to an NRC report today and data compiled by Bloomberg." FirstEnergy boosted output from Beaver Valley Unit 1 to 100 percent of capacity, while the Tennessee Valley Authority increased production from Browns Ferry unit 2 reactor "to 98 percent of capacity from 82 percent yesterday."

Budget Compromise Appears To Deliver Final Blow To Yucca. The Las Vegas Review-Journal (4/14, Tetreault, 178K) reports that budget compromise details released Tuesday confirmed Senate Majority Leader Harry Reid's (D-NV) claim that funding for the Yucca Mountain project had been zeroed out. The article says Reid also was successful in removing a measure that would've stopped the NRC from closing down its review of the DOE's Yucca Mountain construction license application.

Southern Chairman Fanning Touts Energy Policy At US Chamber Of Commerce. The Atlanta Business Chronicle (4/14) reports Southern Co. Chairman, President and CEO Thomas Fanning "told an audience at the US Chamber of Commerce 'CEO Leadership Series' Luncheon in Washington, D.C., the nation needs full portfolio of energy resources combined with a big R&D effort to create new energy technologies." In addition, Fanning reiterated Wednesday the electricity producer's "support for new nuclear energy," noting that "good energy policy means 'a healthier economy and better prospects for job creation.'"

The AP (4/13) reported Fanning said "a new nuclear power plant proposed for eastern Georgia would be safer than the existing US nuclear fleet, and the utility building it plans to proceed despite the ongoing nuclear crisis in Japan." He said spoke out against "attempts by the Obama administration to tighten pollution controls on coal-fired plants, saying the industry was 'under attack,' AP added. The utility "expects federal safety regulators to decide by the end of the year whether the utility can build two more nuclear reactors at the Vogtle Electric Generating Plant near Waynesboro," the article noted.

Fanning, whose firm picked Westinghouse Electric Co.'s AP1000 reactors for the new project at Plant Vogtle, said the reactor design is "'a completely different approach to nuclear safety' because of its extensive use of passive

systems," according to Platts (4/14, Freebairn). Moreover, "The Vogtle site is not seismically active and is 130 miles from the coast," he added.

Southern Co. Chief Says Japan Atomic Crisis Shouldn't Cast A Shadow Over US Nuclear Plans. Bloomberg News (4/14, Mcquillen) reports Fanning, "whose company won \$8.33 billion in US nuclear loan guarantees last year, said the nation should build reactors without letting radiation releases from a Japanese plant 'distract us from what we must do here.'" He said, "We need all the arrows in the quiver." Fanning added: "We need nuclear. We must preserve coal as a resource for America's energy future. We need natural gas, but it is not a panacea. We need renewable, but let's recognize its limitations."

In a "Washington Wire" blog entry for the Wall Street Journal (4/14, 2.02M), Stephen Power criticized the Obama Administration's plans to set limits on greenhouse gas emissions and pollutants such as mercury, noting the move would lead to loss of thousands of jobs, while increasing energy costs. The E&ENews PM (4/13, Mandel) and Power-Gen Worldwide (4/13) also covered Southern Co. CEO's comments at the US Chamber of Commerce.

Rockland County Executive Says Plant Should Be Closed. The Nyack-Piermont (NY) Patch (4/13, Siegel) reports, "Rockland County Executive C. Scott Vanderhoef said Tuesday that while he is confident in the government's Indian Point evacuation plan, he still believes the nuclear plant should ultimately be closed." During a Rockland County Government Day at Rockland Community College, Vanderhoef said his goal must be to "assure the safety and health of every single resident," and if "I can't do that, then the question becomes is nuclear power at that site, in this densely populated area, worth the cheap electricity it produces. And my response is no, that it should be closed."

Author Reflects On Growing Up Near Indian Point. In a personal essay in the New York Times (4/14, Subscription Publication, 950K), author Amanda Petrusich writes of her youth, growing up in Buchanan, N.Y., "a tiny, mostly working-class village in northern Westchester County," which is "home to the Indian Point nuclear power plant." Petrusich adds that one day her mother saw "a man with a sack of unwieldy equipment roaming our backyard, uninvited." He said he'd been "sent to survey our land — and all areas surrounding Indian Point," mentioning "something about 'fault lines.'" She says her aunt contracted thyroid cancer and she still wonders "if Indian Point contributed to her disease."

Retrospective Recalls Con Ed's Attempt To Site Nuclear Plant In New York City. On its "City Room" blog, the New York Times (4/13, Newman, 950K) reports that when Consolidated Edison built Indian Point plant

30 miles north of New York City, the company "had more ambitious plans," applying in December, 1962 "to the Atomic Energy Commission to build the world's largest nuclear plant, with a capacity of a thousand megawatts, more power than all the other atomic plants in the United States put together." Con Ed said it wanted to site that plant "on the East River waterfront in Long Island City, Queens, less than two miles from Times Square." The Times says that while the notion of "siting a mammoth nuclear generator in the heart of New York City seems preposterous now," at the time, "it was not unthinkable." The world "watched as the yearlong struggle, now all but forgotten, over Con Ed's proposed Ravenswood nuclear plant played out."

INTERNATIONAL NUCLEAR NEWS:

Fukushima Stabilization To Take Until June, Source Says. Bloomberg News (4/14, Clenfield) reports, "Tokyo Electric Power Co. estimates the fight to stabilize its crippled Fukushima reactors will last through June, leaving the plant vulnerable to further earthquakes and radiation leaks, according to a person briefed by the utility on its recovery plan." According to the unnamed sources, TEPCO engineers "have so far rejected a proposal to flood reactors at its damaged plant, which could lower the temperature in days rather than months." TEPCO "has been reluctant to flood the reactors because it could increase the amount of contaminated water that eventually flows into the ocean, according to the person. The utility is also concerned that pushing in more water could raise the risk of more explosions because it would compress hydrogen inside the containment."

Meanwhile, Reuters (4/14, Saoshiro, Nakagawa) reports that engineers at the Fukushima Daiichi plant are now concerned that some of the spent fuel rods may have been damaged during the initial earthquake and tsunami and may be emitting high levels of radiation. However, TEPCO said the majority of the roughly 1,300 spent fuel rods at the No.4 reactor are presumed to be undamaged.

Japan's Asahi Shimbun (4/14) reports that TEPCO officials "are considering a plan to remove spent fuel rods from storage pools at its reactors," according to sources. "TEPCO workers began collecting samples of water from a storage pool at the plant on Tuesday to help assess the condition of the spent fuel rods and the feasibility of the plan." High levels of radiation and damaged equipment may complicate the removal effort, though.

US Commander Sees "Incremental" Progress At Reactor. Meanwhile, Bloomberg News (4/14, Cook, Capaccio) reports Navy Admiral Robert Willard, US Pacific Command commander said that "the situation at Japan's

Fukushima nuclear power plant is 'improving every day,' and the government's increase of the accident-severity rating doesn't indicate the status is worsening." Said Willard, the top US commander in the region, "I think it's actually getting incrementally better," adding, "We regard it as static, not yet completely stable, but it's improving every day." He went on to say regarding Japan's Nuclear and Industrial Safety Agency's decision to raise the severity rating of its nuclear crisis to 7, matching the 1986 Chernobyl disaster in Ukraine, "Though that status has changed to 7, we continue to see incremental improvement in the overall stability of the situation."

TEPCO Works To Begin Repairs On Fukushima Plant's Cooling Systems. Reuters (4/14, Uranaka, Fujioka) reports that as tests showed spiking radiation levels in the sea near the stricken Fukushima Daiichi nuclear plant, TEPCO said it was working on a detailed plan to halt the crisis, as engineers continued toward the goal of removing the highly radioactive water from one of the crippled reactors, which would allow for desperately needed cooling system repairs. Prime Minister Naoto Kan said the nuclear crisis is "slowly stabilizing, step by step, and the emission of radioactive substances is on a declining trend."

Aftershocks Pose Ongoing Threats To Reactor, Generators To Be Moved. Bloomberg News (4/14, Sato, Inajima) reports that "aftershocks rattling Japan after the nation's record quake on March 11 may continue for at least six months, increasing the risk of damage to a crippled nuclear plant at the center of the worst nuclear crisis since Chernobyl." Teruyuki Kato, a professor at the University of Tokyo's Earthquake Research Institute, said, "Aftershocks as big as magnitude-7 are likely to continue hitting in eastern and northern Japan for at least six months." While Kazuya Idemitsu, a professor of nuclear engineering at Kyushu University, said that "reactor containment vessels at the nuclear plant that have been flooded with tons of water to keep fuel rods cool are at risk in the event of another big quake." Said Idemitsu, "One of my concerns is that the containment chambers may have been compromised to some extent," and another strong aftershock could damage parts like "pipe joints and cause more radioactive water to leak."

Meanwhile, in a separate story, Bloomberg News (4/14, Nakayama, Inajima, Okada) reports Tokyo Electric Power Co. said it "will move backup generators at its crippled nuclear plant to higher ground away from the sea to ensure cooling systems aren't disrupted by future tsunamis, as aftershocks rattle Japan." TEPCO spokeswoman Takeo Iwamoto said, "Emergency diesel-powered generators will be moved to higher ground, and work for connecting them into the power distribution unit will be carried out around April 19."

TEPCO To Seek Restart Of Reactor Shut After 2007 Earthquake. Bloomberg News (4/14, Inajima, Okada, Nakayama) reports Tokyo Electric Power Co. plans to seek government approval to restart the nuclear reactor at Kashiwazaki Kariwa, which was shut after a 2007 earthquake, in order to address power shortages. TEPCO President Masataka Shimizu said the reactor, "the world's biggest atomic station, is capable of supplying electricity this year," adding, "I would like to get approval to restart the No. 3 reactor early, this year if possible."

Residents Displaced By Radiation Protest, Demand Compensation. The AP (4/14, Kageyama) reports, "Angry residents forced from their homes near Japan's tsunami-stricken nuclear power plant protested at the Tokyo headquarters of the plant's operator Wednesday, demanding compensation as the company's president pledged to do more to help." The protest, which included about 20 small-business owners from communities near the Fukushima Daiichi nuclear power plant, "reflects growing public frustration" with TEPCO. TEPCO president Masataka Shimizu and other company executives "bowed in apology, once again, after Shimizu pledged to do more to compensate residents unable to return home or work."

In a separate story, the AP (4/14, Kageyama) adds that Shimizu said during a two-hour news conference following TEPCO officials' meeting with the protesters that "cash payments would be readied as soon as possible and the company would do its best to get the plant's reactors under control and stop radiation leaks." During the news conference, he "declined to comment on whether he would resign to show he is taking responsibility for the crisis. He said his job is to deal with it, along with the problems of those evacuated and concerns about the energy supply."

Hitachi, Toshiba File Plans To Dismantle Troubled Japanese Nuclear Reactors.

Bloomberg TV's Morning Call (4/13) reported in its "Inside Track" segment that "Hitachi and Toshiba have submitted" plans "to dismantle the crippled Fukushima nuclear plant." Anchor Deirdre Bolton "budgeting won't be easy because engineers say it could take up to three decades and cost \$12 billion."

The Wall Street Journal (4/14, Osawa, Smith, 2.02M) reports the two Japanese firms, Toshiba and Hitachi have confirmed they have each designed separate plans to decommission the nuclear reactors. Hitachi said it took help from its business partner General electric Co. along with two other US firms, Exelon Corp. and Bechtel Corp. The competing plan from rival Toshiba is based on help provided from Babcock & Wilcox Co. and Shaw Group Inc.

The Yomiuri Shimbun (Japan) (4/13, 13.8M) reported Toshiba Corp. has asked "rival Hitachi, Ltd. that the two

companies join hands in decommissioning the crippled reactors at the Fukushima No. 1 nuclear power plant in Fukushima Prefecture, The Yomiuri Shimbun learned Wednesday."

However, a report by Bloomberg News (4/13, Yasu, Shiraki) said Toshiba "denied a Yomiuri newspaper report that it approached Hitachi Ltd. (6501) to jointly propose dismantling Tokyo Electric Power Co.'s stricken Fukushima Dai-ichi plant." Spokesmen from both the companies denied the report.

Firms Eye Poland Nuclear Contract. The Warsaw Business Journal (4/13) reports, "In July of this year, Polish utility PGE is set to announce a tender for a technology supplier to support the construction of Poland's first nuclear power plant, daily Dziennik Gazeta Prawna reports." The paper said US-Japanese firm GE Hitachi, "US company Westinghouse and a French partnership comprising Areva and EdF are interested in obtaining the contract."

Bulgaria In Energy Pact With Areva. The AP (4/13) reported "Bulgaria has come to an agreement with France's nuclear engineering company Areva on future nuclear and renewable energy projects." The AP said Areva CEO Anne Lauvergeon told reporters Wednesday "that the company will provide nuclear safety expertise for Bulgaria's nuclear facilities." Bulgaria "has two 1,000-megawatt reactors at its only nuclear plant in Kozlodui."

Bloomberg News (4/13, Konstantinova) said the contract "envisages cooperation in future nuclear energy projects in Bulgaria's planned 2,000-megawatt Belene plant project in which Areva is a subcontractor of Rosatom Corp."

NRG Says Japan Atomic Accident Hurt Plans For Texas Reactors. Reuters (4/14) reports NRG Energy CEO David Crane said Wednesday the Japanese nuclear disaster has hurt plans by the company to build two reactors in Texas. The article said Tokyo Electric Power Co., the owner of the damaged Fukushima Daiichi plant, is a nuclear development partner of NRG, and after the accident, NRG decided to reduce spending on proposals to set up the reactors at South Texas Project.

China Could Block Approval Of Second-Generation Nuclear Projects. Reuters (4/13, Stanway), citing Li Xiaoxue of the state-owned China Guangdong Nuclear Power Corp., said China may block approvals of second-generation nuclear reactors as it takes stock of its long-term nuclear plans in the wake of the nuclear disaster in Japan. China has plans to eventually build third-generation reactors to meet its growing energy needs.

Areva Says Applying Lessons Learned To Cut Construction Times, Lower Costs. In a blog entry for Power-Gen Worldwide (4/13), Brian Wheeler wrote "the Areva EPR, or Evolutionary Power Reactor, has been criticized by opponents since construction began in 2005 on the Olkiluoto 3 (OL3) reactor in Finland." In spite of the criticism, "Areva continues to construct new plants worldwide and believes Generation III+ plants can be built, on-time and on-budget." The blog posting said "completion of OL3 is nearly three years behind schedule and 50 percent over budget," but Areva has "acknowledged the problems" and is "applying lessons learned to cut construction times and, in turn, lower costs."

German Cabinet Approves CO2 Storage Bill. AFP (4/13) reports, "Germany's cabinet approved a draft law on storing carbon dioxide underground on Wednesday after months of debate as Europe's top economy wrangles over energy policy following Japan's nuclear disaster." The measure, "which needs parliamentary approval and which implements a directive from the European Union, allows pilot and demonstration projects to go ahead of an assessment of its viability in 2017, the government said." According to the report, the bill "follows...months of debate with the governments of Germany's 16 states, and includes a clause giving them the say on where the storage sites are located."

Reuters (4/14, Wacket, Eckert) reports that the German government released the following statement regarding the bill, "The government today [has] agreed [on] a draft bill ... This created the pre-requisite for Germany's CCS-testing projects to attract EU funding." The article also mentions that Hildegard Mueller, director for the energy industry group BDEW, remarked that "the law is more than overdue."

In a separate story, Reuters (4/14, Eckert) reports on the details of the draft legislative measure.

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NRC NEWS:

US Nuclear Regulator Lets Industry Write Rules (PROPUB)

By John Sullivan

Pro Publica, April 14, 2011

In the fall of 2001, inspectors with the Nuclear Regulatory Commission were so concerned about possible corrosion at Ohio's Davis Besse Nuclear Power Station that they prepared an emergency order to shut it down for inspection. But, according to a report from the NRC inspector general, senior officials at the agency held off – in part because they did not want to hurt the plant's bottom line.

When workers finally checked the reactor in February of 2002, they made an astonishing finding: Corrosive fluid from overhead pipes had eaten a football-sized hole in the reactor vessel's steel side. The only thing preventing a leak of radioactive coolant was a pencil-thin layer of stainless steel.

The Davis Besse incident has resurfaced in the wake of the ongoing nuclear crisis at Japan's Fukushima Daiichi plant. Stories recounting close ties between Japanese nuclear regulators and utilities there have reinvigorated critics who say the NRC has not been an aggressive enough US watchdog.

The NRC says that is not the case, and commission Chairman Gregory Jaczko defended the agency's independence and professionalism. "I have a great staff who are dedicated to public health and safety, and people who interact with this agency, they know that and they see that," he said in an interview.

Critics of the NRC say the problem at Davis Besse, 20 miles southeast of Toledo, is a prime example of the agency's deference to industry. The inspector general concluded that a conflict between the NRC's twin goals of inspecting the plant to protect public safety and a desire to "reduce unnecessary regulatory burden" on the owner led to the delay in finding the gaping hole.

In 2003, then NRC's Chairman Richard Meserve disputed the inspector general's report, which found that the agency's decision on Davis Besse "was driven in large part by a desire to lessen the financial impact" the plant's owner. Meserve said the NRC had adequate technical grounds for the delay.

The agency insists that it vigilantly watches operations at 104 commercial reactors and frequently issues violations to nuclear companies that step out of line. Since 2001, the agency has averaged about 120 significant enforcement actions a year at power plants and other nuclear facilities it oversees.

While the Davis Besse case focuses on singular allegations of influence, critics say the industry routinely exercises its muscle in a more pervasive way: through contributions to NRC regulatory guides that advise nuclear companies about how to best follow the agency's rules.

Large parts of the guides, issued by NRC, incorporate or endorse material written by the industry's trade group, the Nuclear Energy Institute. The guides – containing detailed technical procedures and reference materials – are a key part of NRC's oversight. They provide the nuts and bolts advice that nuclear operators follow to stay in compliance but often refer to even more detailed industry guides.

The NRC's guide on fatigue, for example, details how many hours employees in key jobs can work, how to respond when a worker is too tired, and how many days off employees in certain jobs need. It officially incorporates, with a few exceptions, another 60-page guide compiled by the industry group.

In an e-mail, Thomas Kauffman, a spokesman for NEI, passed along responses to ProPublica's questions from the trade group's director of engineering, John Butler. "NRC endorsement, with or without exceptions, of industry guidance is a common practice," Butler said.

Some examples from a list the trade group provided to ProPublica:

How to apply for an operating license extension. Many aging plants are seeking to extend their original 40-year licenses. The 10-page NRC document endorses a 245-page NEI guide that tells applicants how to identify critical equipment and inspect it to be sure it meets relicensing standards.

How to protect plants from fires. The NRC's regulatory guide cites an NEI document that "provides the majority of the guidance applicable" for analyzing fire risk at plants, with some specific exceptions.

How to upgrade plant control rooms. The NRC regulatory guide says that "when possible, this guide has incorporated (NEI's) 'Control Room Habitability Guide,' " again with some limits.

The NEI said its role in contributing to NRC's guides does not mean the nuclear industry has too much influence. Kauffman said the NRC has final say on what NEI adds and frequently makes changes.

"They review them completely," Kauffman said. "It is one thing to draft something and put it out there; it is quite another for the NRC to decide to accept it."

NRC spokesman Eliot Brenner said in an e-mail that the NEI is not the sole source of information in agency regulatory guides and that NRC accepts comment from a broad array of sources.

"If any stakeholder – company, industry organization, individual or public group – backs up a request with appropriate information, the NRC will consider it," Brenner said. "The NRC regularly denies industry requests that lack proper support, and we've taken properly supported rulemaking requests from non-industry sources on many occasions."

"The NRC is the final arbiter of what becomes a regulation," he said, "with safety the total focus of our effort."

But others said the reliance on the industry creates a potential conflict of interest.

Jim Riccio, who follows nuclear issues for Greenpeace, said that allowing the NEI to play such a large role means the industry can shape much of what nuclear companies are required to do.

Riccio said NRC's precursor agency, the Atomic Energy Commission, was disbanded after Congress concluded it had become too concerned with promoting nuclear power instead of regulating safety.

In a 1974 overhaul, development of nuclear energy was transferred elsewhere and protection of the public was given to the NRC, a five-member body whose members are appointed by the president.

Riccio asserted that over the years, NRC has become more accommodating to the industry.

"The problem with inviting the industry in is that they tend to dominate the process," he said. "The NRC has a problem distinguishing between the public they serve and the industry they regulate."

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"The NRC is the final arbiter of what becomes a regulation," he said, "with safety the total focus of our effort."

But others said the reliance on the industry creates a potential conflict of interest.

Jim Riccio, who follows nuclear issues for Greenpeace, said that allowing the NEI to play such a large role means the industry can shape much of what nuclear companies are required to do.

Riccio said NRC's precursor agency, the Atomic Energy Commission, was disbanded after Congress concluded it had become too concerned with promoting nuclear power instead of regulating safety.

In a 1974 overhaul, development of nuclear energy was transferred elsewhere and protection of the public was given to the NRC, a five-member body whose members are appointed by the president.

Riccio asserted that over the years, NRC has become more accommodating to the industry.

"The problem with inviting the industry in is that they tend to dominate the process," he said. "The NRC has a problem distinguishing between the public they serve and the industry they regulate."

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Senate Panel Questions NRC Actions, Transparency (EED)

By Hannah Northey

E&E Daily, April 14, 2011

A key Senate committee yesterday grilled the country's top nuclear regulator on emergency actions he took in the wake of Japan's nuclear crisis and how regulators are weighing the safety of US reactors.

Environment and Public Works Chairwoman Barbara Boxer (D-Calif.) grilled Nuclear Regulatory Commission Chairman Gregory Jaczko on whether the agency is prioritizing the review of nuclear reactors in seismically active areas, notably California's Diablo Canyon Nuclear power plant and San Onofre nuclear generating station.

Jaczko said the commission will evaluate the two facilities as part of the agency's 90-day review of the country's 104 reactors, as well as undertaking a longer-term review once more information from Japan begins trickling in. But the chairman said the agency will not do "anything specific" for the two California plants.

The March 11 earthquake and tsunami that rocked Japan severely damaged the country's Fukushima Daiichi nuclear plant. Jaczko said the situation at the site is "static" but not "stable" and that officials remain focused on providing long-term cooling to the reactors and spent fuel pools.

Boxer acknowledged it is unlikely California could see a massive earthquake like the magnitude 9 Japanese temblor but said regulators must prepare for any situation. She pointed to announcements this week from two California utilities calling for increased seismic studies for their nuclear reactors.

"We've got to respond in a much different way, and I just don't feel the humility from all sides here," Boxer said.

Before the nuclear crisis in Japan, officials there had been "bragging about how this could never happen" and touted nuclear power, and "now they can't even figure out how to stop the darn thing," Boxer said.

But the chairwoman applauded the proactive steps the utilities in California are taking.

Pacific Gas and Electric Co. said Monday it will accelerate advanced 3-D seismic studies related to the Diablo Canyon Nuclear power plant and has asked NRC to delay final action on its license renewal application for the reactors until the studies are complete, according to a statement the company released.

Separately, Southern California Edison announced yesterday the company will file a funding authorization request with California state regulators for \$64 million to conduct seismic studies related to the San Onofre generating station.

Meanwhile, Environment and Public Works ranking member James Inhofe (R-Okla.) yesterday accused Jaczko of inappropriately invoking emergency authority after the Japanese disaster.

Inhofe said Jaczko cited emergency authority to transfer commission functions to himself in the wake of the Japanese crisis and failed to inform the Senate committee of such actions.

The emergency authority the chairman is given occurs in the wake of events such as a crisis at a particular facility, but Inhofe maintained that he is not "aware that an emergency condition exists at any US facility."

Jaczko denied the claims and maintained that he has been acting within his current authority as chairman and said he has continuously communicated with Congress and with his own commission members.

Japan Nuclear Reactors Remain Unstable (INTLBIZ)

By Alyangka Francheska

International Business Times, April 14, 2011

The chairman of the US Nuclear Regulatory Commission told a Senate committee hearing on Tuesday that Japan's damaged nuclear reactors at the Fukushima Daiichi power plant is "static" but remains "unstable" with just an improvised cooling system.

Gregory B. Jaczko told the Senate, "We don't see significant changes from day to day,. However, he clarified that the risk of additional radiation releases diminishes everyday.

At the hearing, Jaczko told members of the Senate Environment and Public Works Committee that Japanese engineers have not yet re-established a long-term regular cooling of the reactors or a regular system to deliver water to the spent-fuel pool.

He made his assessment that the situation at the nuclear power plant is "not stable" and this would prevail until "that kind of situation would be handled in a predictable manner."

Nuclear Engineer Asserts Lack Of US Radiation Monitoring (HUNTNN)

Huntington News Network, April 14, 2011

Nuclear Engineer , Arnie Gunderson in this newly released video discusses why the Toyko Electric Power Company announcements of increased accident severity should not be a surprise. He discusses similarities of Chernobyl, Three Mile Island, and Fukushima.

Gunderson, an independent nuclear safety expert for Fairewinds Associates, tells how governments limit public access to radiation dose data.

Finally, he responds to numerous email inquiries regarding the Fukushima accident.

Images Of Japan Nuclear Crisis Loom During Meeting At St. Lucie Plant (TREASCOS)

By Tyler Treadway

Treasure Coast Palm, April 14, 2011

HUTCHINSON ISLAND — With the recent nuclear disaster in Japan on their minds, several residents voiced concerns about the safety of the St. Lucie Nuclear Power Plant at a meeting Wednesday with representatives of the US Nuclear Regulatory Commission staff and Florida Power and Light Co.

Of particular concern: the safety of storing spent fuel rods at the nuclear plant on Hutchinson Island, the same type of rods that, in the aftermath of Japan's March 11 earthquake, released radioactivity at Japan's Fukushima Daiichi nuclear facility.

"How can the (commission) and FPL possibly ensure the health of the people here," asked Bonnie Howard of Lakewood Park, "when there are unending safety and security issues and long-term storage issues? ... Why do we continue to use a dangerous source of energy?"

Marty Tormey, a winter resident of Fort Pierce, noted that wind and solar power account for very small percentages of the power produced in the country and added, "Until a better alternative is found, I need this facility."

Commission representatives at the meeting went to great lengths to argue that the situations in Japan and Hutchinson Island are dramatically different.

Rick Croteau, the commission's director of reactor projects for the region that includes Florida, said an earthquake like the one in Japan is highly unlikely in Florida.

"That's what they said about Haiti," said Suki deJong of Boynton Beach, "before there was an earthquake there."

Croteau said the St. Lucie plant was designed to withstand "the maximum earthquake that's possible in this area."

Noting that a hurricane storm surge is more likely than an earthquake-generated tsunami, Timothy L. Hoeg, the commission's senior resident inspector at the St. Lucie facility, said the plant is built to withstand the area's maximum predicted surge: 17 feet.

"The ground level at the site is 19 and a half feet," Hoeg said, "and most of the doors and watertight seals are built higher than that."

Hoeg said the plant's spent rods are stored "in a heavy-duty concrete structure" with "two complete subsystems to handle the heat so that if one fails, there's a backup."

Croteau said enough fuel is stored at the nuclear plant to power generators for seven days.

"Just a week?" asked Cara Jennings of Lake Worth, noting that the Fukushima Daiichi nuclear facility has been without power for about a month.

"The idea is that more fuel can be brought to the site within that time if it's needed," Croteau said.

Herman Berg said he'd be satisfied if the commission and FPL officials "make sure you keep learning from what has happened in Japan as well as at Chernobyl and at Three Mile Island."

Lots Of Questions And A Banner At FPL Nuclear Plant Safety Meeting (PALMBEACHP)

By Susan Salisbury

Palm Beach Post, April 14, 2011

JENSEN BEACH — Herman Berg lives about 10 miles from Florida Power & Light Co.'s St. Lucie nuclear plant on Hutchinson Island, and he's worried about how the island would be evacuated if there were some type of disaster.

"With a telescope, I can see this building," Berg told FPL and Nuclear Regulatory Commission officials at a meeting at the plant today. "There's only one way off this island."

Berg was one of about 40 South Florida residents who attended an annual safety assessment meeting at the plant, mostly seeking answers about the plant's readiness in case of a disaster. The plant met all safety requirements in its 2010 review, NRC officials said.

With Japan's nuclear disaster on their minds, the residents wanted details about the reliability of backup systems for keeping St. Lucie's spent fuel pools cooled, information about fuel storage in casks, the plant's water supply, health risks to the public and more.

The meeting had its lively moments, such as when former Lake Worth City Commissioner Cara Jennings and Cici Claar, also of Lake Worth, unfurled a "Don't Nuke Florida's Future," hand-painted banner across the front of the room.

"I am sure they had similar meetings in Japan," Jennings said as NRC officials told the pair to step aside.

Bonnie Howard, a Fort Pierce resident who lives about 20 miles from the plant, said, "I don't doubt the sincerity of FPL and the NRC, but in light of the worsening situation in Japan, how can the NRC and FPL possibly assure the health of the public?"

Howard wants to see FPL, which has three solar plants and has been thwarted thus far in its plans for a wind farm, seek to develop a wind farm here, then shut down its nuclear plants in St. Lucie and Miami-Dade counties.

"I no longer want my tax and ratepayer dollars to subsidize and safeguard this industry which could destroy my life," Howard said. "No one has died from wind and solar."

St. Lucie's Nuclear Power plant has two unit reactors; the first went online in 1977, the second in 1983. The plant employs over 800 people.

Unlike Japan and the northwestern US, the plant is not in an earthquake zone, but of course, has been in the path of hurricanes.

"A tsunami is not possible here. What is possible is a hurricane storm surge of 17 to 17.5 feet. The plant is 19 feet above sea level," said Rick Croteau, NRC's regional director of reactor projects.

NRC's resident inspector Tim Hoag said the plant has two redundant systems to ensure the spent fuel pools cooling system keeps working.

Although the NRC reviews evacuation plans, those are primarily the responsibility of counties and states, Croteau said.

That response did not go over well with Lake Worth resident Stan Smilan, who also had concerns about the plans for distribution of iodine pills, specifically in the form of potassium iodide, in case of a nuclear accident involving the release of radiation.

Smilan became agitated and pointed a finger as he accused NRC officials of shirking their duties, but Croteau stressed the agency's role is to license and regulate nuclear plants.

Hutchinson Island resident Marty Tormey said he believes the plant is safe and said other forms of electric power, such as coal and gas, have killed people.

"I need this power to keep things going," Tormey said. "There's no such thing as a free lunch."

Nuclear Regulatory Comm. Reviews St. Lucie Power Plant (WPTV)

By Marci Gonzalez

WPTV-TV West Palm Beach, FL, April 13, 2011

ST. LUCIE COUNTY, Fla. - The frightening images from the Fukushima Nuclear Plant in Japan sparked some unease about the power plant on Hutchinson Island.

The concerns of residents from the Treasure Coast to Palm Beach County were expressed Wednesday in a meeting at the Saint Lucie Power.

Members of the United States Nuclear Regulatory Commission were in town offering their annual assessment of the plant, and paused to answer questions from the public.

Rick Croteau with the NRC explained, "The plant is designed for earthquakes within the large area but this is a very low seismic zone so it's a very small earthquake."

While they say there is virtually no risk of a disaster mirroring the one in Japan, the concern here, of course, is with hurricanes.

The crowd was assured that the St. Lucie Plant is prepared. Florida Power and Light officials say it can withstand the strongest hurricane, and is built 20 feet above sea level, which is several feet higher than what experts estimate a storm surge could ever be in the area.

Michael Waldron, the Director of Nuclear Communication for FPL, says there are many other safeguards in place. He explains, "We train for the worst case scenarios constantly, so 1 week out of 6, our plant operators are trained and tested against the most stressful situations they could encounter."

While this year, the NRC gave the St. Lucie Power Plant excellent marks in its review, the NRC says Japan is teaching everyone a lesson in how to be even more prepared for the unforeseen.

FPL says, while these public meetings are rare, anyone can stop by the Energy Encounter building at the plant to learn more in depth how the plant works and how they're prepared for a disaster.

NRC Gives St. Lucie Nuclear Power Plant Green Light For Safety (WPBF)

Residents Pack Annual Meeting To Voice Concerns In Wake Of Japan Disaster

By Terri Parker

WPBF-TV West Palm Beach, FL, April 13, 2011

HUTCHINSON ISLAND, Fla. –

Officials from the Nuclear Regulatory Commission held a public meeting Wednesday on their 2010 review of the St. Lucie County nuclear power plant on Hutchinson Island.

"It got a clean bill of health and will not get any unusual oversight other than our baseline inspections," said NRC spokesman Joey Ledford.

Concerns about the safety of US nuclear plants have grown since the tsunami in Japan created a crisis at the Fukushima Dai-ichi nuclear facility, where radiation leaked after the earthquake and tsunami.

Residents packed the Florida Power and Light meeting room, which are usually not so popular, according to FPL.

Some wanted to know if a hurricane or other disaster could damage the reactors or spent fuel storage areas and release radioactive material.

FPL's Michael Waldron said no. "For example, in the case of our Turkey Point plant, in 1992 it got a direct hit from hurricane Andrew and performed exactly as expected. Here at St. Lucie, hurricanes Jeanne and Frances, one after another, hit this plant directly and it survived just fine," said Waldron.

Some still weren't convinced and called some answers vague.

"You said if you needed more water you could just throw a hose into a canal? I mean, to me a canal isn't going to cool down a nuclear power plant," said Jennings.

And Stan Smilan, a retired airline pilot, ranted against what he said was a callous attitude from officials on the possibility of radioactive damage.

"Now can you honestly tell me that you think that an evacuation could take place here, when this site is here, you could get these people out of here?" asked Smilan.

Officials said they were prepared for any evacuation scenario.

Another big concern: how safe are FPL's used fuel rods?

FPL has run out of room to keep all of its spent fuel in cooling tanks, and for several years, has stored them in containers, called dry casks.

According to the Nuclear Energy Institute in Washington, Florida has 3,002 tons of discarded rods sitting in the stainless steel and concrete pools filled with recirculating water. St. Lucie County stores its used rods in pools and in dry cask storage. FPL could not immediately provide details on how many tons of spent fuel it had on-site, and how much it was originally licensed for.

"The amount is irrelevant. They license you to store it. We take it out of spent fuel pools and put it in dry storage," said Waldron.

"It's our position that dry cask storage is perfectly safe. This system has been used since the nuclear industry began so there's some spent fuel that's been on-site for 30 years or more," said Ledford.

The federal government is supposed to come up with a solution to the spent fuel problem, but so far hasn't, which is why many nuclear plants have amended licenses to store the spent fuel on-site.

"The important fact to remember when you're talking about spent fuel is that the federal government was supposed to start assuming responsibility for that 13 years ago, in 1998. Since that time we and every other nuclear plant in the country has moved to an alternative solution, which in the case of the St. Lucie plant is dry storage, which is a very safe way to maintain the fuel for a long time until the government comes up with a way to store it," said Waldron.

Japanese Disaster Raises Interest In Today's Open House On St. Lucie Nuclear Plant Safety (PBP)

By Susan Salisbury

Palm Beach (FL) Post, April 13, 2011

ST. LUCIE COUNTY — Once, the thousands of 12-foot-long rods now being stored in 40-foot-deep pools of water at Florida Power & Light Co.'s two nuclear plants in the region — one on Hutchinson Island and the other in Miami-Dade — helped power the state's electric grid.

Their job is done. However, the used, or "spent," fuel rods have not gone anywhere. They're still at the St. Lucie and Turkey Point nuclear plants, they're still close to population centers on water and they're still radioactive. The pile of waste continues to grow.

The unfolding calamity with issues of cooling fuel rods at Japan's Fukushima Daiichi nuclear facility has drawn renewed attention to the safety of US nuclear plants.

Nuclear officials plan to visit the St. Lucie plant at 1 p.m. Wednesday to hold a public meeting on last year's safety review, and Nuclear Regulatory Commission officials say they have found more public interest since the Japan crisis began.

Should we be worried about the huge amounts of spent fuel stored in our state? The industry says no, but watchdog groups and others have concerns.

"Our federal regulatory and operating history proves that this can be done safely and securely," FPL spokesman Michael Waldron said. "We are supportive of the government's effort to try and identify a permanent disposal solution."

David Lochbaum, director of the nuclear safety project at the Union of Concerned Scientists, said spent fuel pools are among the most vulnerable spots at a nuclear plant. They are housed in buildings that aren't as strong as those that house reactors.

"It would be hard to manage this hazard (more) foolishly. The federal government's ineptitude in disposing of spent fuel has left Americans across the country exposed to elevated and undue risks," Lochbaum said.

The situation is the same at most of the nation's 104 reactors on 65 sites in 31 states. An additional 15 closed reactors also hold spent fuel.

The best plan would be to transfer spent fuel that has been out of the reactor for at least five years into dry casks, then spread the remaining fuel as far as possible, Lochbaum said.

South Miami Mayor Philip Stoddard, a Florida International University professor who lives about 17 miles from Turkey Point, said some hurricane models show storm surge coming to the brink of the plant.

In 1992, Hurricane Andrew devastated Homestead and damaged Turkey Point, which had been shut down before the storm. NRC reports issued in 1993 and 1994 stated that although the plant's reactors were not compromised, damage to the plant's stack, ductwork and monitoring equipment would have prevented monitoring a radiological release if it had been necessary to do so. There was no damage to safety-related structures, the reports said.

"I do believe the facility is vulnerable," Stoddard said. "With Hurricane Andrew, the plant got the clean side of the storm. If you have been around for some of these storms, stuff comes loose. Imagine a construction barge coming loose and bludgeoning the spent fuel pool."

James Tulenko, director of the Florida Laboratory for Development of Advanced Nuclear Fuels and Materials for the University of Florida, said the spent fuel pools in Florida do not pose a health risk.

"However, they do require either maintenance of the spent fuel cooling system or, in case of a power failure, maintenance of the water level to offset evaporation," Tulenko said.

Waldron said FPL's plants have multiple redundant systems to ensure there is adequate power to operate the spent fuel pool cooling systems.

Tulenko said all of Florida's spent fuel pools are next to reactors rather than on top of them, making them easy to maintain. Dry casks are safe and require no maintenance, he said.

Florida has 3,002 tons of discarded rods sitting in the stainless steel and concrete pools filled with recirculating water, according to the Nuclear Energy Institute in Washington. The pools are in steel-reinforced concrete buildings.

Although the pools' racks have been reconfigured to hold more than originally designed for, space is running out. At the St. Lucie plant on Hutchinson Island, 197 tons of rods are in concrete and steel casks, and cask storage is under construction at Turkey Point in Miami-Dade County.

"Almost every plant in the country is currently out of storage space or will be soon," said Roger Hannah, Atlanta-based spokesman for the Nuclear Regulatory Commission. "Spent fuel pools were designed for a limited time period with the expectation that the US government at some point would provide a permanent site for disposal."

"Everything is planned many years in advance," FPL's Waldron said. "We know exactly how much fuel there is, where it is and what our margin is of what any pool can handle safely."

Federal law required the US Department of Energy to begin moving used fuel from plant sites in 1998, but it has not begun to do so. The nuclear industry has poured more than \$35 billion in fees into a nuclear waste fund and is required to continue to do so. Of that, \$11 billion was spent to prepare Yucca Mountain in Nevada as a repository. However, the Obama administration has said it will not pursue the Yucca deal, and in January it appointed a blue-ribbon commission to study the issue. A final report is expected by late 2012.

Spent fuel pools are among the issues a Nuclear Regulatory Commission task force is reviewing as the agency looks at its regulations and programs in light of the March 11 Japan earthquake and tsunami. The six-member task force plans to report its recommendations at a July 19 agency meeting.

With more casks needed to store spent fuel, companies such as Jupiter-based Holtec International, one of three US companies in the business, are meeting the demand.

Joy Russell, Holtec's sales and marketing manager, said the firm has manufactured more than 400 casks in use in the US and Spain. It also manufactures high-tech spent fuel pool racks that can quintuple storage space.

The \$1.5 million cask's "overpack," or outside cask, is about 8 feet in diameter and 20 feet tall. It has two carbon shells and 27 inches of concrete. A stainless steel canister is stored in the inner cavity.

"Since the mid- to late '90s, the demand has increased because the spent fuel pools have been filling up," Russell said.

The NRC's Atomic Safety and Licensing Board has determined that Holtec's cask system can withstand the impact of a crashing F-16 fighter jet, Russell said.

Though some countries, such as Russia and France, recycle spent nuclear fuel, the US government has not allowed reprocessing since 1978 because of concerns about plutonium, which can be used to make atomic weapons.

The bottom line, experts say, is that while spent fuel is being stored safely, centralized, secure storage is needed. Until then, every precaution should be taken.

"At some point, spent fuel needs to be disposed of in a federal repository. But even if that repository were to open tomorrow, spent fuel will be stored on site for a decade or longer," said Lochbaum, of the Union of Concerned Scientists.

"We need to take steps to better manage that known risk before our luck runs out."

Legislators Ask NRC Tough Questions, Local Officials And Pilgrim Critics Give Their Best Answers (OCM)

By Frank Mand

Old Colony Memorial, April 14, 2011

As the state met with representatives of New England's nuclear power plants and their critics last Wednesday, Gov. Deval Patrick, Senate President Therese Murray and Speaker of the House Robert DeLeo released a series of 22 questions legislators are asking 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.

Ten of the 22 questions have to do with spent-fuel rods and their storage.

Does the federal government have any new plans for storage or is dry cask storage the solution, at least on an interim basis?

Patrick, Murray and DeLeo also want Jaczko to comment on whether there are plans to strengthen the fuels stored in the upper levels at Pilgrim against aerial attack, or relocate the wet pool to a more secure location.

Town Manager Mark Stankiewicz says Plymouth does not have the expertise, nor the funding, to effectively monitor Pilgrim. The town must by necessity rely on others for that oversight.

But Stankiewicz says the town doesn't need experts to tell them that Plymouth is being asked to do more than was original conceived when the plant began operation, including serving as a long-term storage facility for spent fuel.

"If the Federal government is not going to pursue a national long-term solution" for spent-fuel storage, Stankiewicz said, "it would only be fair to use the funds earmarked and paid by the nuclear industry and the ratepayers for interim local storage."

Nuclear power critic and Plymouth resident Wedge Bramhall is sympathetic, to a point.

"It isn't easy planning a (spent fuel) repository," Bramhall says, "(a repository) that will have to last for tens of thousands of years. And who would allow it to happen in their town or state for any amount of money?"

Mary Lampert, head of Pilgrim Watch, says first things first: reduce the "catastrophic risk of a spent-fuel fire."

To do that she says the state needs to pressure the NRC to require licensees to reduce the density of assemblies in the spent fuel pool, allowing only the fuel discharged in the previous five years,

"All other spent-fuel assemblies," Lampert says, should be put "in hardened, dispersed dry casks onsite, until an offsite repository is developed.

"Doing so would lower the risk by generating a lower heat load so that if cooling water is interrupted or water lost, the lower heat load would give workers more time to recover cooling or water inventory before overheating caused fuel damage."

"If fuel did become damaged," Lampert continues, "the amount of radioactivity released would be considerably less than that released from a nearly full pool."

Additionally, the Pilgrim Watch leader notes, "dry casks are passive structures and not subject to human error or mechanical malfunction."

Question 8 cites the fact that electric cables at Pilgrim are buried in the ground where, after 40 years of operation, their condition is suspect.

The legislative leaders ask whether the federal government has a system for inspecting, repairing or replacing these cables.

Stankiewicz' answer is that the town expects the NRC to monitor the condition of the cables and all operating systems at Pilgrim.

Bramhall assumes the worst.

"The underground cables must present a problem, or the NRC would have just shrugged it off when Mary Lampert raised the question," Bramhall says. "Sometimes I wonder if she doesn't know more than the NRC itself."

Pilgrim Watch is actually involved in litigation over the issue of what it calls "submerged non-environmentally qualified electric cables."

"Pilgrim's submerged electric cables are not qualified to be in moist environments," Lampert said. "Most electrical cables at Pilgrim have been exposed to significant moisture over the past 40 years."

Lampert references a recent NRC inspection (April 2010) of three manholes that noted two were periodically submerged or partially submerged and the other always submerged.

Pilgrim Watch offers a simple solution: "Require replacing electric cables that may be subject to submergence with ones qualified for a wet environment, or require a more robust inspection program."

The state also asked if there are plans to have real-time radiological and meteorological monitors sited strategically within the emergency-planning zone (EPZ) to more accurately identify "which way the wind (and radiation) is blowing."

This is something that the town's own Nuclear Matters Committee has sought, though Town Manager Stankiewicz says he would like more information before commenting.

During the Dukakis administration there were actually plans for such a system, but they were dropped during the Weld administration in favor of a system that Lampert calls "a useless compromise."

"Those monitors are too close to the reactor to provide any worthwhile data," Lampert asserts. "They may indicate which way the wind is blowing onsite but not what happens to the plume once offsite."

Trust, or its lack, is at the heart of two of the questions posed to NRC head Jaczko.

Will the NRC allow independent experts access to the studies and documents it used in its review of the safety and security of commercial nuclear reactors, and as the basis for their conclusion that continued on-site storage of spent fuel is safe?

"We support (these initiatives), otherwise there is no basis for public confidence," Lampert says. "Safety and trust depend upon layers oversight, and among those layers (should be) an independent panel of experts vetted publicly."

And, to a point, the town of Plymouth seems to agree.

"Unless there are legitimate security concerns," Stankiewicz notes, "any such documents should be released to the public."

In Part Two of our search for the answers of the Loaded 22, we reference those questions that deal with the Japanese disaster and how Pilgrim and other New England nuclear facilities may or may not be responding properly.

In light of the 50-mile evacuation zone that American officials recommended for Japan, for example, is the 10-mile evacuation zone for Pilgrim still valid?

Most importantly, we ask for a response to question 21: "What assurances can the NRC provide 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?"

Pilgrim Will Store Its Waste In Casks (BOS)

By Robert Knox

Boston Globe, April 14, 2011

Seeking to douse worries over nuclear safety sparked by failures in Japanese plants, Pilgrim officials recently announced they plan to begin storing the Plymouth power plant's nuclear waste in hardened dry containers.

In Japan following the massive March 11 earthquake and tsunami that damaged several of the country's nuclear power plants, the greatest source of radiation danger has come from the storage of used fuel in pools of water inside the facilities. When the plants' water coolant system failed, the used fuel grew hot, and radiation escaped through the plants' outer shell.

Last week at a State House hearing, nuclear industry officials cited multiple backup cooling systems as they offered reasons why that failure wouldn't be repeated here, even in plants of the same design. And the decision by Entergy, Pilgrim's

owner, to move to dry-cask storage for used fuel accords with the views of Attorney General Martha Coakley and many experts that such storage of nuclear waste outside the plant is a safer alternative than water storage.

But although it has also urged dry-cask storage for years, Duxbury-based watchdog group Pilgrim Watch says Pilgrim's move to dry storage is too slow and too small. Mary Lampert, Pilgrim Watch president, said Entergy is planning to move only a few hundred spent fuel-rod assemblies to take pressure off an already crowded pool.

Although the spent fuel pool "was designed to hold approximately 880 used and highly radioactive fuel assemblies," Lampert said, it now holds more than 3,000 fuel rods and is likely to hold 3,859 assemblies by the time Pilgrim's current license expires in June of next year. Pilgrim has applied for a 20-year license extension

"It will keep the spent fuel pools nearly filled with radioactive fuel, maintaining the risk level about as high as possible," Lampert said. She said the plan to remove a small percentage of fuel rods will not significantly reduce the risk to public safety, calling it the "cheap" approach.

Concern over the safety of spent fuel storage is also an issue for a newly formed Marshfield-based organization called Pilgrim MUST (Make Us Safe Today). The group is planning to hold a rally at the site of the Pilgrim plant on May 7 from 10 a.m. to noon to publicize its call for new measures to make the plant safe. Anna Baker, the action's co-leader, said the rally's purpose is to expose "significant safety threats at Pilgrim that have been underscored by recent nuclear power events and which affect the surrounding communities."

A prepared statement by the group calls on the Nuclear Regulatory Commission to limit the number of used fuel rods stored in Pilgrim's pool to the number in the pool's original design and require the plant to replace all its buried electric cables with new ones, among other demands. The loss of electric power in the Japanese reactors led to the failure of their coolant systems and the release of radiation.

Pilgrim spokeswoman Carol Wightman said Monday she could only provide details on initial dry-cask storage plans. "We will begin moving to dry-cask storage in 2014, with the first three casks," Wightman said. "Sixty-eight used fuel bundles per cask, for a total of 204 fuel bundles," will be moved then. "It requires a very long lead time."

The nuclear power industry has repeatedly complained that it has been forced to store nuclear waste on site because of the failure of the federal government to deliver on its promise to provide a single national waste site. "We have no desire to store spent fuel in our plants," Wightman said.

While Pilgrim Watch contends that Entergy is unwilling to spend the money needed to put all its waste into a safer storage system, inadequate funding is also a problem for "host" communities involved in emergency planning in the event of a nuclear accident at Pilgrim.

"They're a business. They tend to want to cut funds," said Richard Ferreira, the emergency management director for Taunton, one of three host communities.

Emergency plans call for Plymouth students and many of its residents to evacuate homes, schools, and workplaces in the event of a serious nuclear accident and travel to Taunton. Other residents living within the 10-mile Emergency Planning Zone — including Kingston, Duxbury, Carver, and Marshfield — will be sent to a reception center in Bridgewater or Braintree.

Fleeing Plymouth residents would go to Taunton High School to be monitored and decontaminated. They would walk through portal monitors (resembling airport security gates) and be checked by hand-held radiation monitors. Television images from Japan of emergency workers wearing booties and Tyvek protective suits and "wandering" people for radiation give you "a good idea" of what it would be like, Ferreira said.

Training local volunteers to be prepared to "receive" thousands of evacuees is a huge operation, he said. "I have over 200 community volunteers," said Ferreira. "The entire city is involved. Our roadways, our transportation routes, are all part of this program."

But Entergy has proposed cutting reception center communities' funding, including Taunton's basic grant of \$100,000 for two positions to \$80,000 and requiring the town to pay for the expense of training volunteers. Last year Taunton had \$28,000 reimbursed by Entergy for those training expenses.

Wightman said that last year the funding that Entergy provided to the state and local towns to support emergency planning totaled about \$2.5 million. "They're in negotiations now. We're looking at what is fair and equitable," she said of the company's contribution for training.

In addition to the three host communities, the five towns within the Emergency Planning Zone receive funding from Entergy for their emergency management offices.

Marshfield Police Lieutenant Paul Taber, who serves as his town's emergency management director, said his town received \$186,000 last year from Entergy. Although the town has "a good relationship with Entergy," Taber said, emergency

planning concerns remain. Only about one-third of Marshfield, the south end of town, is included in the 10-mile zone around Pilgrim.

"We'd like to see expanding the zone to include all of the town's residents," he said. "Japan went out to 12 miles." US officials warned Americans in Japan to stay 50 miles away from damaged reactors there.

Pilgrim MUST also wants to see the Emergency Planning Zone around Pilgrim expanded from 10 to 25 miles, which would include all of Marshfield.

Evacuation Area Under Scrutiny (CAPECOD)

By Patrick Cassidy

Cape Code Times, April 14, 2011

A week after the Japanese nuclear crisis began, the US Nuclear Regulatory Commission advised Americans within 50 miles of the island nation's crippled Fukushima Dai-ichi nuclear power plant to evacuate.

In the United States, however, the same federal agency and state emergency officials prepare communities within only 10 miles of nuclear power plants for evacuations related to the facilities, leaving Cape Cod and other areas around the Pilgrim Nuclear Power Station in Plymouth on the outside of the emergency planning process looking in. The basis: a nearly 40-year-old decision that predates even the 1979 partial meltdown at Three Mile Island Nuclear Generating Station in Pennsylvania.

"Fifty miles being the main evacuation area for the plant in Japan maybe we need to look at our plant and adopt it for these issues," said George Baker, Mashpee fire chief and chairman of the Barnstable County Regional Emergency Planning Committee.

While communities less than two miles from the Cape Cod Canal are supported in their planning efforts by the state and Entergy Corp., the company that owns Pilgrim, Cape emergency planners are still unsure what would happen here if an accident occurred at the state's only active nuclear power plant.

Communications would be especially important on the Cape where any major evacuation would require travel over the canal bridges, Baker said.

He said Cape Cod officials prepare for hurricanes and other emergencies but there are no specific plans in case of an accident at Pilgrim. In addition, if residents south of the plant evacuate, many of them would likely head down Route 3 setting up a potential traffic nightmare on the Scenic Highway in Bourne if motorists flee the Cape as well, he said.

'No lead shield'

The so-called plume exposure pathway, which the 10-mile zone is based on, is a planning tool used nationwide to prepare and evacuate populations most likely to be affected by the release of radioactive material at a nuclear plant. A larger area extending 50 miles from nuclear plants known as the ingestion pathway planning zone is designated to protect food supplies.

The zones are arbitrary, according to Mary Lampert, a longtime Duxbury-based nuclear safety activist who leads an organization called Pilgrim Watch.

"There is no lead shield that goes up at 10 miles," she said. "That's just ridiculous."

Planning efforts based on these zones aren't "dealing with reality," she said, adding that harmful exposure could easily extend beyond the 10-mile zone as it has in Japan.

Although she would like to see the primary emergency zone in the US extended further, Lampert has suggested a compromise of 25 miles which would include Cape Cod.

Current planning provides no information for residents on the Cape except in the event that food supplies need protection, she said.

"I advise some people cynically (to) pretend you're a cow and then you'll be tested," she said.

If the entire Cape is included in the planning zone the region could prepare by educating residents and by alerting them quickly to an incident at Pilgrim, Lampert said.

While Entergy provides funding and other support, emergency planning is the purview of local, state and federal officials, said the company's spokeswoman Carol Wightman.

In 2010 the company provided \$2.5 million to towns around the plant for training and emergency equipment, she said.

US plants, like Pilgrim, have many safety measures in place that did not exist at the Japanese plant and the exact sequence of events that occurred there was unlikely here, Wightman said. The Japanese nuclear plant lost power after an earthquake-fueled tsunami struck on March 11.

"I think it would be premature to reach any conclusion that the (emergency planning zones) in the US are inappropriately sized until we get more information," she said.

The state bases its response in emergency planning zones for nuclear accidents on recommendations from the federal government, said Massachusetts Emergency Management Agency spokesman Peter Judge.

Initial evacuations around Pilgrim would include five towns where residents are in the most danger of exposure to radioactive material, Judge said.

If the zone was expanded it would make it more difficult to move those residents most in harm's way to safety, he said.

While different recommendations could come out of the Japanese nuclear crisis, it is too early to tell what those might be, Judge said.

"We're waiting and watching it just like everybody else," he said.

No plans to expand

There are no immediate plans to expand the 10-mile emergency planning zone or to adjust it for specific facilities, NRC spokesman Neil Sheehan said.

"It goes back to the '70s," he said of the planning zone, adding that the 10-mile limit was decided on by a joint NRC and US Environmental Protection Agency task force.

Studies at the time showed that impacts from any release would have the greatest effect on residents within several miles of a plant, he said.

"Therefore it made the most sense to focus your emergency planning efforts on that 10-mile radius," he said.

Although full-scale exercises are conducted within the area every two years and communities there are supplied with potassium iodide pills, the zone's perimeter is not set in stone, Sheehan said.

"It is not a finite wall at the 10-mile radius," he said, adding that just as occurred in Japan, the zone could be expanded as necessary.

A look at the emergency planning zones are part of short- and long-term reviews the NRC is undertaking in the aftermath of Japan's crisis, Sheehan said.

Lampert, who is scheduled to testify before the NRC in Washington, D.C., during a briefing on emergency preparedness May 3, said the agency should hold off on finalizing any new regulations until lessons learned from Japan can be integrated into the process.

Lampert and other nuclear safety activists are holding a press conference today calling for the NRC to suspend all nuclear reactor licensing decisions until a full-scale review of the Fukushima disaster similar to what was done after Three Mile Island is complete.

Letter: AUDREY RICHARDSON, Boston: Good To See Citizen Opposition To Nuclear Energy Is Going Strong (QPL)

By Audrey Richardson

Quincy (MA) Patriot Ledger, April 14, 2011

As one of the groups organizing the April 6 Rally for Nuclear Safety at the State House, we are heartened to see the movement opposing risky nuclear power is alive and well.

Nuclear power – and, especially, old nuclear power plants, like Pilgrim in Plymouth – is inherently dangerous. Elected officials supporting anything other than a “no” on relicensing by the NRC should imagine themselves in the shoes of the mayor of Dai-ichi in Japan for one moment.

The odds of a full-scale nuclear disaster might be similar to hitting the jackpot at a casino, but we all know jackpots are hit. Beyond being an extremely risky way to generate electricity, nuclear power is unnecessary in Massachusetts.

ISO, the organization that monitors the reliable flow of electricity for most of New England, recently reminded state legislators that we would have enough sources of generation for the region (without Pilgrim).

Massachusetts is a national leader in energy efficiency and truly clean and renewable energy. Why should we continue to use risky, unnecessary nuclear power when we have safer solutions right now?

AUDREY RICHARDSON

Environment Massachusetts, Boston

'Radiological Preparedness' Exercise Planned Around Callaway Nuclear Plant (STLBeac)

By Robert Koenig

St. Louis Beacon, April 14, 2011

WASHINGTON - The timing is unrelated to Japan's nuclear crisis, but a safety exercise in the four counties around Missouri's Callaway nuclear power plant next month seems likely to get far more attention than in previous years.

On Tuesday, the Federal Emergency Management Agency announced that state and federal officials -- along with county and local emergency experts from Callaway, Osage, Montgomery and Gasconade counties -- will conduct a "routine exercise" on May 11 that aims to "test their ability to protect the health and safety of the public living in the vicinity of the [Callaway] plant."

On the same day, safety officials at Ameren Missouri, which owns and operates the Callaway plant, will conduct a full-scale safety exercise at the power plant itself. Their performance will be observed and evaluated by regional experts from the Nuclear Regulatory Commission, federal officials say.

FEMA's announcement explains that the safety exercise is required every two years "to determine the adequacy of the radiological emergency preparedness and response plans" around the nuclear power plant. The exercise "will require the activation of emergency facilities for the state of Missouri" and the four counties.

To help ensure that the Missouri response meets national standards, officials from Region VII of FEMA's Radiological Emergency Preparedness Program will be on hand to observe and evaluate the plans and actions of state, county and local officials during the exercise.

Two days after the exercise is conducted, FEMA will hold a public meeting in Jefferson City "to describe and explain the full-scale response exercise process," the agency says. Representatives from FEMA will discuss the exercise and an expert from the NRC's regional office will explain the parallel safety exercise at the Callaway plant.

The preliminary findings described at that meeting will be "very limited in scope," officials said, because it will take a few months to fully evaluate the exercise.

Missouri's State Emergency Management Agency plans to release more information later about the May 11 safety exercise and the public meeting, which is scheduled to begin at 10:30 a.m. on May 13 in the main auditorium of Missouri National Guard headquarters in Jefferson City.

"The primary focus of the biennial exercise is on the ability of the state of Missouri, the utility and the participating counties, to protect the health and safety of the public living in the vicinity of the Callaway Nuclear Power Plant," according to the FEMA release. "The evaluated exercise provides reasonable assurance that the appropriate protective measures can be taken on-site and off-site in the event of a radiological emergency."

Officials at Ameren Missouri have said repeatedly that the facility is completely safe. Callaway participates in such full-scale emergency exercises every two years and also holds smaller safety drills. A report on the most recent such drill in November indicates that the facility got good marks.

In the weeks since the Japanese nuclear crisis began, Ameren officials have gone to great lengths to explain why they believe the plant is safe and would not be vulnerable to a major earthquake along the New Madrid fault in southeastern Missouri.

In a statement posted recently on the company's website, Ameren chairman and chief executive Thomas R. Voss wrote that "risks for nuclear energy in the United States today are actually lower than for many other energy sources."

Voss wrote that "we train, test and scrutinize operations incessantly" at Callaway, which he said "was built to withstand a worst-case seismic event for our area. The plant has redundant systems to ensure a safe shutdown in the event of an emergency."

While some questions have been raised about the safety features of the Japanese nuclear complex, Voss wrote that Callaway "has multiple barriers against radiation, including the strongest-available metal cladding on its fuel assemblies, which are housed in a steel pressure vessel that is eight inches thick and is inside a building with four-foot-thick, steel-reinforced concrete walls."

Ameren Nuclear Plant To Do Safety Drill (STLBIZ)

St. Louis Business Journal, April 13, 2011

The Federal Emergency Management Agency said federal, state and local officials will conduct a safety exercise May 11 at Ameren's nuclear plant in Callaway County, the St. Louis Beacon reports. On the same day, Ameren officials will perform a full-scale safety exercise at the power plant itself. Their performance will be observed and evaluated by regional experts from the Nuclear Regulatory Commission, federal officials say.

Editorial: Stop Dismissing Tritium Threat (ASBPP)

Asbury Park Press, April 13, 2011

When it comes to the release of carcinogenic tritium, the Nuclear Regulatory Commission clearly has failed in its role to ensure the safety of a public at the mercy of nuclear power plants, an Asbury Park Press investigation published Sunday found.

Millions of gallons of tritium-tainted radioactive water have leaked from nuclear power plants throughout the US since the 1970s, threatening water supplies in New Jersey and other states, the investigation found. And not one plant has been so much as fined for it. Why? Because current regulations don't provide for penalties.

That should be of particular concern to officials in New Jersey. The Oyster Creek nuclear power plant in Lacey and the Salem nuclear complex in Salem County have been among the biggest offenders. It is believed at least 180,000 gallons of contaminated water were released from Oyster Creek in April 2009 through two small holes in separate pipes. The contamination was much higher than allowable DEP standards.

It is time for Shore-area Reps. Chris Smith and Jon Runyan, both R-Ocean, and US Sens. Frank Lautenberg and Bob Menendez, D-N.J., to work together to push for regulations that will set new, tough standards for tritium contamination and establish penalties harsh enough to deter violations. It's an outrage that nuclear plants are legally allowed to discharge tritium into waterways and the air.

Major leaks at plants across the nation have increased in recent years as nuclear plants have aged. There was an average of one per year in the 1990s. There were five leaks or spills reported in 2010, five in 2009 and three in 2008, according to the NRC.

New Jersey holds the dubious distinction of being No. 1 in terms of the intensity of radioactive water leaks and spills. The Salem and Oyster Creek plants have leaked tritium with radiation that is more than 500 times the legal limit for drinking water.

The US Environmental Protection Agency's limit is 20,000 picocuries of tritium per liter of water. That is way too high, given recent scientific studies that have concluded tritium's cancer risk could be two to three times higher than what the EPA claims.

New Jersey lawmakers should push for the California standard — 400 picocuries per liter, 50 times more strict than the EPA standard — to become the regulatory law of the land.

By and large, according to NRC spokesman Neil A. Sheehan, "A leak in and of itself is generally not considered a violation," adding that the NRC's mission is to ensure the public faces "no undue risk." Tritium leaks do not pose that risk level, he said. Any time you hear the use of weasel words like "undue risk" coming out of the mouth of a government bureaucrat, a red flag should go up.

Last month, NRC Chairman Gregory B. Jaczko told US senators that tritium leaks are "not an acceptable situation for any power reactor in the United States." Saying it and doing something about it are two different things. Elected officials from New Jersey need to do everything they can to transform Jaczko's words into action.

The NRC does not require plants to clean up their sites until decommissioning, which for some reactors may not be for nearly 40 years after they stop operating. Once contaminated, tritium cannot be removed from water. We're stuck with it.

Nearly all nuclear plants have leaked tritium. There are 65 nuclear power sites in the US, with a total of 104 reactors, and most have had some type of leak or spill of radioactive material.

The NRC should stop pretending that tritium is not a threat. And because New Jerseyans bear such a disproportionate share of this scourge, our congressional delegation and state officials must bring the truth of the matter to the fore and translate it into regulations that will protect the state's citizens.

Berkeley Officials Call For Immediate Closure Of Oyster Creek (LACEYPATCH)

Hard stance on controversial plant nothing new for Berkeley

By Patricia A. Miller

Lacey Patch, April 13, 2011

Berkeley Mayor Jason J. Varano and Township Council members had a simple message last night for the owners of the Oyster Creek Nuclear Generating Station and the federal Nuclear Regulatory Commission.

Close it. Now.

Council members plan to pass a resolution at the next regular meeting calling for the closure of the plant on Route 9 South in Lacey Township. It's not the first time the council has come out against the troubled plant.

"We've always taken a strong position," Council Vice President Carmen J. Amato Jr. said after the meeting. "We want it closed immediately. Now we are also concerned about natural disasters."

Varano said that Japanese nuclear experts were now comparing the situation at the Fukushima Daiichi nuclear complex to the Soviet Chernobyl disaster in the 1980s.

"It's at the Chernobyl category level in Japan, and that's pretty scary," the mayor said.

The Township Council last year passed a resolution calling on the state to mandate that Exelon install cooling towers at the plant, instead of the current system of drawing water from Barnegat Bay.

Varano has said Berkeley Township officials have been "at the forefront" of Ocean County municipalities calling for the plant's closure, dating all the way back to the years when the late Bill Zimmermann Jr. was mayor.

Township officials also opposed the federal Nuclear Regulatory Commission's decision in April 2009 to allow the then-40-year-old plant to operate for another 20 years, he said.

Council members last night also followed up by unanimously passing a resolution in support of two bills sponsored by 9th District legislators Senator Christopher J. Connors, Assemblyman Brian Rumpf and Assemblywoman Diane Gove to establish the New Jersey Coordinating Council on the Decommissioning of Nuclear Power Generating Facilities.

The legislation — S-866 in the state Senate and A-296 in the state Assembly — calls for a mechanism to monitor and coordinate the decommissioning of plants to ensure they comply with federal and state regulations.

"Whereas the bills find that decommissioning of a nuclear power generating facility involves significant issues of public health, safety and welfare of the residents of the State of New Jersey..." the resolution reads.

Edith Gbur, a Berkeley resident and president of the Jersey Shore Nuclear Watch, thanked Varano and council members for agreeing to pass a resolution at the next meeting to close the plant.

"I would like to thank the mayor and council for reaching this decision and calling attention to the fact that Oyster Creek should be shut down now," Gbur said.

Resident William Gumper said during the public portion of the meeting that there were "two sides to this issue.

"I tend to stand in the middle," Gumper said. "We do need electricity, unless we are going to light our homes with candles."

County Against Diablo Nuke Plant Relicensing (AP)

Associated Press, April 14, 2011

SAN LUIS OBISPO, Calif.—Leaders in San Luis Obispo County want a halt to the relicensing process for the Diablo Canyon nuclear power plant along the central California coast.

The Board of Supervisors voted unanimously Tuesday to send a letter to Pacific Gas & Electric asking the operator of the south county plant to withdraw its relicensing application.

PG&E has asked the Nuclear Regulatory Commission to extend the power plant's operating licenses an additional 20 years. Diablo's licenses for the twin reactors expire in 2024 and 2025.

Diablo Canyon sits on a bluff 85 feet above the Pacific Ocean near Avila Beach, within 3 miles of two earthquake faults. The company has been under pressure from area lawmakers to conduct extensive, three-dimensional testing in the area before seeking new licenses, a concern heightened by the Japanese nuclear crisis.

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 costly redesign. Then in 2008 a geologic fault was discovered about a half-mile from the seaside reactor, raising new concerns about safety.

Preliminary research at the site found its reactors could withstand a potential earthquake generated by the recently identified Shoreline Fault, but California regulators say more detailed study is needed.

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.

Earlier this week, the company asked the NRC to delay issuing new licenses, even if approved by the agency, until after testing is completed. The company said it plans to complete its fault research no later than 2015.

The Santa Maria Times says county supervisors want PG&E to withdraw the applications and focus on the seismic studies for the next few years.

San Luis Obispo Officials Battle PG&E Over Diablo Canyon Relicensing (KTVU)

KTVU-TV San Francisco, April 13, 2011

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Diablo Canyon Informational Meeting Today (KEYT)

KEYT-TV Santa Barbara, CA, April 13, 2011

Officials at PG&E are hosting an open house this afternoon to better inform residents about the Diablo Canyon Nuclear Power Plant.

The event will address the plant's operations, security, and how the US nuclear industry is responding to events in Japan.

Today's 3 hour event starts at 4:00 p-m at the South County Regional Center. The address is 800 West Branch Street in Arroyo Grande.

Blog: Nuclear Power Debate: How Much Of Our Fear Is Rooted In Propaganda? (LAT)

Los Angeles Times, April 14, 2011

If you caught the April 1 episode of "This American Life," a fear of nuclear power may have been cemented. In one segment, actors read harrowing passages from "Voices from Chernobyl," a collection of interviews that documents how people were affected by the nuclear meltdown at Chernobyl in 1986. The stories of disintegrating, disposable lives were brutal; it hurt to listen.

But that's radiation poisoning at its most extreme, at a time when we didn't yet know how to react to such a disaster. Still, here we are again:

[Japan's] Nuclear and Industrial Safety Agency announced that because of the amount of radioactive material released from the [Fukushima] plant after the magnitude 9 earthquake a month ago, the rating would be changed to level 7, a "major accident" on the International Atomic Energy Agency's scale, up from a level 5, an "accident with wider consequences."

Amid fears, a nuclear power debate rages on.

How much of our fear is rooted in propaganda?

What a strange turn of events. Instead of uniting the environmental movement in renewed opposition to nuclear power, the Fukushima disaster in Japan has divided it still further. An increasing number of green advocates, including some very prominent voices, have declared their support for nuclear power as a clean energy option, even as radioactive water accumulates and the timeline for cleaning up the contaminated areas extends by decades. Can they be serious? [...]

The science on radiation tells us that the effects of Fukushima are serious but so far much less so than some of the more hyperbolic media coverage might suggest. The power plant operator, Tokyo Electric Power Co., has been releasing enormous quantities of radioactive water into the sea, for example. It sounds scary, but a member of the public would have to eat seaweed and seafood harvested just one mile from the discharge pipe for a year to receive an effective dose of 0.6 millisieverts. To put this in context, every American receives on average 3 millisieverts each year from natural background radiation, and a hundred times more than this in some naturally radioactive areas. As for the Tokyo tap water that was declared unsafe for babies, the highest measured levels of radioactivity were 210 becquerels per liter, less than a quarter of the European legal limit of 1,000 becquerels per liter. Those leaving Tokyo because of this threat will have received more radiation on the airplane flight out than if they had been more rational and stayed put. [...]

What is needed is perspective. Nuclear energy is not entirely safe, as Fukushima clearly shows, even if the current radiation-related death toll is zero and will likely remain so. But coal and other fossil fuels are far, far worse.

–Mark Lynas, Why nuclear power is still a good choice

The US is at risk

Once again, the debate has begun about the role of this uniquely dangerous technology in our global fight against climate change — whether this latest failure in "fail-safe" nuclear reactor safety systems disqualifies nuclear energy from a growing role in cleaning up fossil-fuel pollution as we transition to a clean energy future, a future based on energy efficiency, renewable energy and green jobs. Neither the nuclear industry nor the commission has done enough over the years to inspire public confidence. Nuclear energy isn't cheap or clean or accident-free, and, for the relentless claims to the contrary, the credibility of nuclear utilities and the NRC has taken a beating.

–Joel R. Reynolds, US nuclear industry: Not safe enough

New safety policies should be the highest priority

A variety of events could conceivably cause a loss of pool water, including leakage, evaporation, siphoning, pumping, aircraft impact, an earthquake, the accidental or deliberate drop of a fuel transport cask, reactor failure or an explosion inside or outside the pool building. Industry officials maintain that personnel would have sufficient time to provide an alternative cooling system before the spent fuel caught fire. But if the water level dropped to even a few feet above the spent fuel, the radiation doses in the pool building could be lethal.

A 1997 report that Brookhaven National Laboratory did for the NRC found that a severe pool fire could render about 188 square miles uninhabitable, cause as many as 28,000 cancer fatalities and cost \$59 billion in damage. [...]

Safely securing spent fuel should be a public safety priority of the highest degree in the United States. The cost of fixing America's nuclear vulnerabilities may be high, but the price of doing too little is incalculable.

–Robert Alvarez, Unsafe at any reactor

In the cost-benefit analysis, nuclear doesn't add up

This page takes the threat of climate change very seriously, and would be delighted if a safe, cost-effective way of producing carbon-emissions-free nuclear power were developed. Sadly, we're not there yet. Nuclear power plants are so expensive, and their risks so extreme, that private investors are reluctant to fund them even with huge government subsidies and loan guarantees. Plans to build a national repository for nuclear waste in Nevada have been shelved, meaning radioactive waste is being stockpiled at individual plants in a way that is unsustainable. And then there's the threat of a Japan-type disaster.

–Nuclear fails the test, Editorial

Delaware Plans For Nuclear Incident (WILNJ)

Schiliro tells Senate preparations are solid

By Nicole Gaudiano, News Journal Washington Bureau

Wilmington News Journal, April 14, 2011

WASHINGTON – As the nuclear crisis continues in Japan, Delaware's top homeland security official said Tuesday he has no "specific concerns" regarding the Salem-Hope Creek nuclear complex in New Jersey, or other nearby nuclear energy facilities.

Delaware officials are prepared to handle any radiological incident in the state, Lewis Schiliro, secretary of the state's Department of Safety and Homeland Security, stated in written testimony submitted at a Senate hearing.

Schiliro read some of his testimony at the hearing before the Senate Environment and Public Works Committee and a subcommittee chaired by Sen. Tom Carper, D-Del., a proponent of nuclear power.

Prompted by the escalating disaster in Japan, Carper and EPW Chairwoman Barbara Boxer asked the Nuclear Regulatory Commission to review the nation's 104 nuclear power plants, which generate one-fifth of the nation's electricity. Carper said Tuesday's hearing is one of many aimed at making sure the nation is prepared for the worst.

"The events that struck Japan are reminders that we are all vulnerable to unexpected disasters, whether an act of nature or a terrorist attack," said Carper, chairman of the Environment and Public Works Subcommittee on Clean Air and Nuclear Safety. "While we cannot predict when or where the next major disaster will occur, we know that it will occur and we also know adequate preparation and response planning are vital to minimize injury and death when it does happen."

Gregory Jaczko, chairman of the Nuclear Regulatory Commission, and Lisa Jackson, administrator of the Environmental Protection Agency, also testified Tuesday. Jackson said her agency continues to conduct radiation monitoring in the US in case leaks from the stricken reactors in Japan find their way here.

"EPA has not seen and does not expect to see radiation reaching harmful levels in the United States," she said.

Delaware is within 50 miles of four nuclear generating stations: Limerick Nuclear Generating Station and Peach Bottom Atomic Power Station in Pennsylvania, Calvert Cliffs Nuclear Generating Station in Maryland, and the Salem-Hope Creek plant.

(Page 2 of 2)

Salem-Hope Creek, operated by PSEG Nuclear, is the closest, located 2.5 miles from the Delaware shoreline. The nuclear crisis in Japan, now considered on par with the 1986 Chernobyl disaster, has increased concerns among residents living nearby.

Last week, more than 700 people turned out for the latest public distribution of potassium iodide pills, which help block the accumulation of radioactive iodine in the thyroid glands of people exposed to radiation.

Delaware officials scheduled the distribution because of elevated public concern and the number of state residents – about 41,000 – who live within 10 miles of the Salem-Hope Creek plant. That's nearly double the number from 10 years ago.

Schiliro said the Federal Emergency Management Agency has given Delaware high marks on its exercises testing the state's emergency response capabilities within a 10-mile radius and readiness to address needs within a 50-mile radius of the Salem-Hope Creek plant and the other nearby nuclear sites. The Delaware Emergency Management Agency also conducts quarterly radiological drills with PSEG and New Jersey officials, focusing on emergency plans and responder resources.

Schiliro told Carper, the only senator present by the time he testified, that Delaware could comply if the NRC begins requiring evacuation plans beyond a 10-mile radius.

"There's no doubt in my mind if we needed to expand that we could," Schiliro said.

Jaczko testified earlier that his commission will examine whether evacuation plans around nuclear plants should cover a 50-mile radius.

Evacuating people from within a 10-mile radius would take about three to six hours, Schiliro said.

Expanding the Salem-Hope Creek zone to 15 miles would dramatically increase the consequences of an evacuation, pushing the affected population to 171,798 in Delaware and 35,300 in New Jersey, and extending about a mile into neighboring portions of Maryland.

Notification of a radiological incident would come from PSEG Nuclear, but the Delaware Emergency Management Agency has seven monitoring sites within the emergency planning zone's 10-mile radius providing readings all day, according to Schiliro's written testimony.

Schiliro told senators his department has "an excellent relationship" with PSEG officials. The company provides \$1.4 million each year for the state's radiological emergency preparation program and activities, the only funding for its radiological program.

DEMA staff members "work as a team" with PSEG staff and New Jersey officials, he said.

Federal officials are scheduled to review the PSEG operation's safety and environmental record and risks next month, when the NRC gives final consideration to 20-year life extensions for all three of the reactors along the Delaware. Studies to date have concluded that there was no reason to block the additional years of operation.

PSEG also has asked the NRC to authorize a site for one or two more reactors near Salem-Hope Creek, although the company has not yet chosen a reactor model or asked for construction approval.

Michigan Nuclear Plants — Are They Safe? (TRICITTI)

Tri-County Times, April 14, 2011

As news broadcasts continue to cover the nuclear plant crisis and cleanup in Japan following the March 11 earthquake and subsequent tsunami, nuclear power plants across the United States are back in the spotlight.

According to the US Nuclear Regulatory Commission (NRC), the combined effects of the earthquake and tsunami in Japan exceeded the Fukushima Daiichi nuclear plant's design limits.

Natural environmental disasters, as well as the Sept. 11, 2001 terrorist attacks have put ongoing emphasis on security. The main environmental concerns for nuclear power are radioactive wastes such as uranium mill tailings, spent (used) reactor fuel, and other radioactive wastes. These materials can remain radioactive and dangerous to human health for thousands of years, according to the US Department of Energy (DOE).

Nuclear power is made when atoms within uranium pellets are split, releasing heat. That heat is used to boil water, build steam and crank turbines, which generate electricity for millions of homes and businesses.

There are currently 104 commercial nuclear reactors at 65 nuclear power plants in 31 states, according to the DOE. Since 1990, the share of the nation's total electricity supply provided by nuclear power generation has averaged about 20 percent, with the level of nuclear generation growing at roughly the same rate as overall electricity use.

There are three operating nuclear plants in Michigan and people should be aware of where they are located, what the plants provide and what they should do in the event of an emergency. FERMI 2

The closest nuclear power plant to the tri-county area, in operation, is FERMI 2. This plant is located in Newport, about 70 miles southeast of Fenton, (35 miles south of Detroit) along Lake Erie. It is visible from I-75. The nuclear plant was named after Enrico Fermi, the first physicist to split the atom.

FERMI 2 began operating in 1985 and Detroit Edison Company is the operator of this plant. At this site is another non-operational reactor, FERMI 1. It was closed in 1972 due to reactor problems.

FERMI 2 operates on uranium oxide-enriched U-235 fuel. It has received four notices of violations from the NRC since 1996.

Cook Nuclear Plant

The second plant in operation is Cook Nuclear Plant, named after Donald C. Cook, a former board chair of the American Electric Power (AEP). The plant is located on 650 acres along Lake Michigan in the southwestern corner of the state in Berrien County. It's owned and operated by AEP.

The Atomic Energy Commission granted the construction permit in 1969, and it was one of the largest construction projects, \$1.3 billion, in Michigan. Unit 1 began operating in 1975 and Unit 2 began operating in 1978. Both units are pressurized water reactors and produce enough electricity for more than 1.5 million average homes.

Palisades

The third operational nuclear plant is Palisades, located in South Haven, along Lake Michigan and about 50 miles north of the Cook Nuclear Plant. It is operated by Consumers Power Company. The pressurized water reactor began operations in 1972.

Closed nuclear plants

Big Rock Point, in Charlevoix closed in 1997, due to water storage limitations.

FERMI 1, in Newport closed in 1972 due to reactor problems.

Prema Chandrathil, public affairs officer for the NRC, said all three plants in Michigan are operating safely and in accordance with their operating license. This would be equivalent to a letter grade of A.

Chandrathil said the NRC focuses on ensuring the safety at all nuclear power plants. All plants are designed to take the most severe historical natural phenomena of an area and are required to be regulated by the NRC.

In an emergency, the nuclear power plants must have a plan in place to maintain cooling to the reactor core, the containment building and the spent fuel pools.

NRC regulations are updated as new studies, events and issues become known, said Chandrathil. "Regulations are not written in stone," she said. "We learned a lot from Three Mile Island and 9-11."

The NRC employs two resident inspectors at every nuclear power plant in the United States. Chandrathil said these on-site experts walk the plant daily and know the plant's design like the back of their hand.

According to the NRC, residents living within a 10-mile radius of a nuclear power plant involved in a radiological emergency may receive one or more alerts to warn them of an emergency. Nuclear plants are required to work with state and local authorities on their emergency plan.

If an alert is issued, residents are urged to tune their radio or television to the Emergency Alert System (EAS) station for their area and follow directions.

When asked if safeguards are in place if a terrorist intentionally steers an airplane into a reactor, Chandrathil said, the reactors are extremely robust structures. "Since Sept. 11, the NRC required plants to take additional steps to minimize the damage and risk to the public from a large fire or explosion.

"The requirements include minimizing fuel damage, actions to minimize a release to the public and using existing or readily available equipment and personnel."

She added that studies show there is a low likelihood that an airplane attack on a plant would affect public health and safety, but the NRC works closely with other federal agencies like the Military and Department of Homeland Security to identify and protect critical infrastructure.

US Nuclear emergencies

There has been only one nuclear emergency that resulted in an evacuation since the first nuclear power reactor started producing power in 1957. The accident at the Three Mile Island Unit 2 (TMI-2) nuclear power plant near Middletown, Pennsylvania, on March 28, 1979, was the most serious in US commercial nuclear power plant operating history. The evacuation was recommended for pregnant women and preschool-age children within a 5-mile radius of the plant.

If a nuclear emergency occurs...

- Stay indoors until you are told it is safe to go out.
- Close all windows and doors.
- Turn off all air-intake systems like fans, air conditioning, or combustion heating and fireplace dampers.
- Shelter pets and animals, if possible.
- Tune to the TV and radio stations for emergency instructions.

- Don't go outside to see what's happening. If you must go outdoors briefly to warn someone during a nuclear emergency, cover your nose and mouth with a piece of cloth, such as a towel or scarf.
- Don't use the telephone unless there is a serious need.
- Don't try to pick up children at school. School staffs will keep children in school until it is safe to go out again.
- Don't worry if you are in a hospital or other special-care facility. You will be protected.
- Don't panic! It's your worst enemy in an emergency.

How contamination can occur...

Dust-sized radioactive particles released into the air during a nuclear accident could fall on fruits, vegetables, or grains, which could enter the food supply. For example, dairy cows and goats could eat grasses covered with radioactive iodine 131. Traces of the iodine could be passed through to the milk and then to consumers. Iodine 131 has the potential to concentrate in the human thyroid gland where it could cause thyroid cancer.

Weather and time play a part

All radioactive materials lose their radioactivity over time. For example, inert gases released from commercial nuclear-power plants lose their radioactivity in a matter of minutes. Wind or heavy rain tends to remove radioactive material rapidly from plant surfaces. In some cases, however, hard rain falling on contaminated soil could splash the soil onto plant surfaces, thus increasing the amount of radioactive material on low-standing plants.

Nuclear Plant Siren Test Today (RHH)

Rock Hill (SC) Herald, April 14, 2011

Sirens will sound shortly before noon today at the Catawba Nuclear Station, but it will only be a test, Duke Energy officials say.

The company has its regularly scheduled tests planned for about 11:50 a.m. at the Catawba station on Lake Wylie. The sirens will sound for about three minutes, giving Duke officials a chance to make sure the emergency notification system is working.

The tests are conducted once a quarter.

If the sirens were to sound for real, it is a signal for residents to tune to radio or TV stations for emergency information.

One US Nuclear Reactor Uses As Much Water As All Of D.C. (ATLANTIC)

By Caitlin Dickson

The Atlantic, April 14, 2011

It takes the same amount of water required by a city of 5 million to fuel a typical US nuclear power plant for one hour: 30 million gallons, Fast Company reports. Charles Fishman, author of the book *The Big Thirst*, notes that "the US has 104 nuclear power plants—more than any other country, a quarter of all plants worldwide." As the world's largest energy consumer, "49% of the water used in the US goes to generate electricity," Fishman notes. That's "the single largest use of water" in the country.

Drill Held At Three Mile Island (Central PA)

By Jeff Preval

We Are Central Pennsylvania, April 14, 2011

HARRISBURG - Three Mile Island conducted a scheduled drill.

The results of the drill will be evaluated by FEMA.

FEMA will then pass on the evaluation to the Nuclear Regulatory Commission and a final report will be made public in about four months.

Every two years, each nuclear power plant across the country must conduct a federally mandated drill to comply with regulations put in place following the 1979 meltdown at Three Mile Island.

Franklin County Participates In Three Mile Island Evacuation Drill (CPO)

By Jim Hook

Chambersburg (PA) Public Opinion, April 14, 2011

FRANKLIN COUNTY -- Schools and churches in Franklin County would be a temporary home for thousands of people, should radioactivity be released from Three Mile Island nuclear power plant.

The county Emergency Management Agency took part in a drill Wednesday to test the county's role as an evacuation center.

The drill was unrelated to recent events at the Fukushima Daiichi nuclear plant in Japan, according to county EMA Director David Donohue.

"It makes the drill more of a media event," Donohue said. "It's strictly coincidental. We've been working on it for the past year and a half."

Franklin is among eight counties participating this week in the Biennial Emergency Preparedness Exercise. At 7 p.m. Wednesday, a decontamination site and evacuee shelter was to be set up at J. Frank Faust Junior High School, Chambersburg.

"We'll put out a few tables and cots," said Allen White, emergency services director for the American Red Cross in Franklin County. "We will have our registration and medical stations."

The exercise supposes a release of radioactive material from the power plant. Officials must plan for the movement of the simulated plume based on wind and temperature. The Federal Emergency Management Agency will evaluate the government's ability to protect public health and safety.

Unlike in other disasters, only people who have been cleared or have been decontaminated of radioactivity are allowed in the shelter, White said.

A decontamination

station will be set up outside the school for the drill, according to Donohue. A team suited in protective gear must locate "hot spots," which in this training are actually radiating buttons, during the exercise.

"We did it two years ago," White said. "It went pretty well. There's always room for improvement."

A table-top exercise on Tuesday tested how the county's incident command and its management of information related to a crisis, Donohue said.

The disaster plan for Three Mile Island includes evacuation within a 10-mile radius of the plant. Franklin County is well outside the evacuation zone but within a 50-mile radius where foodstuffs would be monitored.

Franklin County had prepared to handle as many as 50,000 evacuees in the nuclear accident of 1979. An evacuation order was never given, and only 10 residents of a Middletown nursing home were housed in the county at the South Mountain Restoration Center.

A recent review found that the original evacuation plan did not account for 2,000 students from the Steelton-Highspire School District and possibly 500 of their parents, according to Donohue. The additional number is not part of the simulation today.

Faust replaces the Scotland School for Veterans' Children, which is closed. The exercise considers the routing of traffic as well as coping with pets and evacuees with special needs, Donohue said.

"It's great training for our newer volunteers," said White, who expected more than 15 volunteers at Faust.

In a real crisis, other shelters could be opened at the Eugene C. Clarke Jr. Community Center and local schools and churches, according to White.

Three Mile Island Unit 2, owned by First Energy of Akron, was damaged in the 1979 incident and never reopened. Unit 1 was restarted in 1985. Owned and operated by Exelon Corp., Unit 1 produces enough electricity to power more than 800,000 homes.

FEMA will present preliminary findings of the exercise in a public meeting at 11 a.m. Friday at the Hilton Garden Inn on TecPort Drive in Harrisburg. The evaluation will help the Nuclear Regulatory Commission make licensing decisions.

The final report will be available to the public about 120 days after the exercise.

Jim Hook can be reached at 262-4759 and jhook@publicopinionnews.com.

Braidwood: Tritium Release During Refueling Of Nuclear Reactor (Kankakee)

Kankakee (IL) Daily Journal, April 14, 2011

Steam containing trace amounts of radioactive tritium will be released Thursday as the Braidwood Generating Station nuclear plant begins preparations to refuel its Unit 2 reactor.

"Several high pressure steam systems will begin to be tested and depressurized," said Exelon spokesman Neil Miller. "Residents may see steam or hear a loud noise from time to time as this takes place."

The amount of tritium "has no health or safety implications to employees or the public and is part of normal, permitted operations," Miller said.... For the unabridged version of this story, subscribe to The Daily Journal's print edition or E-edition.

Only Two Hospitals In Arkansas Can Handle Radition Treatment (KTHV)

By Jessica Duff

KTHV-TV Little Rock, AR, April 14, 2011

LITTLE ROCK, Ark. (KTHV) – There are only two hospitals in Arkansas equipped to handle radiation emergencies in the event something goes wrong at Nuclear One – St. Mary's Regional Medical Center in Russellville and UAMS in Little Rock.

Ron Crane manages Emergency Preparedness at UAMS.

"We do decontamination every year. We do it yearly. But every two years we are federally evaluated and graded on our performance," Crane says.

Entergy partners with UAMS in these radiation drills. They're there every step of the way to monitor the radiation levels throughout the process.

"It really helps to have a second or third set of eyes as well as ears here to assist us because Entergy and ANO deal with this all time," adds Crane.

Entergy owns ANO, Arkansas Nuclear One, the state's only nuclear power plant.

"We want to be prepared just in case there's ever sort of an incident over at Arkansas Nuclear One. Hopefully not. Likely not. But that's why we're here, we want to be prepared," says Dr. Jon Palmer.

Dr. Palmer supervised the radiation drill, from the patient's arrival to recovery.

"First off to make sure the patient is safe. To make sure he was medically stable. And then to kind of decontaminate and supervise those procedures," Dr. Palmer adds.

Meantime, Crane says these drills help the staff and the public feel safe and prepared.

"The people of the state of Arkansas should feel very comfortable knowing that there are medical institutions and medical professionals that work very well with our partners to ensure that should any event ever happen of this type or of a greater magnitude that we're ready, willing and capable to handle it," adds Crane.

The crew working on the test subject did not have protective eye-wear or masks on during the drill. But in an actual emergency setting, those precautions would be taken.

Limerick Nuclear Re-fueling Worker Hurt In Fall (POTTMER)

By Evan Brandt

Pottstown (PA) Mercury, April 13, 2011

LIMERICK — A contracted worker in Exelon Nuclear's Limerick Generating station was knocked unconscious early Monday morning during the plant's re-fueling outage, but was determined not to have been contaminated by radioactivity.

According to Neil Sheehan, a spokesman for the Nuclear Regulatory Commission, the worker, whose name was not released, was working in the "secondary containment area" of Limerick's Unit 2, which is shut down for re-fueling.

It was about 2:30 a.m. when the worker was injured.

He was "climbing a ladder when he hit his head on a scaffold pole," according to the notification Limerick sent to the NRC.

Sheehan wrote in an e-mail that the worker injured "the back of his head, rendering him unconscious for about one minute."

The worker was in full protective clothing in the area near the unit's "residual heat removal heat exchanger," which is being replaced, Sheehan wrote.

An ambulance responded to the plant and the worker was taken to Reading Hospital Trauma Center "as potentially contaminated at about 3:30 a.m."

Sheehan wrote, "radiation protection technicians from the plant accompanied the individual in the ambulance and were able to confirm he was not contaminated."

The worker was subsequently released from the hospital, according to Sheehan.

The Limerick Generating Station has two nuclear reactors and Unit 2 is currently off-line for re-fueling. Continued...

When re-fueling occurs, Exelon also performs regular maintenance and repair work that is more difficult to do when the reactor is running.

The entire process is so work intensive that contracted workers are brought in from outside the area to augment the plant's regular work force.

Fukushima, Japan, At Diablo Canyon (VCR)

Another disaster waiting to happen

By Grant Marcus

Ventura County (CA) Reporter, April 14, 2011

"It was a disaster waiting to happen." This is what many Japanese environmentalists insisted, long before the Fukushima tragedy.

Environmentalists such as Aileen Mioki Smith of Green Action were trying their best to warn the public. But then the quake and tsunami struck. And it was too late.

The Fukushima nuclear energy site, with nine reactors and six spent-fuel holding ponds, had a history of several near misses. And the plant was built among several fault systems, all having the seismic potential that plant designers thought they had prepared for, but hadn't.

Mother Nature proved it. No one had predicted the 9.0 magnitude earthquake, 10 times greater than geological estimates. The tsunami exceeded estimates as well.

Could East meet West? Could we in California be looking in the mirror at a Japanese disaster serving as a premonition for what awaits us?

Diablo (Devil's) Canyon is also built near three fault systems. And like Fukushima, there is a calm before the storm.

But what will happen if a major earthquake hits? Will Mother Nature prevail? Is Diablo, too, a disaster waiting to happen?

And if this is a possibility, can California afford to wait and see, or do nothing, considering that hundreds of miles could be affected, thousands of lives lost, and crops and water supplies contaminated for generations?

Since there is no safe level of radiation, and doses are cumulative, every dose has the potential to cause health effects, such as cancer. That is why nuclear power must work perfectly. In other words, it must work against the odds of man's inherent mistakes in the midst of nature's unbridled power.

At least one partial meltdown in Japan: An update

For nearly 40 years, the public was told there were only minor problems at the Fukushima plant. It was going better than expected, considering that nuclear engineers had resigned from GE because of the Mark I reactor design flaws, the same design used by the Tokyo Electric Power Company (TOPEC) in six of the nine reactors on site.

Ken Bridenbaugh, one of the engineers who quit GE, put it this way: "The Fukushima situation is a direct result of Mark I containment (GE). It's a direct result of the earthquake, the tsunami, and the fact the Mark I containment is less forgiving than some other reactors."

At this writing, five of six of those GE reactors are unstable. Two show fissures in the exterior containment, indicating ruptures.

Authorities did finally admit to a partial meltdown at reactor No. 3, putting workers in a race to prevent a complete meltdown.

Radiation levels are at their highest level since the accident, and are 1,850 times the norm in the ocean water up to 1,000 yards off shore.

Two hundred square miles have been affected. The water supply in Tokyo, 180 miles from the plant, has been contaminated and is unfit for children.

Twelve different crops are contaminated, and fresh food is considered unsafe to eat. The fishing industry, too, is contaminated, if not lost.

And since the plant contained MOX fuel, a fuel source from breeder reactors, much higher in plutonium, pockets of plutonium have been found close to Tokyo, indicating there will be health problems for generations to come, and for miles around the plant.

Nuclear power at Diablo

Just 130 miles from Ventura, along the pristine coastline near San Luis Obispo at Avila Beach, lie two reactors above the cliffs of Devil's Canyon, an old Indian burial site. It is now PG&E's Diablo Canyon Nuclear Power Plant.

In a devil's tale, the local Indian tribes were the first to put up a fight against the plant, declaring that the spirits of their ancestors were being violated.

Recognizing health, safety and waste issues, environmentalists joined in. In 1976, the Abalone Alliance was created, following the defeat of Proposition 15, which had appealed to the voters for nuclear safety.

In 1976, the Abalone Alliance orchestrated the first civil disobedience at Diablo. Thousands gathered at Avila Beach, and 46 of its founders were arrested. A year later, thousands more were back at Avila, with thousands more marching in formal demonstrations, tallying 487 arrests.

In 1981, the National Council of Churches, local professors, politicians, ranchers and the organization Green Peace became involved.

Protesters were allowed onto adjacent lands, and as 30,000 marched along the coastal highway, 1,960 people, surrounding the plant by land and sea, were arrested, some within yards of the plant.

Included in the arrests were celebrities Ed Asner, Daniel Ellsberg and Jackson Browne. Forty professors and the entire San Luis Obispo City Council were also arrested.

Days before Diablo went on line, a poll was taken and showed that 80 percent of those living in San Luis Obispo County were opposed to the licensing of Diablo.

Fault lines

At the end of the 10-day civil disobedience, an engineer discovered a mirror image reversal in the seismic blueprints. PG&E had built one of its Diablo reactors backwards. The NRC (Nuclear Regulatory Commission) approved the plant anyway.

Yet, in spite of past errors, for 26 years, similar to the history at Fukushima, there have been only minor problems mentioned at Diablo, with the utility claiming there are no safety or health risks. And thus far, things have gone well, and catastrophes averted — Or have near misses been swept under the rug, just as they were in Japan?

In 2007, a new fault system was discovered, the Shoreline Fault, just a mile off shore from the Diablo plant, making a tsunami a greater possibility.

During the licensing process, PG&E bought up Shell's geological survey, perhaps to keep the public from knowing about the Hosgri faultline.

The Hosgri fault system had already produced an earthquake of 7.1 magnitude, more than Diablo Canyon was designed to withstand. It was only after a geologist exposed the danger of the Hosgri, that the utility agreed to reinforce the plant.

Another geological study showed that the Hosgri is connected to the San Andreas fault, and some geologists have estimated the Hosgri is now capable of an 8.7 jolt, about 12 times more powerful than the current strength of the rebuilt reactors. The Hosgri fault is just two and a half miles from the Diablo plant.

In February 2010, legislators asked PG&E for "seismic accounting," as the three nearby faults have shattered bedrock around the Diablo facility.

Photographs taken show irrefutable damage.

Complete seismic studies have yet to be done.

Diablo's hazardous spent-fuel pools

At Fukushima, the spent fuel pools lit the snowy sky like firestorms in the night. All six pools held radioactive waste, although, four years earlier, the waste had been transported to the breeder facility to be used for making MOX fuel.

Fortunately, the pools were not full when the earthquake and tsunami hit.

At Diablo, spent-fuel pools may pose more of a threat than earthquake uncertainties. Spent fuel has been stored at the two reactors since 1985. It has been accumulating, at 2,000 tons per year, and the waste continues to mount, never having been removed from the Diablo site. The amount of spent fuel, or nuclear waste, at Diablo is nearly 10 times the amount that was at the Fukushima site, or the equivalent of 60 Hiroshima bombs.

In a recent report to the L.A. Times, Robert Alvarez, past secretary and deputy assistant to the Department of Energy, cites Brookhaven findings done for the NRC. They demonstrate that if spent-fuel pools catch fire, 188 square miles will be rendered uninhabitable, and cancer fatalities will number 28,000, along with \$59 billion in property damage.

Alvarez points out that spent-fuel waste is more vulnerable because it is stored in open air, away from the facility, and is without the same safety backup systems and monitoring available on site. "And instrumentation is lacking to keep the water levels in pools." The nuclear waste must be submerged in water, if it is to continue to be cooled.

By law, nuclear power plants have only limited liability insurance, limited to \$1.2 billion. The state of California could stand to lose most of that \$59 billion (property damage) in a catastrophic accident, if the spent fuel catches fire.

And because the fuel is open to air, it is also the target of terrorists. Planes flying along the coast could cause damage to the spent-fuel storage ponds and cause a major disaster.

A history of safety violations

There have been 14 serious safety violations at the Diablo Canyon Nuclear Power Plant since its licensing.

One such violation is considered by the NRC to have been a "near miss."

A New York Times investigation revealed that many of the plant's backup cooling systems, intended to save Diablo Canyon from a nuclear catastrophe in the face of an earthquake, have had safety standards violations.

The NRC also cited PG&E for operating the plant for 19 months while some emergency systems were inoperable.

Secondary backup diesel generators were also cited for "performance deficiency." PG&E was further cited for the failure of its engineering staff to notify plant operators of these problems.

Just as the Fukushima reactors had problems with containment vessels, so Diablo Canyon has had past issues with the failure of its backup cooling systems, beginning years ago.

The cost of nuclear power and the practicality of alternatives

In light of all that can go wrong with nuclear power, would it still be worth the risk if it were cost effective?

Surprisingly, no.

The only reason that nuclear power is cost-effective, compared to other fossil fuels is that 80 percent of the nuclear industry is financed by the US taxpayer. Because of the dangers, the potential for terrorism and the need for top security, from the uranium ore to the waste that cannot be stored, PG&E has essentially been placed in a nuclear welfare program.

The nuclear waste must be stored for 10,000 years. After a lengthy search for stable ground, Yucca Mountain was chosen as the nation's permanent waste storage site. Two fault lines have recently been discovered at Yucca, and waste storage there has been scrapped. That is why nuclear reactors must continue to store waste on site or, as Diablo programmer Jearl Strickland put it, "The federal government, hopefully within the next 200 years, will be in a position to assume ownership."

The government has already spent \$3.5 billion to develop plans at Yucca, and tens of billions of dollars more over the years to find appropriate containment and stable ground for nuclear waste storage. The task has proven elusive.

Nuclear power plants used to cost hundreds of millions of dollars to build. (Diablo Canyon was \$5.3 billion.)

And future prices have been projected to be \$10 billion.

Yet, the life of the plant is only 40 years.

The plant must go through dismantling and encasement, adding another billion dollars to its price tag. And 10 miles of land around the plant must then be rendered permanently uninhabitable once the facility has been encased in concrete.

This is terribly inefficient. Indian lands are forever ruined by the mining of uranium ore. Acres of land must be mined to make just one fuel rod of the 50 to 200 in a reactor's core. Enrichment of uranium alone requires 25 percent of all the energy that nuclear power produces. And with each step of the fuel cycle, 10-15 percent of the energy can no longer be used for its original task.

With nuclear energy, there aren't just mining and enrichment, but milling, conversion, fabrication, hazardous transportation to centralized sources, tons of concrete for containment vessels and for containment vessels within containment vessels, backup cooling systems, backup electrical systems, turbines and generators, reprocessing, breeding, encasement, security, not to mention the nuclear waste that must be stored for thousands of years. And all these steps of the fuel cycle require energy, water, land and transportation, and there is the risk of terrorism and contamination each step of the way.

And for what? To boil water and turn it into steam.

Using nuclear power to boil water is like using a jackhammer or chainsaw to pick the food from your teeth. Or, in the words of John Gofman, an opponent of nuclear power, "It's like using a cannon to kill a fly in the room." It is an unnecessary, wasteful and dangerous way to create, if not waste, energy.

Grant Marcus has been a registered nurse for 26 years. He was co-founder of the Abalone Alliance, a group that opposed the licensing of the Diablo Canyon Nuclear Power Plant, and was a spokesperson for the Abalone Alliance From 1973-1986. He was arrested at Diablo Canyon several times, protesting the use of nuclear power near a faultline. This piece has been reprinted in other local media.

TVA To Discuss Nuclear Safety At Meeting (TENN)

Tennessean, April 14, 2011

Nuclear issues are high on the agenda of the Tennessee Valley Authority's board meeting today in Chattanooga.

Discussions about the safety of nuclear power are coming in the wake of disabled reactors and radioactive releases after an earthquake and tsunami in Japan.

TVA, the nation's largest independent power producer, has been aggressively pursuing building more nuclear power into its system.

The meeting, which is open to the public, begins with an opportunity for public comment at 8:30 a.m. EDT.

Anyone wanting to speak must pre-register at TVA's website or sign in that day before the meeting begins.

The meeting is at TVA's Chattanooga office complex, 1101 Market St., but it can be watched on streaming video at the board's website, www.tva.com/

[abouttva/board/](http://www.tva.com/abouttva/board/)

[index.htm](http://www.tva.com/abouttva/board/index.htm).

— Staff reports

TVA May Delay MOX Use Decision (AUGC)

By Rob Pavey

Augusta Chronicle, April 14, 2011

Tennessee Valley Authority may need more time to determine whether its commercial nuclear reactors can use mixed oxide fuel to be made at Savannah River Site.

"All of our nuclear programs now have to be looked at through the lens of what's going on in Japan," said Ray Golden, TVA's senior nuclear spokesman.

The utility has an interagency agreement with the National Nuclear Security Administration to evaluate using MOX fuel at its two Sequoyah reactors in eastern Tennessee and at Browns Ferry's three reactors in Alabama.

Company officials expected to make a decision by the end of 2012, Golden said, but now TVA may need more time to study the impact of the damaged No. 3 reactor at Fukushima, which was partially loaded with MOX test fuel similar to what will be made in South Carolina.

"From a due diligence standpoint, we have to see if there are any lessons to be learned and how they would incorporate into any analysis we are doing," he said.

The \$4.86 billion plant in Aiken County is designed to dispose of 34 metric tons of high-grade plutonium from about 17,000 dismantled nuclear warheads.

Small amounts of the material would be blended with traditional uranium to make fuel suitable for use in commercial reactors.

Although the damaged Japan reactor contains just 32 MOX assemblies—less than 6 percent— environmentalists have warned that a meltdown of fuel made with plutonium could create more hazards than traditional fuels.

The MOX fuel in Japan was made by nuclear giant AREVA in France. The company is also part of Shaw AREVA MOX Services – the group building the US plant.

The Japan fuel, however, is made from uranium and plutonium reprocessed from spent uranium fuels, while MOX to be made at Savannah River Site uses pure weapons-grade plutonium.

So far, TVA is the main prospect in the US Energy Department's search for clients willing to use the fuel when the new plant goes into commercial production in 2018.

A Richland, Wash., utility is also mulling its use in one unit, but no formal agreements have been signed.

Safety officials have pointed out that the problems in Japan were caused by the combined effects of the earthquake and tsunami—not by the type of fuel in the reactors.

Golden said a 2012 decision is still planned.

"It is still a possibility but I don't want to speculate," he said. "We would obviously not use it if it turns out to be too dangerous."

Meeting Sought On Nuke Evacuation Plan (NSDY)

By Stacey Alther

Newsday, April 14, 2011

With the shadow of the Millstone nuclear power plant at its doorstep, Southold Supervisor Scott Russell has asked the town's congressional representatives for a community meeting with federal Nuclear Regulatory Commission officials to talk about the health of the Connecticut facility.

At the top of the agenda would be a possible expansion of evacuation routes in the wake of Japan's recent...

Nuclear Generation Tax Draws Broad Opposition (CONNEMIR)

By Arielle Levin Becker

Connecticut Mirror, April 14, 2011

A legislative plan to tax the state's two active nuclear power plants could threaten jobs, send the wrong message to businesses and lead to higher electricity rates, lawmakers, municipal officials, business and labor leaders and the operators of the plants warned Wednesday.

"This targeted, seemingly vindictive initiative would undermine and destabilize an entire region of our state," Sen. Andrea L. Stillman, D-Waterford, said during a press conference. The two power plants are in Waterford. "Senate bill 1176 would send our entire state in absolutely the wrong direction with regard to economic development."

Dominion CEO David Christian

The proposal, which passed out of the legislature's Energy and Technology Committee by a 12 to 9 vote, would create a tax on nuclear, oil-fueled and coal-fired electric generation, with nuclear plants paying a far higher rate than the other facilities. According to the legislature's nonpartisan Office of Fiscal Analysis, the tax would raise \$342.6 million a year, \$335 million of which would come from nuclear generation.

The money would be used to pay off bonds authorized last year that would otherwise be paid for by a surcharge on electric consumers and a raid on energy conservation funds. After that, the money would be used to fund clean and renewable energy projects and to provide ratepayer relief.

On Wednesday, critics of the proposal called it vindictive, targeted at one business and unfairly aimed at nuclear power.

David Christian, CEO of Dominion Generation, which owns and operates the Millstone power plants in Waterford, said there are two possibilities if the tax were enacted.

"One would be that rates would go up due to the fact that the higher cost would be passed on to the consumers through higher electric rates," he said. "Or the plant would become uneconomic to operate and it would be forced into closure, following which electric rates would increase as well."

But Dominion officials signaled that they would be open to alternatives to help close the state's budget deficit. When asked about a separate proposal by Gov. Dannel P. Malloy to increase the tax on electricity generation, Christian said, "The concept of temporary shared sacrifice to help the governor in his goal would be a matter for discussion."

Daniel A. Weekley, Dominion's vice president for government affairs, said the company opposes Malloy's tax proposal, which would tax all generation sources and raise about \$58.4 million. But he noted that the company "is a strong supporter of Governor Malloy" and has been trying to work with him on alternatives.

"There are a number of different options on the table," Weekley said in response to questions about Christian's comment on temporary shared sacrifice. "I don't think we want to limit it to exclusively a temporary tax, but certainly that is one of the avenues that could be pursued."

The energy committee's bill would replace Malloy's proposal. When asked about the legislative bill, Juliet Manalan, Malloy's press secretary, said the governor still supports his own proposal.

The committee bill has drawn support from House Speaker Christopher G. Donovan, D-Meriden; the state Office of Consumer Counsel; Environment Connecticut, a nonprofit conservation advocacy group; and ConnPIRG. Rep. Vickie Nardello, D-Prospect, who co-chairs the committee, has said it would provide relief to ratepayers and protect clean energy.

In testimony on the bill, Consumer Counsel Mary J. Healey said the tax would lead Millstone to "simply earn less profit" and would not lead to higher electric rates for consumers. It would not lead the company to produce less power at the facility, she said, because technical and regulatory constraints would keep nuclear power plants from ramping up and down rapidly.

The Office of Fiscal Analysis report said any effect on ratepayers from the tax would likely occur after the 2013 fiscal year, when the sales contracts for the plants expire.

Christian said it would be unwise to operate a nuclear power plant on thin margins. He and others, including legislators from both parties, representatives of business groups and organized labor, described the economic impact of the plants, which employ nearly 1,100 people. Dominion commissioned a study that suggested that the plant provides \$1.2 billion in economic value to the state and is linked to 4,200 jobs in the region.

Waterford First Selectman Dan Steward said Millstone represents 30 percent of the town's tax base, paying \$22 million a year, and has provided fields for the towns and donations to local charities. The proposed bill has already affected the town's bond rating, he said.

Dominion currently pays about \$35 million in state and local taxes, Weekley said.

Millstone, Lawmakers: Stop Electricity Tax (WFSBTV)

WFSB-TV New Haven, CT, April 14, 2011

The Millstone Nuclear Power Plant in Waterford has joined forces with lawmakers to fight legislation that would tax generators of electricity.

The bill would tax generators of electricity to provide relief for ratepayers, finance alternative energy and raise \$340 million in revenue - including \$332 million from Millstone nuclear plants.

"Dominion is not threatening to close Millstone. What we are saying if Senate bill 1176 were to be passed, the Legislature would be forcing us to shut down," said Dan Weekley, a representative of Dominion Resources Inc., which owns Millstone.

Dominion's top brass stood alongside State Sen. Andrea Stillman and Rep. Betsy Ritter, who are opposed to the tax.

"The inequity of this bill is spelled out in the very first sentence of the non-partisan bill analysis provided by the Office of Legislative Research: 'This bill subjects certain electric generators to a tax on the power they generate in the state,'" Stillman said. "Our state's tax laws must first, last and always be based upon fairness, and we must not lose sight of that fundamental premise just because we're operating under these challenging economic conditions."

Dominion said the tax will force the plant to raise prices for consumers and that the tax is discriminatory because it is applied to only a few energy sources.

Supporters of the proposed tax said it is structured in a way that it cannot be passed on to consumers.

Conn. Group Opposes Tax On Electricity Generators (AP)

By Stephen Singer, AP Business Writer

Associated Press, April 14, 2011

A coalition of state lawmakers, business and labor representatives and local officials announced their opposition Wednesday to a proposed tax on electric generators that targets the Millstone nuclear power plants in Waterford.

Sen. Andrea Stillman and Rep. Betsy Ritter, both Waterford Democrats, said the tax is punitive and anti-business.

Stillman noted that Gov. Dannel P. Malloy had declared Connecticut "open for business" in his inaugural address earlier this year. "This bill flies in the face of that declaration," she said.

Ritter said the tax, which would apply to generators of electricity to provide relief for ratepayers, finance alternative energy and raise \$340 million in revenue – including \$332 million from Millstone nuclear plants – "punitively targets certain large companies and creates a difficult and negative environment" for businesses operating in Connecticut.

If enacted, the tax will be a nearly tenfold increase in current state and local taxes that Daniel A. Weekley, Dominion's vice president of government affairs said is \$35 million a year.

Sen. John Fonfara, co-chairman of the Energy and Technology Committee that approved the legislation in its first legislative test, said Dominion "is going to say the sky will fall" if the tax ultimately becomes law.

Ratepayers are overpaying for electricity and will benefit from a portion of the revenue that would be returned, he said.

Malloy has proposed a separate tax on generators of two-tenths of one cent per kilowatt hour. The tax has not been criticized as heavily as the legislative proposal because it is seen as more broad-based rather than singling out nuclear power.

Waterford First Selectman Dan Steward, a Republican, said the legislative tax proposal is a "huge concern" to the town because Dominion Generation, which operates the Millstone plants, pays \$22 million in taxes, or 30 percent of the town's tax base.

"This is not a business-friendly rule," he said.

Steward also criticized the tax plan for targeting the nuclear plants, which are not sources of carbon emissions.

David A. Christian, chief executive officer of Dominion Generation, said the tax would lead to higher electric rates or the plant would be shut because it is uneconomical to operate.

"We believe the tax is onerous and disparate in its impact," he said.

Fonfara and other supporters have disputed Dominion's threat to raise rates, saying the tax is structured in a way that it cannot be passed on to consumers.

Keith Brothers, president of the Norwich-New London Building and Construction Trade Council, said southeastern Connecticut has already been hit hard by the recession and weak recovery. The proposed tax could lead to a loss of as many as 1,500 Millstone and building trade jobs, he said.

"Shame on Connecticut if we allow this to happen," he said.

The opposition announced Wednesday came just two days after a Massachusetts electric company said the proposed tax would impose a cost on consumers in Massachusetts. The Massachusetts Municipal Wholesale Electric Company said that because it owns 4.8 percent of Millstone Unit 3, the proposed tax would cost the Massachusetts company and customers \$9.3 million a year.

CT Group Opposes Tax On Electricity Generators (HARTBZ)

Hartford Business, April 14, 2011

A coalition of state lawmakers, business and labor representatives and local officials announced their opposition Wednesday to a proposed tax on electric generators that targets the Millstone nuclear power plants in Waterford, The Associated Press reports.

Sen. Andrea Stillman and Rep. Betsy Ritter, both Waterford Democrats, said the tax is punitive and anti-business.

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Sen. John Fonfara and Rep. Vickie Nardello, who head the legislature's Energy and Technology Committee that approved the tax last month, did not immediately return calls seeking a response.

Waterford First Selectman Dan Steward, a Republican, said the tax is a "huge concern" to the town because Dominion Generation, which operates the Millstone plants, pays \$22 million in taxes, or 30 percent of the town's tax base.

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Conn. Group Opposes Tax On Electricity Generators (BOS)

By Stephen Singer

Boston Globe, April 14, 2011

HARTFORD, Conn.—A coalition of state lawmakers, business and labor representatives and local officials announced their opposition Wednesday to a proposed tax on electric generators that targets the Millstone nuclear power plants in Waterford.

Sen. Andrea Stillman and Rep. Betsy Ritter, both Waterford Democrats, said the tax is punitive and anti-business.

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Millstone Tax Proposal Unfair, Out-of-line, Anti-business (NLDAY)

By JC Reindl

New London (CT) Day, April 14, 2011

A bipartisan group of lawmakers and southeastern Connecticut municipal, labor and business leaders Wednesday denounced a proposed state tax on electricity generators that targets the Millstone nuclear power station in Waterford.

The legislative proposal would tack various new charges onto oil, coal and nuclear power producers. Yet a full 97 percent of the tax would be shouldered by Millstone, the sole operational nuclear station in Connecticut.

"I'm not a big business guy - I'm a pretty big labor guy - but that just makes no sense at all," said state Rep. Ernest Hewett, D-New London, one of 18 state lawmakers at the news conference at the state Capitol.

Dominion Resources Inc., of Richmond, Va., owns Millstone and has said it would close one or more of the facility's operating reactors if the tax becomes law. Neither the House nor the Senate has yet to act on the bill.

"This is such a huge disparate tax, and no business should be forced to bear this tax," David Christian, chief executive officer of Dominion Generation, told reporters Wednesday. Christian also said it would be "unwise" to operate a nuclear plant with the thin margins that would result.

Bill opponents criticized the tax measure as sending an anti-business message about Connecticut and discouraging investment in the state. Even if Millstone remained open and paid the tax, the tax would likely get passed on to consumers as a rate increase, they said.

"Senate Bill 1176 would send our entire state in absolutely the wrong direction in regards to economic development," said state Sen. Andrea Stillman, D-Waterford.

But the bill's proponents argue that the tax would ultimately benefit ratepayers while merely trimming the high profits Dominion has made for years in Waterford.

Backers include House Speaker Christopher Donovan, D-Meriden, the state Office of Consumer Counsel, as well as Rep. Vickie Nardell, D-Prospect, and Sen. John Fonfara, D-Hartford, who are co-chairmen of the Energy and Technology Committee that voted 12-9 last month to forward the bill.

Consumer Counsel Mary Healey dismissed arguments that the tax is a state-directed attack on business. Proceeds from the tax are to go to paying off bonds, and then providing ratepayer relief and supporting alternative energy projects.

"I'm getting tired of this anti-business refrain," Healey said Wednesday afternoon. "Ratepayers are also businesses, so it's not business unfriendly."

During the news conference, Christian, the Dominion Generation CEO, was questioned about an earlier and separate proposal by Gov. Dannel P. Malloy that would tax all energy generators. Christian said he was open to discussion on "the concept of a temporary shared sacrifice to help the governor." The Malloy proposal would have cost Millstone about \$33 million a year, the company said.

An economic impact study of the Millstone station, commissioned by Dominion, determined that the plant pays a \$33.6 million in taxes a year to state and local governments, including \$17.7 million in annual property taxes to Waterford.

Millstone employs 1,080 people and 350 contractors. Dominion shed 200 jobs at the nuclear facility in 2010, including laying off about 50 workers who didn't accept the company's voluntary separation offers.

Waterford First Selectman Dan Steward said Dominion represents about 30 percent of the town's tax base. He said the uncertainty surrounding the tax and the potential plant shutdown may already be costing the town money as it issues bonds for school projects.

One firm, which holds about \$35 million of the town's municipal bonds, has been calling the town almost daily with concerns.

"Our bond rating is already being affected by just the presence of this bill," Steward said.

State Rep. Ed Jutila, D-East Lyme, stood with opponents of the tax.

"This is simply patently unfair to put a burden of this size on one single enterprise in this state," Jutila said. "The result would be increased costs for ratepayers, either because it gets passed on to consumers or because the plant shuts down."

Joseph Rosenthal, principal attorney for the consumer council, criticized Dominion on Wednesday for scaring workers and residents with threats of layoffs.

"They've already shown that they will lay off people," he said. "People were laid off last year despite very excellent profits."

Those layoffs were done to reduce costs at Millstone, according to Dominion spokesman Ken Holt, who said plant safety was unaffected.

"We had high [worker] numbers compared to the industry," he said.

Millstone Owners Fight New Tax Plan (WTNHTV)

By Mark Davis

WTNH-TV Hartford, CT, April 14, 2011

Waterford, Conn (WTNH) - Dominion, the company that owns and operates the Millstone Nuclear Power Complex, received strong support Wednesday from most of the state lawmakers and local officials in Southeastern Connecticut in the company's effort to fight the proposed 'generation tax' that could cost them a hefty \$330 million per year.

"This very onerous tax scheme. If it passes, we jeopardize as many as 1,100 jobs," said State Senator Andrea Stillman (D-Waterford).

And the political types were joined by business and labor leaders from across that region, saying it could have a devastating impact on Southeastern Connecticut.

That's because Dominion says if the tax goes on the books they might have to pull the plug on the plant, or simply jack up the electric rates, and pass the \$330 million on to homeowners and business owners.

"Rates would go up due to the fact that the higher costs would be passed on to the consumer through higher electric rates, or the plant would become uneconomic to operate, and we would be forced to closure," David Christian, CEO of Dominion Generation said.

The tax would help pay down the state budget crisis, deregulation costs, and help fund alternative energy development. Advocates say that with a 47 percent profit margin, Dominion can easily afford the tax, and they can't pass it on.

"Because of the way that generators are compensated when they bid their energy into the market everyday. Dominion, being a very efficient, low cost generator, they don't clear the market, natural gas does, not nuclear," said State Senator John Fonfara (D-Hartford).

Conn. Lawmakers Question Electricity Tax (AP)

Associated Press, April 14, 2011

A group of Connecticut lawmakers is opposing a proposed tax on electric generators.

Several of the legislators are from southeast Connecticut, home to the Millstone nuclear plants that would pay much of the new tax.

Sen. Andrea Stillman, a Democrat from Waterford, called the tax punitive and says it is anti-business.

The proposal would tax generators of electricity to provide relief for ratepayers, finance alternative energy and raise \$340 million in revenue — including \$332 million from Millstone nuclear plants.

Dominion Resources Inc., which owns Millstone, strongly opposes the tax, saying it will raise prices for consumers and that the tax is discriminatory because it is applied to only a few energy sources.

Supporters say it is structured in a way that it cannot be passed on to consumers.

Conn. Tax Plan Could Shut Nuclear Plant -lawmakers (REU)

By Scott DiSavino

Reuters, April 14, 2011

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

Industry Not Meant To Benefit Bureaucracy (NLDAY)

By Kathy Cole

New London (CT) Day, April 14, 2011

This is in regard to the article "Dominion, state differ over profit numbers on which new tax is based," published April 9. In supporting lawmakers' efforts to invent an onerous new tax specifically aimed at Dominion, Mary Healy, the state consumer counsel, displays a blatantly anti-business if not a socialist attitude. Referring to Dominion's contested profit estimates, Healy states that the proposed tax will "still allow the company to be able to make a healthy profit, which is their right, but not an excessive profit."

What? What other businesses does Ms. Healy profess to dictate to regarding what is the correct amount of profit it should make? In coming up with justifications, Ms. Healy is using "consultants she would not name," nor would she describe how her staff arrived at their estimates. If ever a business, any business, felt driven out of Connecticut, Ms. Healy and the lawmakers have provided the push with this glimpse of the disrespect for and ignorance of Connecticut businesses.

Industry and business are the engines that support the economy of Connecticut, not government. I urge the legislators not to pass the proposed \$332 million tax on Dominion.

State's Nuclear Plants Recover From Shaky Ratings (MJS)

By Thomas Content

Milwaukee Journal Sentinel, April 14, 2011

After compiling spotty safety records that drew stepped-up scrutiny from federal regulators earlier in the past decade, Wisconsin's three nuclear reactors - now operating under new ownership - have improved their safety grades markedly in the past few years.

As a result, the two-reactor Point Beach plant and the single-reactor Kewaunee plant won't be subjected to extra scrutiny from regulators this year, even as public interest in the safety of nuclear energy has been heightened following the disaster at the Fukushima Dai-ichi plant in Japan.

The Kewaunee and Point Beach plants, which generate nearly one-fifth of Wisconsin's electricity, were designed to withstand extreme natural events such as tornadoes, flooding and earthquakes, plant operators say.

Like all US nuclear plants, they'll get a fresh safety review by the Nuclear Regulatory Commission during the next six months in response to the problems that followed the earthquake and tsunami in Japan, said agency spokeswoman Viktoria Mytling - a review that will focus on their ability to hold up under extreme conditions and a loss of off-site power.

But groups concerned about nuclear safety say that while there has been improvement in recent years, it should be taken with a grain of salt. They note that the problems at the state's three reactors were significant enough that they were among only six reactors nationwide that spent most of the decade facing extra scrutiny from the NRC, according to an analysis of past nuclear safety oversight since 2000.

"Things had gotten so bad that they were forced to improve their performance," said Katie Nekola, energy program director at the environmental group Clean Wisconsin.

And the NRC's process for overseeing reactors is still far from perfect, critics say, pointing to the nuclear industry's biggest near-miss since Three Mile Island - at a nuclear reactor in Ohio - to stress that more safety oversight of all plants is needed.

For the Wisconsin plants, the improved safety ratings mean they won't face the additional layer of examinations they were subjected to for parts of the past decade.

Mark Kanz, spokesman for the Kewaunee Power Station, now owned by Dominion Resources Inc. of Virginia, said the plant has worked to improve its safety performance in recent years, earning the NRC equivalent of an "A" grade the past two years. Dominion bought the plant in 2005 from Wisconsin Public Service Corp. of Green Bay and Wisconsin Power & Light Co. of Madison.

"It's taken a lot of hard work for us to get there, and that's where we intend to stay," Kanz said. "Dominion has a lot of experience in the nuclear business and has a lot of resources that we can rely on as a fleet, and certainly those resources meant a lot in terms of our turnaround to where we are now." Plants' histories

Florida-based NextEra Energy Resources said the safety performance of the Point Beach plant has improved since it took over ownership and management of the facility in 2007. The plant hasn't had extra oversight linked to earlier safety problems for years, even before the company bought the plant from Wisconsin Energy Corp., the company said.

"As part of our ongoing commitment to safe and reliable operations, we are currently investing hundreds of millions of dollars in upgrading and improving plant equipment and systems," NextEra said. "These investments will improve equipment reliability and efficiency throughout the plant, helping to also increase our overall safety margin."

In the early 2000s, the NRC faulted Point Beach for several problems that resulted in the stepped-up oversight from inspectors, including problems with backup water pumps that are needed to keep the reactor cool in case of an emergency. The NRC later found flaws in the plant's emergency preparedness, and it cited the plant in 2006 for providing false information to the agency about an emergency preparedness drill.

Among safety concerns at the Kewaunee plant was an NRC finding that backup diesel generators at the plant weren't functioning properly for nearly two months in 2006.

Concerns about safety at the Wisconsin plants also grew after boric acid ate a football-size hole in the vessel head, or cap, of a similarly designed reactor at the Davis-Besse plant near Toledo, Ohio, in 2002. No radiation escaped in the Davis-Besse incident because the plant was shut down before a problem could occur. It remained closed for more than two years.

The NRC responded to the Davis-Besse problem by requiring stepped-up inspections at reactors in Wisconsin and across the country with similar designs.

The issue prompted some nuclear operators, including the Wisconsin utilities that owned Point Beach and Kewaunee, to retrofit their reactors with new vessel heads. The cost in Wisconsin totaled \$72 million.

"What is really significant is we changed our regulations as a result of the findings from the discovery of the reactor vessel head," said NRC spokeswoman Mytling. "Neither the NRC nor experts in the nuclear industry expected that particular phenomenon to be able to cause such damage to the vessel head."

That remains a concern to some nuclear watchdogs who worry that the NRC's oversight of reactor safety - while improved since the 1990s - is still lacking.

David Lochbaum, a former nuclear plant engineer and now director of nuclear safety at the Union of Concerned Scientists, says the NRC did make substantive changes after Davis-Besse.

At the same time, he added, "The new reactor oversight process is not foolproof," he said. "In the year 2002, the reactor oversight process gave the Davis-Besse plant the highest marks possible, basically straight 'As,' even though it was then discovered to have come closest to an accident since the Three Mile Island accident in 1979."

Nekola is concerned that the NRC has continued to move forward with plans to relicense 40-year-old nuclear plants and allow them to expand the amount of power they produced.

The 38-year-old Kewaunee plant was the last reactor to get a 20-year extension on its NRC license before the earthquake and tsunami in Japan. The 41-year-old Point Beach plant is proposing to expand the amount of power it produces by 17%, and has begun modifying the plant to accommodate the increased power.

"We're still really concerned that they continue to move forward with pushing these old reactors harder to get more power out of it, and that raises safety concerns," Nekola said. Lessons learned

NRC and nuclear industry representatives say that lessons learned from the Japanese earthquake will apply to all plants, regardless of whether they have been relicensed or received permission to generate more power.

Similar changes took place after the Sept. 11, 2001, terrorist attacks, Tony Pietrangelo of the Nuclear Energy Institute said during a recent media briefing. Assessments of nuclear plants' ability to withstand an airplane attack resulted in plant modifications, including extra diesel generators for backup power and increased safeguards to ensure that pools that hold spent nuclear fuel remain filled with water to prevent a radiation leak.

Point Beach has a total of four diesel generators for its two reactors, while Kewaunee has three for its one reactor, plant representatives said.

Attention to the risks of nuclear power nearly a month after the Japanese crisis began comes as public opinion surveys show waning support for building new reactors.

An Associated Press-GfK poll released last week shows most Americans doubt the US government is prepared to respond to a nuclear emergency like the one in Japan.

But few Americans believe such an emergency would occur, the survey found.

Nevertheless, the disaster has turned more Americans against new nuclear power plants, AP reported. By a 60-40 margin, Americans oppose building more nuclear power plants. That's up from 48% who opposed it in an AP-Stanford University Poll in November 2009.

Welcome To THE COMMONS -- News And Views For Windham County, Vermont (Comm)

By Olga Peters

Commons, April 14, 2011

Welcome to THE COMMONS – News and Views for Windham County, Vermont

BRATTLEBORO—Robert "Jake" Stewart, one of the charter members of the New England Coalition on Nuclear Pollution (NEC), believes that the economic impact of Vermont Yankee's closure cannot outweigh the consequences of a disaster at the plant. He also reminds people that the decommissioning process will require skilled employees.

But he said that, ultimately, people need to conserve energy.

"We need to stop the increase of energy use," said Stewart, who worked with solar power in the 1970s, and remembers the Arab oil embargo and the gasoline shortages that ensued.

Stewart said new technologies exist that can help with conservation. People should also develop more "energy efficient systems," and governments could provide more incentives to people developing alternative energy and technologies.

Raymond Shadis, staff technical advisor to the NEC, believes that Vernon will feel the economic pain of the plant's closing, but that the economic impact will decrease the further away one gets from the host community.

Shadis became an NEC trustee in 1981 and an employee in 1997.

He did a study of the economic aftermath at Maine Yankee in Wiscasset, Maine, which closed in the late 1990s. He said that Wiscasset received donations and support from Maine Yankee similar to those that Vernon receives from Vermont Yankee.

He studied the countywide effects of Maine Yankee's closing five years after the fact. In areas like loan defaults, home sales, and sales tax revenues, Shadis said that he didn't find much of an impact from the loss of Maine Yankee.

Wiscasset also fared well because, "as any responsible company would," Maine Yankee worked out an economic step-down plan, gradually reducing donations and tax breaks to the community over a number of years.

Granted, said Shadis, the town has 900 tons of nuclear waste stored in it, but it receives \$700,000 a year for storing the waste.

Vernon receives \$1 million a year for an operating plant, said Shadis. He thinks that Vernon is getting a bad deal already.

The host community becomes “addicted to a cash cow” and takes the biggest hit, said Shadis, but the area surrounding Wiscasset has done fine.

“The host town is not the representation of the larger community,” said Shadis.

When it comes to the fate of the Vermont Yankee employees, Shadis believes that most of them will weather the winds of change just fine. There will be other jobs in their industry if they want them. The employees who don’t want to remain in the nuclear industry still possess valuable skills that can transfer to another industry.

The after-effects of Vermont Yankee’s closing will “be nothing to sneeze at, but are not insurmountable, and can be cured as fast as the damage occurs,” said Shadis.

Texas Senate Approves Radioactive Waste Oversight Plan (TXTRIB)

Texas Tribune, April 14, 2011

Today the Texas Senate passed a couple of bills that outline how the Texas Low Level Radioactive Waste Disposal Compact Commission will oversee the Texas Low Level Radioactive Waste Disposal Compact, which was established by SB 1504.

SB 1504 would allow the compact, which currently consists of only Texas and Vermont, to bring domestic waste to a facility in Andrews County. This bill prohibits the importation of foreign waste.

Other states could send their waste to Texas but it would cost them \$1,000 per cubic foot and states that want to join the compact must pay \$40 million until September 1, 2015, and \$60 million until 2020 to join.

SB 1605 establishes the compact commission as an independent entity answering to the Texas legislature, according to State Sen. Kel Seliger, R-Amarillo, the bill’s author. It charges the Texas Commission on Environmental Quality with regulating the facility.

The bill passed by a vote of 30 to 1.

US Nuclear Output Rises On FirstEnergy Boosts In Pennsylvania (BLOOM)

By Colin McClelland

Bloomberg News, April 14, 2011

US nuclear-power output rose for a third day as plants in Alabama and Pennsylvania boosted energy production, the Nuclear Regulatory Commission said.

Power generation nationwide increased 514 megawatts, or 0.7 percent, from yesterday to 77,568 megawatts, or 76 percent of capacity, according to an NRC report today and data compiled by Bloomberg. Twenty-four of the nation’s 104 reactors were offline.

FirstEnergy Corp. (FE) boosted Beaver Valley Unit 1 to 100 percent of capacity from 82 percent yesterday, the report showed. FirstEnergy increased output at Unit 2 to 87 percent from 61 percent. Each reactor can produce 940 megawatts at the plant, which is located about 26 miles (42 kilometers) northwest of Pittsburgh.

The Tennessee Valley Authority boosted output from the 1,104-megawatt Browns Ferry 2 reactor in Alabama to 98 percent of capacity from 82 percent yesterday.

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.

Scana Corp. (SCG) slowed the 966-megawatt Virgil C. Summer reactor in South Carolina to 85 percent of capacity from 100 percent yesterday. The plant is located near Jenkinsville, about 26 miles northwest of Columbia.

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.

Compromise Details Show Yucca Accounts Zeroed Out (LVSRJ)

By Steve Tetreault

Las Vegas Review-Journal, April 14, 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.

Southern Chairman Fanning Talks Energy Policy At US Chamber (ATLBIZ)

Atlanta Business Chronicle, April 14, 2011

Southern Co. Chairman, President and CEO Thomas A. Fanning told an audience at the US Chamber of Commerce "CEO Leadership Series" Luncheon in Washington, D.C. the nation needs full portfolio of energy resources combined with a big R&D effort to create new energy technologies.

He further reiterated on Wednesday Southern Co.'s (NYSE: SO) support for new nuclear energy and noted good energy policy means "a healthier economy and better prospects for job creation."

In an exclusive conversation with Atlanta Business Chronicle on April 1, Fanning recounted his reaction to the nuclear issues in post-disaster Japan and reaffirmed Southern Co.'s dedication to nuclear as a leading source of energy in the future.

Fanning told the US Chamber today he believes the nation needs new nuclear energy, but also natural gas, renewables and energy efficiency. And America must also preserve coal as an energy source. This must all be backed by new technology.

"As a nation, as an industry, research and development must be a national priority so that we have in place those technologies of tomorrow that we haven't even thought of today," he said.

His full remarks follow:

Good afternoon. Thank you, Karen, for that introduction. I want to also thank Tom Donohue and the US Chamber for their leadership in representing business issues in this country. We're all better off because of your efforts. Likewise, Southern Company is committed to making our own communities better off because we're there. We like to say we're bigger than our bottom line. In fact, for 2010, the company contributed nearly \$24 million to the communities we serve. Even more telling, our employees volunteered more than 200,000 hours to community work. It's a privilege for me to represent our 26,000 Southern Company employees - those thousands of people who make thousands of good decisions every day - all for the benefit of our customers. Now, I'll turn to today's issue. Mark Twain is often quoted as saying everybody talks about the weather but nobody does anything about it. You could say the same thing about national energy policy. As a nation, we've been debating national energy policy since before the days of President Jimmy Carter. Too often policies and politics have been on a collision course and nothing's gotten done. That's unfortunate because energy policy is a matter of national economic interest. Energy touches virtually every part of our economy. Good energy policy means a healthier economy and better prospects for job creation. The consequences of bad national energy policy are likewise clear. Our GDP suffers. Personal disposable income suffers. We all know how fragile our economy can be. We've seen it. We've lived it. Today, we're seeing unrest in the Middle East, oil well over \$100 per barrel and perhaps gas at \$4-\$5 per gallon by summer. We're still seeing a stagnant housing market and unacceptable levels of unemployment. Instead of a national energy policy, what we have is a hodgepodge of laws and regulations that serve as a collection of energy programs and initiatives. We have artificial incentives subject to the vagaries of domestic politics. Our energy economy is subject to international geopolitics that's outside our control. What we need is clear. We must focus on the well-being of our customers. And it must begin here in Washington. Reaching a consensus on domestic oil exploration and production would, of course, be great, but my focus is on issues related to the production and consumption of electricity. In that respect, there are two major elements that make up a sensible national energy policy. First, we need all the arrows in the quiver - a full portfolio of energy resources - nuclear, 21st Century coal, natural gas, renewables and energy efficiency. Second, we need a national, robust research and development effort to create new energy technologies for our future. Let's first address those "arrows in the quiver." Nuclear Power You can't talk today about nuclear power without discussing the events in Japan this past month - the earthquake, the tsunami and the subsequent issues at the nuclear power units in the devastated area. The spirit of the Japanese people and their ability to rise above adversity has inspired each of us. Our thoughts, our prayers and our offers to help remain with them. We can't, however, let the events there distract us from what we must do here. Nuclear power accounts for 20 percent of US electricity. It provides long-term price stability and there are no harmful emissions. Southern Company has three nuclear power plants - two units each -- and as you may know, we're leading the renaissance of nuclear energy in America by being the first company in 30 years to build new units. Developing new nuclear requires three critical attributes -- scale, financial integrity and credibility of operations. Now, we have scale. Southern Company is the largest electric utility in America today, with a market cap of \$32 billion. We have the highest level of financial integrity, the best bond ratings of any sizeable company in our industry and we have a long track record of excellent operations. More than \$2 billion has already been invested in constructing the new units, and we are awaiting final approval for a combined construction and operating license from the Nuclear Regulatory Commission, which is expected to be delivered by year-end. More than 3,000 jobs will be created during the construction phase and 800 people will permanently staff these plants once the units are operational in 2016 and 2017. Our new units have a new design - the AP1000. And although it's the newest technology, its design relies on one of the oldest principles -- gravity. No power is needed to shut down the reactor safely. Just Newton's law. Our current units are safe. Our new units will be even safer. According to the Department of Energy, the nation's nuclear power plants are among the safest and most secure industrial facilities in the United States. Working closely with the NRC and other industry groups, we will take what we learn from Japan, look deeply into our own safety systems, take them through a rigorous review and implement improvements to ensure the

highest levels of safety. The NRC, for example, has already begun review of plants in seismic-sensitive areas and those that are located along our coastlines. And, let's be clear, the review underway has much more to do with the current nuclear fleet than with the proposed new units. The site for our new units, for example, is not in a seismic-sensitive area. It's also 130 miles from the coastline and 220 feet above sea level. And we're going to use the newest technology employing a completely different approach to nuclear safety. You know sometimes it's easy to criticize Washington, but since the events in Japan, the Administration, Congress, and our regulators have understood those facts. Rest assured, we will continue to focus on safety and be diligent in making sure that our plants remain as safe and efficient as possible. But let's not let politics hinder our progress in this nuclear renaissance. Nuclear energy must remain a part of our future. 21st Century Coal A Congressional Research Service study shows the US has 28% of the world's coal resources - the largest amount of any country. Nearly half of all US electricity generated comes from coal. It's America's most abundant energy resource. And it's the one that we control. We must place a high priority on developing solutions that preserve this critical energy resource for the future. We must do it in a way that provides a sensible balance of reliability, economic consequence and environmental impact. Through our own technology innovation, we have created this notion of "21st Century Coal." Southern Company, with the help of the DOE and our other partners, has developed a way forward for coal - one that provides high reliability at low price and an environmental signature roughly equivalent to natural gas-fired generation. Now... I'll talk more about that later. First, please be aware that the existing coal industry is under attack by some in America. Decisions are being made today that will limit our ability long term to use coal... and, therefore, negatively impact the nation's economic well-being. For example, last month, EPA issued a nearly 1,000-page proposed regulation on further reductions of emissions from coal-fired power plants. It covers 125 different types of emissions. It's complex. It contains stringent limits and requirements that must be met in an unreasonably short time frame. It will be costly. Nationally, those energy costs could rise as much as 20% as a result of this new proposed regulation. And reliability could suffer. EPA also is proposing to limit greenhouse gases, which could lay another costly burden on our energy sector. Then there are the jobs. Let's say we replace coal with gas. There are potentially enormous social consequences. For the same capacity, there are six times as many jobs at a coal plant than a gas plant. There are predictions that as a result of the proposed regulations, as much as 70,000 megawatts of coal generation could be shut down by 2015, potentially impacting 35,000 jobs. And that's just in our industry. You also have coal mining, railroads and equipment vendors that will be impacted. Those jobs will go away too. And think about the tax base that would be lost to those communities, many in rural areas. These are important public policy issues. Please know that people in my industry are already thinking very carefully about transitioning the current fleet of generation. But we don't need to manufacture artificial burdens that will hurt our customers and weaken our ability to create jobs and improve the economy. Some companies may see this as an opportunity to benefit from an environment of reduced reliability and rising prices to improve their own profits. Southern Company does not. Let's make sure we keep the interests of our customers and the health of our economy as our highest priorities. EPA clearly has an important and critical role to play. They must set regulations around policy. But they DO NOT set policy. That is the job of Congress which is accountable to all Americans. Natural Gas Let's face it. There are only a small number of companies that are able to undertake the development of new nuclear plants. Pending federal regulations have virtually declared a war on coal. As a result, much of our industry is rushing to natural gas-fired generation. In fact, since the late 1990s, 98% of new US generation has used natural gas as its primary energy resource. Today, with new discoveries, natural gas is abundant and prices are down. But there are challenges in how we recover the gas. Fracking, a process that makes it economical for companies to tunnel deep underground and remove the gas, could pose environmental risks. At present, 90% of the gas that's being recovered involves fracking. Then there's infrastructure. Do we have the pipelines in place today to meet the rising demand for natural gas and transport it to where it's needed? At present, we don't. And what about the price of natural gas in the years ahead? Not long ago, gas rose to \$14.50 per million BTU, or more than three times what it's selling for today. Whatever you believe about the future price of natural gas, it's reasonable to believe it will remain volatile. If that's your only future generation resource, then that volatility will only increase and that's not good for American business. Renewables Renewables are exciting, and clearly, there is a role for renewable energy to play in our nation's energy future. Technologies are improving and costs are coming down. Southern Company is building one of the nation's largest biomass plants in Texas and operating the nation's second-largest solar plant in partnership with Ted Turner in New Mexico. We've got other solar projects in the works in Alabama and Georgia and along the Gulf coast. I'm not particularly bullish on wind energy, but even there we continue to evaluate our options off the Georgia and Florida coasts. Still, renewables have their challenges. Most large sources of renewable energy are often located where there are no people. So, in order to get that energy to where the people are, you must build significant new transmission lines. If we've learned anything from the blackouts in the Midwest and the Northeast a few years ago, generation is best located near the areas it serves. The greater the distance the greater the risk. Also, because renewable resources - particularly wind and solar - are intermittent in nature, we must have in place back-up generation for when the wind doesn't blow and the sun doesn't shine. Finally, there are questions whether the renewable sector can survive

without artificial support in the form of government tax incentives. Therefore, considering the consequences of the need for long-distance transmission, back-up generation and artificial cost subsidization, renewable technologies will likely have a marginal impact for some time to come. Please understand me. We fully support the development of renewable energy as an important source for generating electricity. But because of its inherent limitations, it will be almost impossible to replace the significant role of large nuclear, coal or natural gas-fired generation. Energy Efficiency In my business, to some people, energy efficiency carries a bad name. It gets translated as "sell less" of our product. What it really means is to promote the idea of using our product more wisely. I want to help my customers make decisions that lead to wiser, more efficient use of what they buy from me. You can't be against what's good for your customers. Southern Company clearly won't go there. But I still want to sell more of my product. There are plenty of examples where substituting electro-technologies for other energy resources is great for customers and great for America. Electric vehicles are one example of electro-technologies where we can play offense in an energy efficiency environment. Think of what you're spending on gas per gallon and what you could be spending to charge up an electric vehicle. The equivalent cost is about a dollar per gallon. We have major customers - air carriers and ports, for example - who are already converting equipment from diesel to electric. They're saving dollars and reducing emissions. So I AM plugging EVs - no pun intended! Not only because it helps my business -- it also helps our nation. The US spends \$1 billion a day on foreign oil. It's good national energy policy to "nationalize" that source of energy. In addition to electric transportation, there are other things that are being done, like programs we and other utilities offer that show homeowners, small businesses and large industrial customers how to be more efficient in their energy use. To date, our energy efficiency programs have lowered peak demand for electricity by 3,400 megawatts - enough to power nearly half a million homes. That's a lot of electricity that we didn't have to generate. And, between now and 2020, we plan to spend an additional \$1 billion on energy efficiency, reducing peak demand by an additional 1,000 megawatts. That represents about 11% of the demand growth we expect to experience in the Southeast. So, to summarize the first element of our national energy policy, we need all the arrows in the quiver - the full portfolio -- nuclear, 21st Century coal, natural gas, renewables and energy efficiency. Considering the entire portfolio, Southern Company has committed more than \$20 billion to these enterprises. Right now, we are the only company doing it all. Now, let's discuss the second major element of our national energy policy - providing a robust capability to pursue technological innovations in energy that will benefit American jobs and our economy. I'm proud to say that Southern Company is by far the industry leader in this area. In fact, we're about the only company still engaged in proprietary research and development in our industry. Over the past 40 years, Southern Company, along with our partners, has developed our own environmental technologies that have allowed us to deploy billions of dollars of capital some 10%-20% cheaper than our industry peers and at performance levels well in excess of standard industry design - all for the benefit of our customers. Our most recent achievement is the development of a coal gasification technology that I referred to earlier -- built from the ground up for electricity generation. We're using that technology at a plant in Kemper County, Mississippi. It will cost about \$2.4 billion, and will create more than 1,000 jobs during construction and 260 permanent jobs when operational in 2014. Some 65 percent of the carbon dioxide will be captured and reused for enhanced oil recovery. It will have the environmental footprint equivalent to a natural gas plant - and without the price volatility. We've already licensed that same technology in China where a similar plant will begin operating next year. And we believe there's the potential for more business to come. We also have some 20 research and development projects under way related to carbon capture and storage. And we operate the nation's only center for studying carbon capture technology - the DOE's National Carbon Capture Center located just south of Birmingham, Alabama. That's another example of our longstanding, constructive relationship with the DOE, leveraging our investments together. By 2013, we will have invested more than \$10 billion in environmental controls. As a result, we will have reduced emissions some 90% from those plants. We're also a leader in the deployment of "smart" technologies - such as smart meters and smart grid, or the wires part of the business. Smart grid technologies are nothing new to us. Since 1990, we've invested nearly \$1 billion in our infrastructure. A smarter grid helps better manage demand, lower operating costs and improve reliability and efficiency - again all for the benefit of our customers. Interestingly, at the end of those wires is a meter. To date, we've already installed more than 3 million smart meters in the Southeast. By the end of next year, we will have installed more than 4.6 million. We've saved money and man-hours, and trimmed vehicle miles significantly. That's both good for business and good for the environment. Smart meters improve communications with our customers and lay the groundwork for future technologies that allow customers to take more control of their energy use. But a very good question is, "What's beyond the meter?" I'll bet many of you didn't know five years ago you couldn't live without an iPhone. What is the analog to that in my industry? How will our customers think differently about and use differently our product five years from now? The truth is I really don't know today what value chains will emerge and what role Southern Company should play. So in light of that uncertainty, we're making lots of "options bets." We're engaged in numerous trials and pilots all across the Southeast to see where this might lead. Finally, we're working diligently to find more sensible applications for smart appliances that not only make life better for our customers but also make the use of electricity more efficient and help improve our customers' bottom lines. And, as I said, we're

continuing to look for that next innovation, the one that our customers will one day say "I can't believe I lived without that." What's it going to be? I don't know. But, as a nation, as an industry, research and development must be a national priority so that we have in place those technologies of tomorrow that we haven't even thought of today. So, in closing, where does that leave us? First, we need all the arrows in the quiver. We need new nuclear. We must preserve coal as a resource for our energy future. We need natural gas, but it's not a panacea. We need renewables, but let's recognize their limitations. We need to continue to promote energy efficiency. Second, we need to get serious about research and development. Energy technology development has to become a national imperative. As an industry, we thrive on fulfilling the obligation to serve, but never before have the challenges seemed so challenging. We need your support as business leaders to understand what's being discussed by our leadership here in Washington. There are many good efforts under way, but we need you to understand what's at stake for the future health of jobs and the economy. National energy policy is the job of Congress working with all interested parties. Energy policy is not the job of the agencies. But I remain confident. We have a great track record of reaching constructive outcomes dealing with very complex issues. One of the things I remember about Benjamin Franklin is his contribution to electricity through a kite and a key. But he also said something else that we should remember when it comes to energy policy and working with an Administration, Congress and regulators. He cautioned: "If we do not pull together, then we most certainly will pull apart." Thank you.

Southern Co. CEO Says Proposed Nuclear Plant Remains On Track After Disaster In Japan (GREENDR)

Greenfield (IN) Daily Reporter, April 14, 2011

A new nuclear power plant proposed for eastern Georgia would be safer than the existing US nuclear fleet, and the utility building it plans to proceed despite the ongoing nuclear crisis in Japan, Southern Co. CEO Thomas Fanning said Wednesday.

The head of the Atlanta-based electric utility, one of the largest in the country, also criticized attempts by the Obama administration to tighten pollution controls on coal-fired plants, saying the industry was "under attack."

Southern Co. expects federal safety regulators to decide by the end of the year whether the utility can build two more nuclear reactors at the Vogtle Electric Generating Plant near Waynesboro. If approved, it would be the first time a power company has won permission to break ground on a nuclear plant in a generation.

Fanning acknowledged during a speech in Washington the ongoing disaster at the Fukushima Dai-ichi nuclear plant in Japan. The crisis started when a March 11 earthquake and tsunami knocked out the plant's emergency cooling system. Since then, Japanese authorities have struggled to cool the plant's nuclear reactors. The facility has been damaged by explosions and spewed radiation into the environment.

"We can't however let those events there distract us from what we must do here," Fanning said. "Nuclear power counts for about 20 percent of United States' electricity production. It provides long-term price stability and there are no harmful emissions."

Fanning said the new reactors would be built at a seismically stable site about 130 miles from the sea, meaning it's nearly impossible it could be struck by a tsunami wave.

Southern Co. operates two reactors at the Edwin Hatch Nuclear Plant near Baxley that are substantially similar to the damaged boiling-water reactors in Japan. For the new project at Plant Vogtle, Southern Co. has picked Westinghouse Electric Co.'s AP1000 reactors. Its emergency cooling system is powered by gravity, not electricity, which Fanning said makes it more robust.

"Although it's the newest technology in the nuclear industry today, it relies on one of the oldest principles: gravity," Fanning said. "No power is needed to shut down the reactor safely — just Newton's law. Our current units are safe. Our new units will be even safer."

A scientific advisory committee within the US Nuclear Regulatory Commission said earlier this year that it believes the reactor can be operated safely. The NRC must still approve the reactor design — which could be used in other projects — before deciding whether to allow its installation in Georgia.

A coalition of environmental groups has questioned whether the steel containment surrounding the reactor could be vulnerable to corrosion, increasing the odds of a radioactive leak during an accident. The coalition has asked for a moratorium on approving new reactor technology until safety regulators can review the accident in Japan.

Fanning faulted the US Environmental Protection Agency for proposing new rules last month limiting mercury, lead, arsenic and acid gas pollution from coal-fired power plants. He said those rules will raise electricity costs and would be imposed too quickly. Environmental and medical groups have praised the move, saying it will remove toxins from the air that contribute to respiratory illnesses, birth defects and developmental problems in children.

Fanning also criticized the EPA for trying to put limits on the greenhouse gas emissions blamed for global warming.

"When you burden the United States with higher energy prices, all you are doing is exporting jobs and reducing the growth rates for our economy and benefiting someone else," Fanning said, responding to a question.

EPA spokesman Brendan Gilfillan said for every dollar spent on pollution controls, residents will receive \$5 to \$13 in health benefits that include the prevention of heart attacks and premature deaths. The agency is seeking public feedback from industry, environmental and other groups before issuing proposed greenhouse gas rules this summer.

Fukushima Accident Should Not Derail US Nuke Buildout: Southern CEO (PLATTS)

By William Freebairn

[Platts.com](#), April 14, 2011

The accident at the Fukushima 1 nuclear plant in Japan should not be allowed to derail new nuclear plants in the US, Southern Company Chairman and CEO Thomas Fanning said Wednesday.

The US has offered to help the Japanese following a March 11 earthquake and tsunami that caused cooling problems at the six Fukushima Daiichi reactors, he said. "We can't, however, let the events there distract us from what we must do here," he said. Fanning spoke at a luncheon in Washington sponsored by the US Chamber of Commerce.

The US needs to pursue new nuclear generating units as well as "21st century coal," natural gas, renewables and energy efficiency, he said.

Article continues below...

The president, regulators and Congress "understand the facts" about nuclear energy's safety and are proceeding properly to study the lessons of the Fukushima accident, he said.

"Let's not let politics hinder our progress in this nuclear renaissance," he added.

The nuclear industry itself is also reviewing any lessons and will "look deeply into our own safety systems" and make improvements to US plants, he said.

Southern Company subsidiary Georgia Power and three partners are building two units at the company's Vogtle site in eastern Georgia, a project Fanning said will cost \$14 billion.

The Westinghouse Electric AP1000 reactor design selected for construction at Vogtle is "a completely different approach to nuclear safety" because of its extensive use of passive systems, Fanning said. The Vogtle site is not seismically active and is 130 miles from the coast, he said.

Although the cost to build nuclear units is higher than other baseload energy sources, nuclear energy provides "long-term price stability," which makes it attractive for utilities, he said. The price of natural gas is likely to remain volatile, and could rise if demand increases for its use in electric generation or transportation, he said. "We need natural gas, but it's not a panacea," he said.

He also said the coal industry is "under attack by some in America," offering, as an example, proposed emission rules issued last month by the US Environmental Protection Agency. Fanning said the rules contain "stringent limits and requirements that must be met in an unreasonably short time frame."

The social impact of replacing coal with natural gas also must be considered, Fanning said. For the same capacity, there are six times as many jobs at a coal plant as at a gas plant, he said. And in some rural communities, the coal plant represents a large portion of the tax base, he said.

"These are important public policy issues" that should be set by Congress, not EPA, he said.

Japan Crisis Shouldn't Derail US Nuclear Plans, Fanning Says (BLOOM)

By William McQuillen

[Bloomberg News](#), April 14, 2011

Southern Co. (SO) Chairman and Chief Executive Officer Thomas Fanning, whose company won \$8.33 billion in US nuclear loan guarantees last year, said the nation should build reactors without letting radiation releases from a Japanese plant "distract us from what we must do here."

Current models are "safe," and new nuclear units would be "safer," Fanning told the US Chamber of Commerce in Washington today. The two new reactors proposed by Southern would provide 3,000 construction jobs, he said. Fanning also encouraged pursuing energy from coal, natural gas and renewable technologies.

"We need all the arrows in the quiver," he said. "We need nuclear. We must preserve coal as a resource for America's energy future. We need natural gas, but it is not a panacea. We need renewable, but let's recognize its limitations."

Southern, based in Atlanta, is awaiting final certification for the design of its AP1000 reactors, made by Toshiba Corp. (6502)'s Westinghouse Electric Co. Fanning said the US shouldn't delay approval, which he expects by the end of the year, because of the crisis at the Fukushima Dai-ichi plant.

Southern's planned reactors, the only project in the US backed by federal loan guarantees, would become the first new American nuclear units built in more than 30 years.

The Nuclear Regulatory Commission hasn't issued a new construction license since a partial meltdown at Pennsylvania's Three Mile Island in 1979, the worst US nuclear accident.

The US gets 20 percent of its electricity from 104 nuclear reactors. Southern wants to add the units to its Vogtle nuclear power plant, about 26 miles (42 kilometers) southeast of Augusta, Georgia.

Southern Co. CEO: Coal Industry Is 'Under Attack' (WSJ)

By Stephen Power

Wall Street Journal, April 14, 2011

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

Nuclear, '21st-century Coal' Crucial To US -- Southern Co. CEO (EPM)

By Jenny Mandel

E&ENews PM, April 14, 2011

Nuclear regulators should look to the nuclear accident in Japan for lessons that can apply here, but those lessons will not be available for a considerable period of time and will focus on plants in seismically active and coastal areas, a utility official said today.

Thomas Fanning, president and CEO of Southern Co., was speaking at a US Chamber of Commerce event in Washington, D.C., and said the United States should not "let those events there dictate policy here."

In February, Southern Co., which operates 73 fossil fuel and hydroelectric plants in the Southeast, won the first federal nuclear loan guarantee for two reactors at its Vogtle site near Burke, Ga. The company will be backed by \$8 billion in federal support.

Asserting that "our current units are safe; our new units will be even safer," Fanning said observers would need to be patient in awaiting the take-away lessons from the accident at Japan's Fukushima Daiichi plant. Understanding what happened after the tsunami and what happened as a result of the emergency response is crucial, he said.

Fanning declined to say if those lessons might encompass changes to the duration of backup electric power available to nuclear plants in the case of a grid outage or the storage of spent fuel in on-site pools (Greenwire, March 15).

In a speech that covered the energy generation spectrum, Fanning said nuclear power and "21st-century coal" will be crucial to meeting future energy demands.

He was far less keen on natural gas than many others in the utility industry, warning that history shows that prices may be low now but that they will remain volatile despite newly accessible discoveries. "Fracking could pose environmental risks," he said, speaking of the hydraulic fracturing process. "We need natural gas, but it is not a panacea. ... We need renewables, but let's recognize their limitations."

Fanning said advanced coal technologies like one developed by Southern Co. engineers – now being licensed to China – can be "roughly equivalent" to natural gas-fired power from an environmental standpoint.

But he said strict emissions regulations from US EPA, like the "Utility MACT" rule released in February, amount to artificial barriers that hurt utility customers. "When you burden the US economy with higher electricity prices, all you do is export jobs and benefit someone else," Fanning said, saying the general attitude now amounts to a "war on coal."

He also warned against regulating coal ash as a hazardous substance. "I think that would be, frankly, terrible for America," Fanning said, adding that he thinks it is unlikely to be agreed upon.

Southern Co. CEO Says US Coal Is "Under Attack" (POWGENWLD)

Power-Gen Worldwide, April 14, 2011

Thomas Fanning, chairman, president and CEO of Southern Co., said the US coal industry is "under attack" and that nuclear power needs to be a factor in future US power generation.

In a speech before the US Chamber of Commerce Fanning addressed national energy policy, renewable energy and energy efficiency.

Fanning said the two major elements of a national energy policy are a full portfolio of energy resources, including coal, natural gas, renewables and energy efficiency, and a "robust" national research and development effort to create new energy technologies.

Nuclear

Fanning said events at the Fukushima Daiichi nuclear power plant in Japan should not get in the way of a US nuclear renaissance. Southern Co. is waiting for regulatory approval to build new nuclear units at Plant Vogtle in Georgia.

"Rest assured, we will continue to focus on safety and be diligent in making sure that our plants remain as safe and efficient as possible," Fanning said. "But let's not let politics hinder our progress in this nuclear renaissance. Nuclear energy must remain a part of our future."

Coal

Fanning said coal-fired generation is "under attack" and the industry will be hit by costly upgrades and installations of emission control technology. He called the time frame to meet new regulations "unreasonable." Fanning also said that while the Environmental Protection Agency is responsible for regulating power plant emissions, the regulatory agency should not do the job of Congress.

"They must set regulations around policy. But they do not set policy," Fanning said. "That is the job of Congress which is accountable to all Americans."

Natural gas

Fanning said that while the price of natural gas is currently low, making it competitive with coal and renewables, the price is still volatile and is not good for American business.

"If that's your only future generation resource, then that volatility will only increase," Fanning said.

He also said that hydraulic fracturing shale formations to recover natural gas is economical but can cause environmental problems.

Renewables

Fanning said renewable generating sources are "exciting," but present their own challenges.

"Considering the consequences of the need for long-distance transmission, back-up generation and artificial cost subsidization, renewable technologies will likely have a marginal impact for some time to come," Fanning said.

Energy efficiency

To date, Southern's energy efficiency programs have lowered peak demand by 3,400 MW. The company plans to spend an additional \$1 billion until 2020 on energy efficiency, reducing peak demand by an additional 1,000 MW, Fanning said.

Read more policy news

Rockland County Executive: It's Time To Shut Indian Point (Patch)

It's Time To Shut Indian Point

By Melissa Siegel

Nyack-Piermont Patch, April 14, 2011

Rockland County Executive C. Scott Vanderhoef said Tuesday that while he is confident in the government's Indian Point evacuation plan, he still believes the nuclear plant should ultimately be closed.

"My own personal belief is that no matter how good your plan is ... there's always a hiccup, there's always a problem, there's always something behind something else that creates problems, and that we live in too densely a populated area to assure the safety and health of every single resident," Vanderhoef said while participating in Rockland County Government Day at Rockland Community College. "And if I can't do that, then the question becomes is nuclear power at that site, in this densely populated area, worth the cheap electricity it produces. And my response is no, that it should be closed. Not because I'm opposed to nuclear power, but because it's in the wrong spot."

The discussion began when Vanderhoef was talking to RCC faculty and students, along with other government officials, about what the County Executive's office does. The talk was part of Rockland County Government Day, where various booths were set up to teach locals about what each department in the county government does. Vanderhoef's speech was one of several "break-out" sessions during the event, where local officials talked to a small group about their specific role in the government.

Vanderhoef began by talking about the different jobs that a county executive has, one of which is serving as the chief emergency officer for Rockland. However, he noted that the one exception to this was in the case of a disaster at Indian Point, when the executives for Westchester, Orange, Putnam and Rockland would have to come together to decide the next course of action.

After making this clarification Vanderhoef moved on to discuss other topics, specifically how and why he chose to keep Rockland schools open the day after the September 11th terrorist attacks. But when Vanderhoef opened the floor up for a question-and-answer session, the focus quickly switched back to Indian Point.

One woman asked if the four county executives ever get together to discuss a possible evacuation plan. Vanderhoef said that they in fact practice such plans at least twice a year, each with different hypothetical scenarios. He noted, however, that a question has now come up about whether the evacuation radius should be 10 miles — as it is now — or 50 miles. This has mainly become an issue because officials from the Nuclear Regulatory Commission recommended that Americans staying within 50 miles of the Japanese nuclear power plant impacted by the country's recent earthquake should evacuate the area. Vanderhoef assured the crowd that the 10 mile radius would remain and that it was sufficient for evacuation.

"What NRC was they made a decision, in the Japanese plants, to tell Americans to evacuate within 50 miles of those plants," Vanderhoef explained. "The reason they did that was because they could not get enough information from the Japanese authorities and the Tokyo Power authority, and they were fearing the worst, so they made a very conservative judgment to do 50 miles. [...] So the question that is now is everybody's mind is, 'Is it 10 miles or is it 50 miles?' The answer is going to be it's 10 miles, but the NRC is going to have to explain themselves [...] and then explain it to the public as to why the 10 mile limit is scientifically appropriate for purposes of getting out."

Vanderhoef later pointed out that the 10 mile radius is in effect throughout the country, not just for the area surrounding Indian Point.

But, Vanderhoef said, no matter how often they practice these plans, something could still go wrong, especially in an area with so many people. Thus he stated that we must discuss whether alternative means of creating electricity might be better for this community, even if they are more expensive. He also suggested perhaps moving the plant to an area that is less densely populated.

"I just think there's too much of a risk," he said of Indian Point. "Why not biomass? Wind power? Different natural gas power? I understand it may be more expensive. Build a nuclear plant somewhere else, just not there."

A final questioner asked Vanderhoef what they could do about this issue. Vanderhoef responded that people could write to different government officials, and the main topic they should discuss is the criteria by which the NRC decides whether or not to recertify existing nuclear plants.

"When you recertify a plant, you should recertify the plant based on whether you would build that plant today in that same location," he concluded. "[...] Base it on those criteria, and I would suggest to you Indian Point would not be recertified. But the NRC doesn't do that. The rules and the law say that they recertify based only on reviewing whether there's an enormous environmental damage that might take place if it were recertified and to assure that it's fundamental operations are continuing and they're not too old. [...] So if you write [to the government tell them to], ask the NRC, or pass a law at the federal level that requires the NRC recertifying any plant to review as if it were a new plant."

In The Shadow Of 'What If' (NYT)

By Amanda Petrusich

New York Times, April 14, 2011

I GREW up in Buchanan, N.Y., a tiny, mostly working-class village in northern Westchester County, on the eastern shores of the Hudson, tucked into a crook where the river bends. My parents were public school teachers, and we lived in a split-level wood house near Lake Meahagh (pronounced MEE-haw), a manmade pond where my sister and I laced up our figure skates each winter and carved broad figure eights into its big, imperfect surface. Buchanan is a modest community (the village itself comprises less than two square miles); when people ask where I'm from, I usually say Peekskill or Croton, the two closest midsize towns. For the most part, Buchanan is known only to itself.

But on occasion — after 9/11, and again now, after the earthquake and tsunami in Japan — Buchanan becomes a regional fixation. The reason: the village is home to the Indian Point nuclear power plant. Because the plant sits just 30-odd miles north of Midtown Manhattan, newspaper and magazine articles loudly bullhorn its dangers during tense times, detailing all the reasons it should be shuttered, and soon. But to residents (I live in Brooklyn now, but my parents, aunt and uncle all reside within a mile or so of the plant), Indian Point's menace is old news. After all, it's been there since 1962.

When I was a child, the plant loomed large in my mind. Its big, domed reactors signified something peculiar and unsettling, something I didn't entirely understand, although I'd heard, as children do, that it had something to do with glowing in the dark or, if you were particularly lucky, manifesting a third eyeball.

At some point, my sister and I decided Indian Point was funny. Periodically, the plant would test its emergency siren system, its violent wails piercing the calm air, and we would scream "Meltdown!" at my parents before collapsing into giggly

heaps on the cold kitchen floor. Sometimes we would go fishing with our father on Lake Meahagh, and after he stabbed balls of bread or kernels of corn onto the ends of our poles, and we started hooking perch and such, we would throw back any that we deemed “nuclear fish.” (The qualifications were arbitrary.) And of course, every now and then, with a certain relish, we would attribute each other’s various imperfections (“your face”) to massive and irreversible radiation poisoning.

The plant became considerably less funny after my sister found an old paperback copy of “Hiroshima,” John Hersey’s book on the aftermath of the dropping of the atomic bomb there, and spent the next several nights shaking in her bed in the room next to mine, dreaming of endless flashes of light.

Certainly, there were quirks to a childhood in Buchanan: power lines extended in every direction, our medicine cabinet always contained a bottle of potassium iodide pills, and when my father took us out on the river in his aluminum canoe, a sickly warmth would spread over the floor of the boat as we paddled closer to the plant. Still, signs declaring the plant’s safety (“Safe, Secure, Vital,” they swore) were tacked to telephone poles all over town, and the village seal included the atomic symbol with two hands next to it, holding tools. Buchanan was proud of its industry, and of the citizens who made it run.

My father grew up less than two miles from the site where the plant would be built, and it was then an idyllic spot called Indian Point Park, a name that would cause double-takes today. In the 1930s and ’40s, stately Hudson River Day Liners chugged north from New York City and deposited smartly dressed tourists at the park, which had a dance pavilion, a public swimming pool, ball fields, picnic areas and amusement rides. My father remembers curling into the branches of the park’s copious cherry trees as a child, and filling his mouth with ripe fruit.

Francis B. Stein, my elementary school principal and Buchanan’s beloved historian, saved postcards of the park. Muted but enthralling, the cards show beaming visitors wading into the river, bounding toward the dance hall and lining up for 75-cent rides on a boat called Miss Indian Point V.

Approached from the east, Indian Point is set back from the road so that its reactors are visible only from a distance. When I was young we drove down Broadway toward my aunt’s house, where I would catch the schoolbus most mornings, and I would twist my neck from the back seat of our Ford to glimpse the tops of its domes — dull and squat, turning pinkish-gray as the morning sun climbed higher. You could spot them from the riverfront in Peekskill, too, but the best view was from the other side of Annsville Creek, near a kayak launch. There, the domes (“Domes of doom,” my aunt joked) rose clumsily from the horizon, odd and oafish, cold. Even now, that juxtaposition — organic versus synthetic, ancient versus new — feels ominous.

One day, when I was still in elementary school, my mother spotted a man with a sack of unwieldy equipment roaming our backyard, uninvited. My mother, who is unusually fearless, marched us outside and confronted him. Apologetic and bumbling, he said he had been sent to survey our land — and all areas surrounding Indian Point. Why? He mumbled something about “fault lines.”

I had learned a bit about earthquakes in school. As far as I could tell, they involved giant, lightning-bolt-shaped gashes in the earth. As the man packed up his instruments and left, I began wondering what it would feel like if our house slipped into a crack in the ground.

That worry got a little more real when, soon after the man’s visit, we heard that Indian Point is near the Ramapo Fault Plane, a 185-mile system of fractures in the earth’s crust that snakes from Pennsylvania into the Hudson Valley. Then, just weeks ago, in the midst of the Japan crisis, various news outlets reported that Indian Point had the highest risk of earthquake damage in the country.

Eventually, I went away to college and didn’t think much about Indian Point until the fall of 2001, when I was living at home and commuting to graduate school at Columbia University. In the days following the 9/11 attacks, I would trudge back to my car at the Croton-Harmon station and pull out fliers — for chemical suits and build-your-own nuclear bunker kits — from underneath my wipers. Camouflage-clad armed guards stood at the entrance to the plant, and the whole area was cordoned off like a prison, with stretches of razor wire.

Soon, the National Guard started camping out in the forest behind our home, near the cemetery where my grandmother is buried. On the evening news, we watched anxious anchors speculate about Indian Point’s vulnerability as a terror target. We ourselves had whispered conversations with neighbors about whether rolled-up blueprints for the plant had really been found in a cave in Afghanistan. When I stood at our living-room window during those days, gazing out over the lake and drinking a mug of hot coffee with my father, I half-expected a tank to slowly roll by.

A few years later, my aunt was told she had thyroid cancer. She recovered, but I still wonder if Indian Point contributed to her disease. (There has yet to be a definitive study of thyroid cancer rates in Westchester and Rockland Counties and local nuclear radiation.) Not long after, our veterinarian found a lump growing on our old cat’s thyroid gland; he was treated, successfully, with an injection of radioactive iodine. When I go to the dentist for a checkup and all the attending X-rays, my

mother still cautions me to request a thyroid guard, an extra bit of lead-lined apron that can extend up and over the neck. Secretly, I want to ball up under the bib like a hermit crab, shielding my entire body from any more radiation.

I don't live in Buchanan anymore, but I still spend plenty of summer weekends there, grilling veggie burgers and corn in my parents' backyard, helping my father plant potatoes, idly picking ticks off the cat. The village is under intense scrutiny now, but after the news crews and reporters speed back to the city, it will be quiet again.

And we will look at those domes and shudder, or shrug, as we have all our lives.

Amanda Petrusich is the author of "It Still Moves: Lost Songs, Lost Highways, and the Search for the Next American Music" (Faber & Faber).

New York's Nuclear Future That Might Have Been (NYT)

By Andy Newman

New York Times, April 14, 2011

The year was 1962, and nuclear power was in the ascendant.

A handful of atomic plants had opened across the country, with more in the pipeline. Across the ocean, a depressed coal town in the Japanese prefecture of Fukushima had welcomed overtures from Tokyo Electric to build a nuclear generating station, and the utility was surveying the site.

Thirty miles north of New York City, the Consolidated Edison Company's Indian Point plant, the nation's biggest, had just achieved a sustained chain reaction and was about to go online.

But Con Ed had more ambitious plans. On Dec. 10, it applied to the Atomic Energy Commission to build the world's largest nuclear plant, with a capacity of a thousand megawatts, more power than all the other atomic plants in the United States put together.

The plant, Con Ed said, would rise on the East River waterfront in Long Island City, Queens, less than two miles from Times Square.

The idea of siting a mammoth nuclear generator in the heart of New York City seems preposterous now, and increasingly so.

Neal Boenzi/The New York Times In 1963, demonstrators marched in City Hall Plaza to protest the proposed nuclear power plant in Queens. [Click to enlarge.](#)

At the time, while controversial, it was not unthinkable.

Around the world, governments were contemplating nuclear plants in or near big cities, weighing the remote risk of catastrophe against the higher long-run cost and air pollution associated with conventional plants: the unknown devil against the known.

And the world watched as the yearlong struggle, now all but forgotten, over Con Ed's proposed Ravenswood nuclear plant played out.

On a snowy night in February 1963, more than 250 people crowded into a church auditorium a few blocks from the plant site in the middle-and-working-class neighborhood of Ravenswood for the first community meeting on the project. The Queens borough president, Mario J. Cariello, set the tone, thundering, to cheers and applause, "I was opposed to this project, I am opposed, and I will continue in that stand until convinced otherwise."

If Con Ed was cowed, it did not let on. In April, the utility's chairman, Harland C. Forbes, told a Congressional committee that "one or two people have raised some question about the genetic effects of radiation and so forth." Such concerns were "rather silly," Mr. Forbes said.

"It seems to me," he said, "that the public in general has reached the point where it has accepted nuclear plants as a matter of course."

But a former chairman of the Atomic Energy Commission, David E. Lilienthal, told the same committee, "I would not dream of living in the borough of Queens if there were a large atomic power plant in that region, because there is an alternative — a conventional thermal power plant as to which there are no risks."

Con Ed officials noted that there were already two large oil-fired plants at its Ravenswood site; building another would worsen air pollution. If nuclear power were to compete with conventional power, Con Ed said, plants had to be built in the areas they served. Building a nuclear reactor the size of Ravenswood at Indian Point, the utility said, required transmission lines that would tack \$75 million onto the reactor's \$175 million price, an increase of 40 percent.

In May, the Democratic leader of the City Council introduced a bill to ban commercial nuclear power in New York City. At a hearing on the bill, six women and a man picketed outside. One carried a sign that read, "Atomic power plants increase the toll of deformed, stillborn and mentally retarded children."

In June, the City Council heard more than seven hours of testimony on the ban. A city utility commissioner called it “repressive and shortsighted.” The chairman of the Atomic Energy Commission, Glenn T. Seaborg, questioned the measure’s legality. A state senator from Queens, Seymour R. Thaler, told the Council, “The mind of man has not yet invented an accident-proof piece of mechanical equipment.”

All told, 29 people testified against the ban; 30 testified in favor. Out in City Hall Plaza, the growing crowd of picketers now had a name: Canpop, the Committee Against a Nuclear Power Plant in New York City.

In Washington, the Atomic Energy Commission harbored doubts. In August, it sent Con Ed a list of safety questions about the plant. The commission’s 1962 siting guidelines were deliberately ambiguous. On one hand, they called for a one-mile unpopulated zone around a nuclear plant, and low population density within a 16-mile radius. (More than five million people lived or worked within five miles of the Ravenswood site.) But the guidelines also noted that applicants were “free — and indeed encouraged” to argue for exceptions.

Con Ed had boasted that the shielding for its pressurized water reactor, featuring a concrete igloo 167 feet high and 7 feet thick, encased in another shell of thick concrete, could withstand a complete meltdown or a jetliner crash.

The plant’s neighbors remained unimpressed. “We think one of the threats is a decline in property values, and that is a factor,” Irving Katz, a founder of Canpop and a biochemist, told *The Times* in an October 1963 article. “But really it comes down to this — when we look out of our windows and see those two stacks up there, we are frightened. And our women are frightened.”

On Dec. 9, Con Edison told the commission it would modify its plans to include “additional engineering safeguards.”

Instead, on Jan. 6, 1964, Con Ed withdrew its Ravenswood application. It said it had made arrangements to buy hydroelectric power from Canada instead, a move that “had absolutely nothing to do with the public opposition to the proposal.” The cost of building transmission lines was suddenly not a factor.

Con Ed was not done trying to build a nuclear plant in the city, though. In 1968, it floated a plan to build an underground reactor — “because it would provide the nth degree of safety” — beneath an abandoned hospital site at the south end of Welfare Island, now Roosevelt Island, a few hundred feet from the Ravenswood plants and that much closer to the East Side of Manhattan. It went nowhere.

In 1970, the utility proposed nuclear plants on man-made islands several miles off Coney Island and Staten Island, built of solid waste and each crowned with four thousand-megawatt reactors.

That proposal, too, was blocked by public opposition. But J. Samuel Walker, a former historian for the Nuclear Regulatory Commission, said that neither one ever had a chance of getting approved.

“Ravenswood was kind of a test case,” Mr. Walker said. After that, the atomic commission “agreed on kind of an informal rule. They wouldn’t allow a plant any closer to a city than Indian Point.”

INTERNATIONAL NUCLEAR NEWS:

Tepco Said To Estimate Three Months Needed To Stabilize Fukushima Reactors (BLOOM)

By Jason Clenfield

[Bloomberg News](#), April 14, 2011

Tokyo Electric Power Co. estimates the fight to stabilize its crippled Fukushima reactors will last through June, leaving the plant vulnerable to further earthquakes and radiation leaks, according to a person briefed by the utility on its recovery plan.

Engineers at Tokyo Electric have so far rejected a proposal to flood reactors at its damaged plant, which could lower the temperature in days rather than months, according to the person, who asked not to be identified because he isn’t authorized to speak to the media. Instead, the utility is pumping in water and venting off steam, a method called “feed and bleed.”

Since the magnitude-9 temblor and tsunami damaged the Fukushima Dai-Ichi station on March 11, there have been hundreds of aftershocks, including one this week that disabled power and cooling systems for almost an hour. As the crisis drags on, the plant is left exposed to the risk of new accidents, said Pierre Zaleski, a former member of the French Atomic Energy Commission.

“The major problem is these aftershocks,” said Zaleski, who was also part of the team that supervised the startup of France’s first power-producing reactor in the 1950s. “You never know if there are more aftershocks and containment may fail — maybe not completely — but these structures have been weakened.”

Tokyo Electric has been reluctant to flood the reactors because it could increase the amount of contaminated water that eventually flows into the ocean, according to the person. The utility is also concerned that pushing in more water could raise the risk of more explosions because it would compress hydrogen inside the containment, the person said.

Decommissioning of the four crippled reactors at Fukushima can't start until the reactors have been stabilized by lowering their temperature and pressure. The cleanup from the disaster, which has caused the evacuation of hundreds of thousands of people living within 20 kilometers of the plant, could take decades and cost more than 1 trillion yen (\$12 billion).

While Tokyo Electric hasn't announced a timeline for resolving the crisis, the person said the utility drafted an internal document two weeks ago called the "Tepco Short/Medium/Long Range Recovery Plan" that aims to have the reactors stabilized by the end of June.

Tokyo Electric President Masataka Shimizu, speaking publicly this week for only the second time since the disaster started, said a schedule for dealing with the crisis "will be presented soon."

Shimizu spoke to reporters a day after a magnitude-6.6 temblor disrupted power at Fukushima for 50 minutes, setting back efforts to cool reactors at a plant already weakened by explosions and last month's quake and tsunami.

The primary danger at the plant is reactor No. 1, where temperatures and pressure are still high, the person said. Flooding the space between the pressure vessel and a surrounding containment with water would bring temperatures down in days rather than months, the person said.

A make-shift combination of fire hoses and pumps being used to cool the reactor isn't providing enough water, according to the person. Temperatures of 204.5 degrees inside the vessel yesterday, or twice boiling point, cause the water to turn into steam, creating a sauna-like cooling system that's less effective, the person said.

Water levels inside the core of reactor No. 1 dropped yesterday, according to data released by Tokyo Electric, leaving 1.65 meters of fuel rods exposed to air, where they can heat up and melt, releasing radiation into the pressure vessel.

While Tokyo Electric's plan for ending the crisis says getting exposed fuel rods covered with water again is one measure of stabilization, according to the person briefed on the document, the utility's data shows pumping efforts have failed to raise the water level more than 20 centimeters in the 35 days since the disaster started.

The failure to raise water levels is part of the reason US Nuclear Regulatory Commission Chairman Gregory Jaczko this week called the situation "static," rather than stable. "Significant additional problems" could still occur at the plant, he said.

"We're studying a variety of ways to resolve the crisis and getting support from the US and France," Naoyuki Matsumoto, a Tokyo-based spokesman for the utility, said yesterday. He declined to comment on specific measures being considered.

Decision-makers at the utility are walking a tightrope between risks, according to David Lochbaum, a nuclear safety engineer at the Union of Concerned Scientists in Washington D.C. Flooding adds weight that could cause weakened containment structures to break, while as time passes the plant is exposed to aftershocks and other unknowns.

"They're getting back to situation where they have more control," he said. "The downside is that a surprise or a curveball could cause things to get worse."

Japan's Nuclear Crisis Continues To Hit Economy (REU)

By Shinichi Saoshiro And Izumi Nakagawa

Reuters, April 14, 2011

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

TEPCO Considers Plan To Remove Spent Fuel Rods From Crippled Fukushima Plant (ASAHI)

Asahi Shimbun, April 14, 2011

Officials of Tokyo Electric Power Co., the operator of the crippled Fukushima No. 1 nuclear power plant, are considering a plan to remove spent fuel rods from storage pools at its reactors, sources said.

TEPCO workers began collecting samples of water from a storage pool at the plant on Tuesday to help assess the condition of the spent fuel rods and the feasibility of the plan.

Under normal conditions, spent fuel rods are kept for many years in the storage pools to cool. They are then placed in airtight steel casks for removal.

But TEPCO is having to improvise a method of moving spent fuel rods that may have been severely damaged by explosions at the reactors.

The buildings housing the Fukushima plant's No. 1, No. 3 and No. 4 reactors have all been damaged, leaving storage pools exposed, and equipment normally used in the removal process may also have been knocked out by the explosions.

High levels of radiation are also likely to prove a major obstacle to the removal effort, which sources said TEPCO has been formulating since March.

Water was collected from the No. 4 reactor storage pool on Tuesday to check on the condition of the spent fuel rods. The No. 4 reactor is of particular concern to TEPCO officials.

It was not operating when the Great East Japan Earthquake struck on March 11 because it was being inspected. About 1,300 fuel rods had been moved to its storage pool for that inspection, and that large number of fuel rods means the pool is now the hottest of the storage pools at the plant.

The water from the pool was collected using a special vehicle normally used to spray liquid concrete onto construction projects. A container was attached to the end of a 62-meter arm on the vehicle and was lowered into the storage pool to collect the sample.

Experts will assess the condition of the rods from the radioactive material in the water.

According to internal TEPCO documents outlining the plan to remove the spent fuel rods, metal structures will be constructed around the buildings housing the No. 1, No. 3 and No. 4 reactors and huge cranes will be set up on those frames.

The cranes would be used to lower airtight casks into the storage pools. Once the spent fuel rods were moved into the casks, the cranes would move the casks outside of the reactor buildings.

The casks could weigh as much as 100 tons, and TEPCO officials are unsure if the cranes will be powerful enough to move them safely. Alternatively, TEPCO officials are considering constructing a temporary storage pool outside of the reactor buildings. The spent fuel rods would be moved to that temporary pool and then placed into the casks.

Sources said TEPCO officials were using the experience of the Three Mile Island nuclear accident in the United States in 1979 as a model. At Three Mile Island, melted fuel rods in the reactor core could not be removed using ordinary procedures and had to be shifted in small batches. Cranes were operated by remote control to reduce exposure to radiation among the workers.

The US company that developed the remote-control technology and handled the processing of fuel rods at Three Mile Island is now part of the Toshiba Corp. group. TEPCO officials are considering drawing on that expertise.

A major difference between the two accidents, however, is that the reactor building at Three Mile Island was not damaged. The wrecked buildings at Fukushima have led to high radiation levels on the plant site.

A TEPCO executive said, "It will be impossible to conduct the work now because of the high radiation levels."

An official with the Nuclear and Industrial Safety Agency said of the plan: "It cannot be carried out unless radiation levels fall to a point that ensures the safety of the workers."

Some TEPCO officials say the removal of the spent fuel rods could take several years.

Japan Nuclear Plant Crisis 'Incrementally Better,' US Admiral Says (BLOOM)

By Peter Cook And Tony Capaccio

Bloomberg News, April 14, 2011

The situation at Japan's Fukushima nuclear power plant is "improving every day," and the government's increase of the accident-severity rating doesn't indicate the status is worsening, the top US commander in the region said.

"I think it's actually getting incrementally better," Navy Admiral Robert Willard, US Pacific Command commander, said in a Bloomberg Television interview today.

"We regard it as static, not yet completely stable, but it's improving every day," he said. Willard called the risks "manageable across Japan" and said US forces will be in that country for "weeks and perhaps months" to assist.

The US military is working with Japan to contain radiation from the Fukushima Dai-Ichi nuclear facility damaged following an earthquake and tsunami on March 11. "We must see these reactors stabilized," Willard said.

Japan's Nuclear and Industrial Safety Agency yesterday raised the severity rating of its nuclear crisis to 7, matching the 1986 Chernobyl disaster in Ukraine, after increasing radiation prompted the government to widen the evacuation zone and aftershocks rocked the country.

The accident previously was rated a 5 on the global scale, the same as the 1979 partial meltdown at Three Mile Island in Pennsylvania.

Still, elevating the rating doesn't mean an increased radiation risk to the 38,000 US personnel ashore in Japan, dispersed among 85 facilities on Honshu, Kyushu and Okinawa, or the 11,000 aboard ships in the region, he said.

"I monitor reactor status – minute-by-minute," Willard said. Japan's rating increase for what the disaster represented "against the international standard is of much less consequence to me than understanding the actual status of the reactors at any given time," he said.

"Though that status has changed to 7, we continue to see incremental improvement in the overall stability of the situation," he said. "We are conducting very close monitoring of all the bases."

The US is assisting Japan in the analysis and tracking of radioactive air plumes and the "blooms" of radioactive water discharges -- understanding how the currents may affect them and how far they will travel before they dissipate.

George Washington's Return

Willard said the aircraft carrier USS George Washington, moved last month from its home port at Yokosuka as a precaution to avoid a potentially costly and complex future cleanup, is still in Japanese waters.

"As quickly as possible, I'd like to bring it back and we are just waiting for when conditions with the ship and its maintenance are favorable, then she'll come back in," Willard said. "I need to do that sooner rather than later."

Asked if returning the carrier to its home port would reassure the public, Willard said, "If there were overreactions to the GW pulling out, I would offer we have managed our way through that."

"There is no sign the US is pulling out in any way, shape or form," Willard said.

The current US effort in Japan is focused on the nuclear response and less on humanitarian relief "because Japan Self Defense Forces have executed brilliantly," Willard said.

The United States continues to fly Northrop Grumman Corp. (NOC) Global Hawks drones over the Fukushima facility to gather thermal images, which it shares with the Japanese, he said.

The US also has provided a 150-man Marine Corps team that specializes in chemical, biological and radiological warfare to provide expertise on contamination and radiological monitoring, Willard said.

TEPCO Still Working On Plan To End Japan Nuclear Crisis (REU)

By Taiga Uranaka And Chisa Fujioka

Reuters, April 14, 2011

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

Aftershocks Threaten More Damage To Crippled Nuclear Plant (BLOOM)

By Shigeru Sato And Tsuyoshi Inajima

Bloomberg News, April 14, 2011

Aftershocks rattling Japan after the nation's record quake on March 11 may continue for at least six months, increasing the risk of damage to a crippled nuclear plant at the center of the worst nuclear crisis since Chernobyl.

"Aftershocks as big as magnitude-7 are likely to continue hitting in eastern and northern Japan for at least six months," said Teruyuki Kato, a professor at the University of Tokyo's Earthquake Research Institute.

The magnitude-9 earthquake and tsunami last month left more than 28,000 people dead or missing and knocked out back-up power and cooling systems at the Fukushima Dai-Ichi nuclear plant north of Tokyo, causing explosions and radiation leaks. Hundreds of aftershocks, including three stronger than magnitude-7, have struck the region, causing more deaths and hindering work to cool damaged reactors.

Reactor containment vessels at the nuclear plant that have been flooded with tons of water to keep fuel rods cool are at risk in the event of another big quake, said Kazuya Idemitsu, a professor of nuclear engineering at Kyushu University.

"One of my concerns is that the containment chambers may have been compromised to some extent," he said. Another strong aftershock might damage parts such as "pipe joints and cause more radioactive water to leak."

Still, the pressure vessels inside the containment chambers that surround the cores shouldn't be at risk, said Idemitsu. "The pressure vessels can withstand another magnitude-8 earthquake," he said.

Tepco spokesman Takeo Iwamoto said the company hasn't found damage to the site after the aftershocks. A magnitude-6.1 quake struck off Japan at 5:57 a.m. today, according to the US Geological Survey.

"The worst-case scenario is for a 10-meter tsunami to swamp the Pacific Ocean coast in northeastern Japan if a magnitude-8 aftershock strikes offshore," Kato said.

Tepco is still using emergency pumps to cool the reactors and pools holding spent fuel, more than one month after the initial rupture. Three blasts damaged reactor buildings and spewed radiation into the air last month.

"The integrity of the core facilities at Fukushima Dai- Ichi will probably be maintained because they are designed to withstand earthquakes," said Tomoko Murakami, a nuclear researcher at the Institute of Energy Economics, Japan. "The big problem is the radioactive water that is hampering efforts to bring the cooling system on line."

The earthquake and tsunami and the resulting nuclear disaster show that atomic energy should be phased out in Japan, according to a group that opposes such power stations.

"There is no such thing as a safe nuclear power plant in Japan," because it's an earthquake-prone country, said Philip White, international liaison officer at the Citizens' Nuclear Information Center in Tokyo.

Tsunami Risk Prompts Tepco To Move Fukushima Backup Power To Higher Ground (BLOOM)

By Michio Nakayama, Tsuyoshi Inajima, And Yuji Okada

Bloomberg News, April 14, 2011

Tokyo Electric Power Co. will move backup generators at its crippled nuclear plant to higher ground away from the sea to ensure cooling systems aren't disrupted by future tsunamis, as aftershocks rattle Japan.

"Emergency diesel-powered generators will be moved to higher ground, and work for connecting them into the power distribution unit will be carried out around April 19," Takeo Iwamoto, a spokesman for the utility known as Tepco, said in Tokyo today. They will be placed 20 meters (66 feet) above sea level, double the current height, according to the company.

Backup generators and cooling systems at the Fukushima Dai- Ichi station were knocked out by a 15 meter surge following a magnitude-9 earthquake on March 11, triggering the worst nuclear disaster since Chernobyl in 1986. Explosions occurred as water in the reactors and spent-fuel ponds boiled away, and radiation leaked into the air and sea.

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 reactors. Some highly contaminated water leaked into the sea and the utility has dumped less toxic fluids into the ocean.

Tepco will install silt fences near the sea water intakes of reactors No. 1 and 2 to prevent the flow of contaminants to the ocean, Japan's nuclear safety agency said at a separate briefing today. The utility said yesterday it was placing the fabric curtains at the No. 3 and 4 units. The power station has six reactors.

The water level in a trench outside the No. 2 reactor rose even as Tepco was draining the liquid, possibly because coolant spilled over from the unit, Hidehiko Nishiyama, deputy director- general of the safety agency, said at a news conference streamed over the Internet.

Tepco had transferred 660 cubic meters (174,000 gallons) of the radioactive water to a condenser in the unit's turbine building as of 5:04 p.m. yesterday, Nishiyama said. Water from the trench will eventually be moved to a waste-processing building, he said.

Japan's Nuclear and Industrial Safety Agency this week raised the severity rating of the accident to 7, the highest on the International Nuclear and Radiological Event Scale and the same level as the Chernobyl disaster.

The ranking was increased from 5, the same as the 1979 partial meltdown at Three Mile Island in Pennsylvania. Each step on the scale represents a 10-fold increase in severity.

The Fukushima station is yet to stabilize and the reactors must be kept cool to prevent the crisis from deteriorating, Gregory Jaczko, chairman of the US Nuclear Regulatory Commission, said at a Senate hearing April 12.

Efforts to restore cooling systems at the Fukushima plant have been hindered as aftershocks forced workers to evacuate periodically. Crews were still using temporary pumps for reactor cooling yesterday, and used a cement-pumping truck to spray water into a damaged spent-fuel pool, Tepco said in a statement.

Four temblors stronger than magnitude-5 struck eastern Japan today, according to the US Geological Survey.

A total of 238 workers, including 39 subcontractors, were deployed at the station as of 6:30 a.m. today, according to information posted at Tepco's media center.

The utility said most of the fuel rods in the spent fuel pool of the No. 4 reactor are undamaged. Higher-than-normal levels of radioactive iodine and cesium in a water sample taken on April 12 show some of the rods may have been damaged, Tsuyoshi Makigami, a spokesman, said today.

Tepco Seeks To Start Reactor Idled In 2007 As Crews Battle Fukushima Leaks (BLOOM)

By Tsuyoshi Inajima, Yuji Okada And Michio Nakayama

Bloomberg News, April 14, 2011

Tokyo Electric Power Co. plans to seek government approval to start a nuclear reactor shut after a 2007 earthquake to help ease power shortages, while the utility battles radiation leaks from its Fukushima Dai-Ichi station.

The reactor at Kashiwazaki Kariwa, the world's biggest atomic station, is capable of supplying electricity this year, Masataka Shimizu, president of the utility known as Tepco, said in Tokyo yesterday. "I would like to get approval to restart the No. 3 reactor early, this year if possible," he said.

Japan has experienced rolling blackouts and faces more power shortages as temperatures rise. The blackouts came after a magnitude-9 earthquake and tsunami on March 11 shut power plants and crippled the six-unit Dai-Ichi station, triggering the worst nuclear crisis since Chernobyl in 1986.

"This 'operations first, safety second' approach and the failure to learn the lessons from the 2007 quake was the cause of the Fukushima Dai-Ichi nuclear disaster," said Philip White, international liaison officer at the Citizens' Nuclear Information Center in Tokyo. "How many more disasters will it take?"

Shimizu defended Tepco's response to the nuclear crisis at its Fukushima plant 220 kilometers (135 miles) north of Tokyo. "The steps we have taken so far were the best that we could do," he said.

Tsunami defenses, which were about 5 meters (16 feet) below the maximum wave height, followed regulatory guidelines, he said. The company didn't delay a decision to use seawater to cool four reactors because it would render them inoperable, Shimizu said.

The tsunami knocked out backup generators and cooling systems at the station, leading to explosions and radiation leaks as water in the reactors and spent-fuel ponds boiled away. Japan's strongest quake on record and tsunami left about 27,500 dead or missing, according to the National Police Agency.

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A total of 238 workers, including 39 subcontractors, were deployed at the station as of 6:30 a.m. today, according to information posted at Tepco's media center.

The utility can't rule out the possibility that some fuel may be damaged after analyzing water in the spent fuel pool of the No. 4 reactor, Junichi Matsumoto, a spokesman, said at a news conference yesterday.

Tokyo and eight nearby prefectures face power shortages after the disaster and aftershocks, knocked out 8 percent of generating capacity, the government said on April 8.

Three of seven reactors at the Kashiwazaki Kariwa station are closed while Tepco strengthens structures to improve their resistance to earthquakes. Work can continue at two units, while Unit 3 is restarted, Shimizu said yesterday.

Local government approval is required for a restart. There will be no progress on starting the three reactors until Tokyo Electric resolves the Fukushima incident, Takehiko Katagiri a spokesman for the city of Kashiwazaki said on April 6.

Shimizu said Tepco's board members and senior executives will take pay cuts and the company is in discussions with the government on how to compensate people affected by Japan's worst civilian nuclear crisis.

He reaffirmed that Dai-Ichi reactors No. 1, 2, 3 and 4 will be decommissioned, and said the fate of the two remaining units, which were shut when the tsunami struck, is undecided.

Evacuees Slam Japan Nuclear Plant Operator (AP)

By Yuri Kageyama

Associated Press, April 14, 2011

Angry residents forced from their homes near Japan's tsunami-stricken nuclear power plant protested at the Tokyo headquarters of the plant's operator Wednesday, demanding compensation as the company's president pledged to do more to help.

"I can't work and that means I have no money," said Shigeaki Konno, 73, an auto repair mechanic, who lived seven miles (11 kilometers) from the Fukushima Dai-ichi nuclear plant before the area was evacuated due to leaking radiation. "The talk about compensation is not concrete. We need it quickly."

The protest by about 20 small-business owners from communities near the plant reflects growing public frustration with Tokyo Electric Power Co. since the tsunami triggered by the magnitude-9.0 earthquake March 11 wrecked the plant's cooling systems and backup generators.

TEPCO's president, Masataka Shimizu, and other company executives bowed in apology, once again, after Shimizu pledged to do more to compensate residents unable to return home or work.

Cash payments are being "readied as soon as possible," Shimizu said.

He said the company "will do our utmost" to get the reactors under control and curb radiation leaks that prompted the government to revise its rating of the crisis to the worst possible, the same as the 1986 Chernobyl disaster.

TEPCO manager Kensuke Takeuchi told Konno and the other protesters the company was not yet prepared to give any money, but he promised to convey their demands to higher management.

"You are eating a warm meal every day," said Konno, complaining that the two pieces of bread provided daily at the evacuation center where he is staying were not fit to be fed to dogs.

"I am not asking for anything more than I am entitled to. I just want my due," said Ichijiro Ishikawa, 69, a construction worker who lived eight miles (13 kilometers) from the plant.

Work on repairs and stopping leaks has been impeded by aftershocks, fires and other glitches in the improvised efforts to restore the plant's cooling systems. "I think we are making progress toward stabilizing" the reactors, Shimizu told reporters.

Levels of radiation in the air, soil, water and sea have fluctuated constantly, sometimes to levels several millions of times above the legal limits. The most recently reported samples, from Tuesday, showed radioactive iodine up to 2,500 times the legal limit, TEPCO reported.

The Nuclear and Industrial Safety Agency asked TEPCO to study the plant's tsunami-related issues that could be used to improve preparedness at other plants. NISA also asked the company to repair damage to buildings from explosions and earthquakes to help make them more earthquake resistant.

The raise to Level 7 was open recognition that the nuclear crisis has become the second-worst in history after Chernobyl, but it did not signal a worsening of the plant's status in recent days or any new health dangers.

Radioactive isotopes have been detected in tap water, fish and vegetables far from the facility. Shipments of produce from 16 cities, towns and villages around Fukushima Dai-ichi have been banned.

On Wednesday, the government added wood-grown shiitake mushrooms raised outdoors to a list of vegetables banned for shipping to markets after high levels of radiation were detected.

The nuclear crisis has hit farmers and fishermen in northeastern Japan hardest, though widespread damage to factories, ports and other infrastructure is also taking a huge toll on the world's No. 3 economy.

The government downgraded its economic outlook for the first time in six months Wednesday, saying in a monthly Cabinet report that drops in production and consumer spending would drag growth.

The Finance Ministry is drafting an extra budget to finance post-tsunami reconstruction efforts. Local reports have said the budget could exceed 5 trillion yen (\$59 billion).

Underscoring how a supply crunch from the disasters is affecting regions beyond Japan, Toyota Motor Corp., the world's No. 1 automaker, announced it is suspending production in Europe for eight days due to parts shortages. Last week, it said it would temporarily halt car production in North America this month.

Still, work on recovery and reconstruction is progressing. The region took a step forward Wednesday with the reopening of a coastal airport that had been swamped by the tsunami.

Staff at the Sendai airport stood on the tarmac waving as passengers emerged from a JAL Express flight emblazoned with the logo "Hang in there, Japan." It was the first flight since the 32-foot (10-meter) wall of water raced across the airport's runways and slammed cars and aircraft into its terminals.

The area around the airport, about half a mile (a kilometer) from the shoreline, remains a twisted wasteland of mud, uprooted trees and the remnants of smashed buildings and cars. Soldiers were sifting through the debris looking for bodies. The final death toll is expected to top 25,000.

The airport will handle only a few daytime flights for now and just one terminal is running, but its opening should help with relief efforts regionally.

"We can only operate in a small area, but I think it's a great step toward recovery," said Naohito Nakano, an operations manager for Japan Airlines.

Hiroshi Abe, 41, whose parents are among the missing, was preparing to board a flight back to the western city of Osaka.

"There's not really anything I can do there now, so I'm flying home," Abe said. "Now that flights are open again I know it will be much easier for me to go back."

Japan Nuclear Plant Evacuees Demand Compensation (AP)

By Yuri Kageyama

Associated Press, April 14, 2011

Small business owners and laborers forced to leave their homes and jobs because of radiation leaking from Japan's tsunami-flooded nuclear plant rode a bus all the way to Tokyo on Wednesday to demand compensation from the plant's operator.

People are increasingly growing frustrated with Tokyo Electric Power Co.'s handling of the nuclear crisis, which has progressed fitfully since the March 11 tsunami swamped the Fukushima Dai-ichi plant, knocking out important cooling systems. Restoring them will take months.

"I am not asking for anything more than I am entitled to," said Ichijiro Ishikawa, 69, who dug roads and tunnels and is now living in a shelter because his home is in a 12-mile (20-kilometer) evacuation zone around the plant. "I just want my due."

He and about 20 other people who lived and worked near the plant traveled 140 miles (220 kilometers) southwest to hand-deliver a letter to the president of Tokyo Electric, known as TEPCO. They said talks with the government over how to compensate victims will take too long to get started and they want money now. A few were near tears.

They met near company headquarters with four TEPCO officials who bowed to them in apology. President Masataka Shimizu later apologized during a two-hour news conference and pledged to do more, saying cash payments would be readied as soon as possible and the company would do its best to get the plant's reactors under control and stop radiation leaks.

"I offer my apologies for having spread radiation," he said. "I apologize from the bottom of my heart."

Shimizu declined to comment on whether he would resign to show he is taking responsibility for the crisis. He said his job is to deal with it, along with the problems of those evacuated and concerns about the energy supply.

TEPCO earlier said it will give evacuated towns 20 million yen (\$240,000) each in "apology money," and analysts say massive compensation claims could cost it several trillion yen.

The government earlier this week revised its rating of the severity of the crisis to level 7, the worst possible on an international scale. The only other level 7 was the 1986 disaster at the Chernobyl plant in what is now Ukraine, though that explosion released 10 times the radioactivity that has come from Fukushima Dai-ichi so far.

The nuclear crisis has hit farmers and fishermen in northeastern Japan hardest, though the 9.0-magnitude earthquake and tsunami caused widespread damage to factories, ports and other infrastructure that is taxing the world's No. 3 economy.

The government downgraded its economic outlook for the first time in six months on Wednesday, saying in a monthly Cabinet report that drops in production and consumer spending would limit growth.

The ravaged northeast coast had some rare good news Wednesday as the Sendai airport reopened. It had been closed since the 32-foot (10-meter) wall of water raced across the runways and slammed cars and aircraft into the airport's terminals.

Airport staff waved on the tarmac at passengers emerging from the first flight, a Japan Airlines Express plane emblazoned with the logo "Hang in there, Japan."

The airport will handle only a few daytime flights for now, but its opening should help with relief efforts in communities virtually obliterated by the disasters.

"We can only operate in a small area, but I think it's a great step toward recovery," said Naohito Nakano, an operations manager for JAL.

The area around the airport, about a half-mile (one kilometer) from shore, remains a twisted wasteland of mud, uprooted trees and the remnants of smashed buildings and cars. Soldiers were sifting through the debris looking for the bodies of some of the more than 15,000 people still missing since the earthquake and tsunami. The final death toll is expected to top 25,000.

Frequent aftershocks have been an unwelcome reminder of the disaster and have impeded efforts to restore the cooling systems at Fukushima Dai-ichi. TEPCO officials said Wednesday they are discussing ways to eventually remove spent fuel rods from storage pools as the plant is closed down for good.

Shipments of produce from 16 cities, towns and villages around the plant have been banned and the government Wednesday added wood-grown shiitake mushrooms raised outdoors to the list.

The evacuees who traveled to TEPCO's offices said farmers nearby have had to throw away milk because of contamination concerns and they need money to buy food for their cows.

On top of expenses associated with being away from home, Hideo Munakata, a 61-year-old construction worker, said he is buying bottled water for his children because of concerns about the tapwater. He also hasn't been able to return to the evacuation zone to get his tools.

"We have to think about our future," Munakata told The Associated Press. "Tokyo Electric must help us get our lives back."

Hitachi, Toshiba May Seek Nuclear Clean-Up Work (WSJ)

By Juro Osawa And Rebecca Smith

Wall Street Journal, April 14, 2011

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

Disassembly Of N-reactors A Joint Effort? (YOMIURI)

Toshiba seeks cooperation of rival Hitachi

Yomiuri Shimbun (Japan), April 14, 2011

Toshiba Corp. has proposed to rival Hitachi, Ltd. that the two companies join hands in decommissioning the crippled reactors at the Fukushima No. 1 nuclear power plant in Fukushima Prefecture, The Yomiuri Shimbun learned Wednesday.

Toshiba and Hitachi, manufacturers of some of the reactors at the plant operated by Tokyo Electric Power Co., had separately proposed their own decommissioning plans, including task lists and timetables.

But Toshiba has hinted that it would revise its decommissioning plan into one to be carried out jointly with Hitachi. A top Toshiba official said, "We're calling on [the Hitachi side] to work with us, as we will be working on the same site at the Fukushima No. 1 nuclear plant."

Of the six nuclear reactors at the Fukushima No. 1 nuclear plant, the Nos. 1 to 4 reactors need to be decommissioned. It is the first time in the world for four reactors to face such severe trouble simultaneously.

The No. 1 reactor was manufactured by General Electric Co., the No. 2 by GE and Toshiba, the No. 3 by Toshiba and the No. 4 by Hitachi.

Toshiba has called for Hitachi to decommission the reactors jointly, as the difficult task may face rough going in the aftermath of hydrogen explosions that occurred at the Nos. 1 and 3 reactors.

Hitachi has reportedly shown a positive stance on a joint decommissioning project with Toshiba. Even if the plan is realized, the work will take at least 10 years.

On April 4, Toshiba made a proposal on decommissioning to TEPCO, jointly with four US companies, including its subsidiary Westinghouse Electric Co. Under that plan, the decommissioning work would be completed in about 10 years at the earliest.

Specifically, the work of cooling the interior of the overheated reactors and removing debris would be done in the next six months, while the following five years would be spent on removing fuel rods from the reactor and spent fuel rods from a storage pool. In the final five years, the buildings housing the reactors and other equipment would be dismantled, along with the reactors themselves, while the contaminated ground would undergo soil improvement and the whole lot would be left vacant.

Meanwhile, Hitachi has formed a 30-member team of experts, jointly with six other firms, including GE and leading US industrial plant manufacturer Bechtel Corp.

The plan proposed by the Hitachi team includes the work of taking nuclear fuel out of the reactor, the decontamination of equipment and of buildings housing reactors and other machinery, the dismantling of the buildings and the disposal of waste following the dismantling. Under this plan, the entire task would take about 30 years.

The Hitachi plan is based on their experience of analogous work in the aftermath of the Three Mile Island nuclear plant accident in the United States and the Chernobyl nuclear plant accident in Ukraine, then a Soviet republic.

Toshiba, Hitachi Deny Report On Talks To Jointly Plan Shutdown (BLOOM)

By Mariko Yasu And Maki Shiraki

Bloomberg News, April 14, 2011

Toshiba Corp. (6502), Japan's biggest maker of nuclear reactors, denied a Yomiuri newspaper report that it approached Hitachi Ltd. (6501) to jointly propose dismantling Tokyo Electric Power Co.'s stricken Fukushima Dai-Ichi plant.

"It isn't true that Toshiba approached Hitachi," said Hiroki Yamazaki, a Toshiba spokesman. Masanao Sato, a Hitachi spokesman, also denied the report.

Firms Prepare To Compete For Polish Nuclear Contract (WARBUSJO)

By Remi Adekoya

Warsaw Business Journal, April 14, 2011

In July of this year, Polish utility PGE is set to announce a tender for a technology supplier to support the construction of Poland's first nuclear power plant, daily Dziennik Gazeta Prawna reports.

PGE has been charged by the Polish government with responsibility for building the plant.

And it seems that major international companies are already interested in participating, the newspaper writes.

American-Japanese concern GE Hitachi, US company Westinghouse and a French partnership comprising Areva and EdF are interested in obtaining the contract.

Westinghouse, which has already expressed interest in helping to build Polish reactors, told DGP yesterday that if it wins the zł.40 billion tender it will invite Polish companies to cooperate with it

"We can see potential Polish partners such as contractors and engineers," said Anders Jackson, deputy CEO of Westinghouse.

He added that some 60-70 percent of supplies will be ordered from within Poland.

Polish companies such as Energomontaż Póńoc, Polimex-Mostostal, Budimex, Elektrobudowa and Erbud have all expressed interest in cooperating with Westinghouse in the project, DGP writes.

The American company said it also considering building a factory somewhere in Poland which would produce components needed for the construction of a nuclear plant. This investment could also potentially support projects in other nearby countries, as Westinghouse is also mulling the idea of helping to build a nuclear plant in nearby Lithuania.

Bulgaria Signs Energy Accord With Areva (AP)

Associated Press, April 14, 2011

SOFIA, Bulgaria (AP) – Bulgaria has come to an agreement with France's nuclear engineering company Areva on future nuclear and renewable energy projects.

Areva CEO Anne Lauvergeon told reporters in Sofia on Wednesday that the company will provide nuclear safety expertise for Bulgaria's nuclear facilities.

Bulgaria has two 1,000-megawatt reactors at its only nuclear plant in Kozlodui. In 2008, it struck a deal with Russia's Atomstroyexport for a second plant at Belene, but the project has been delayed over financial terms.

Areva, which is a subcontractor to the construction of the future plant, said it will implement the highest safety standards.

Wednesday's memorandum of understanding also envisages some joint renewable energy projects like offshore wind turbines in the Black Sea.

Areva, Bulgaria Sign Accord On Nuclear, Renewable Energy (BLOOM)

By Elizabeth Konstantinova

Bloomberg News, April 14, 2011

Areva SA (CEI), the world's largest producer of nuclear equipment, signed a memorandum of understanding on cooperation in Bulgarian nuclear and renewable energy projects.

The agreement envisages cooperation in future nuclear energy projects in Bulgaria's planned 2,000-megawatt Belene plant project in which Areva is a subcontractor of Rosatom Corp., Russia's state nuclear company, and in the country's operating Kozloduy nuclear plant, Areva Chief Executive Officer Anne Lauvergeon told reporters in Sofia today.

Areva and Bulgaria will also consider building off-shore wind turbines in the Black Sea, she said.

Bulgaria is seeking to diversify energy sources to meet growing demand as older utilities are decommissioned and reduce dependence on Russian oil and natural gas imports.

NRG Energy CEO Says Odds For New Texas Reactors Fall (REU)

By Eileen O'Grady

Reuters, April 14, 2011

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

China Could Ban Second-generation Nuke Projects -official (REU)

By David Stanway

Reuters, April 14, 2011

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

Areva: Utilizing Lessons Learned (POWGENWLD)

By Brian Wheeler, Associate Editor

Power-Gen Worldwide, April 14, 2011

The Areva EPR, or Evolutionary Power Reactor, has been criticized by opponents since construction began in 2005 on the Olkiluoto 3 (OL3) reactor in Finland. Despite this, Areva continues to construct new plants worldwide and believes Generation III+ plants can be built, on-time and on-budget. But the completion of OL3 is nearly three years behind schedule and 50 percent over budget.

I spoke with Michael Rencheck, chief operating officer for Areva Inc. Rencheck said the company doesn't take comfort in the overruns at OL3 and when they look at the schedule, it is not an unexpected schedule for a first-of-a-kind plant build. He said the reactor manufacturer had "bumps and bruises on the first plant," but they are now capturing lessons learned in a formal program and incorporating them into the design, planning, construction, and startup and operation of new plants.

"We have really progressed a long way from the initial days at Olkiluoto," he said.

Areva is building four nuclear reactors globally: OL3 in Finland, a third reactor at the Flamanville plant in France and Taishan Units 1 and 2 in China. All are expected to be completed in the 2012 to 2013 timeframe. Despite rumors of further delays at OL3, the main civil engineering work has been completed and all four steam generators have been installed in the reactor building.

Areva has acknowledged the problems at OL3 and is applying lessons learned to cut construction times and, in turn, lower costs. Rencheck said Areva is now using a three-dimensional model of the EPR that uses actual commodities, along with construction times and data based on engineering, planning and installation.

"It is a very powerful tool for to help us look at the implementation of construction techniques and the optimization of how we engineer the plant," he said.

To help address issues related to incomplete design and engineering work prior to the start of construction, Areva is using these models in projects currently being constructed. For example, at Flamanville it took 47 weeks to complete the nuclear island base mat, the first foundation as workers proceed with build up. At Taishan, workers have cut that time to 10 weeks. Taishan is showing a threefold reduction in the amount of engineering hours needed to complete, too. At 52 percent complete, Taishan 1 and 2 needed 50 percent fewer engineering hours than either Olkiluoto or Flamanville.

"That is all the product of putting these models in place, taking the lessons learned and adopting them," said Rencheck.

The EPR is now being completed faster than older generation reactors, he said. The Generation 2 – N4 1,500 MWe reactors built in Germany took anywhere from 103 months to 150 months from first concrete to fuel loading. The Generation 2 1,400 MWe reactors were completed no faster than 69 months. Now, after looking into problems at OL3, the 1,650 MWe EPRs in China are due to be completed in 46 months.

"We gain efficiency and do what is best for the area to build the plant," said Rencheck.

Areva does not modularize everything, one of the lessons learned from the first two plants, Rencheck said. He said that there is less of a need to modularize when you do not have to import components. Areva is performing studies of 500 areas to determine where modularization makes the most sense. Rencheck said the company had approached the first new build with the impression that the global supply chain would be robust enough and found that it was not.

After spending a lot of time at Olkiluoto and Flamanville, Rencheck said Areva feels better about the supply chain now when progressing forward. And with plans to build an EPR in the US, Areva wants to localize production wherever possible to eliminate any possible supply chain issues, while providing jobs. And that can be seen with the development of the Areva Newport News manufacturing facility for heavy components. The goal is that 90 percent of the US EPR reactors will be "Made in America" using US workers.

"We still think there are challenges there but we have our internal set up and processes established," he said.

Globally, Areva now has around 20 reactors either being constructed or planned. Rencheck said Areva is improving the timelines negotiating to finalize deals in the U.K., India and China for Taishan 3 and 4. And in Finland, where they have had to address the majority of these challenges, Areva is looking at the possibility of completing another EPR. Using the lessons learned, Rencheck said he thinks it may give Areva a strong position moving forward.

German Cabinet Approves CO2 Storage Bill (AFP)

AFP, April 13, 2011

BERLIN (AFP) – Germany's cabinet approved a draft law on storing carbon dioxide underground on Wednesday after months of debate as Europe's top economy wrangles over energy policy following Japan's nuclear disaster.

"Recent developments have again brought home to us the efforts we need to make to ensure power generation is sustainable, climate-friendly, safe and economically viable," Economy Minister Rainer Bruederle said.

"I am convinced that CCS (carbon capture and storage) opens up important opportunities, both for the continued use of fossil fuels and to reduce CO2 emissions."

The bill, which needs parliamentary approval and which implements a directive from the European Union, allows pilot and demonstration projects to go ahead ahead of an assessment of its viability in 2017, the government said.

It follows however months of debate with the governments of Germany's 16 states, and includes a clause giving them the say on where the storage sites are located.

It also comes as Chancellor Angela Merkel's government looks to speed up the transition to renewable energy sources after the crisis at Japan's Fukushima nuclear plant following the March 11 earthquake and tsunami.

Merkel announced a few days later a three-month suspension of an earlier decision to extend the life of Germany's nuclear plants and the temporary shutdown of the country's seven oldest reactors pending a safety review.

Germany decided a decade ago to abandon nuclear power by around 2020 but Merkel last year postponed this by more than a decade, saying alternative sources of energy were not yet ready to fill the gap.

The country's 17 reactors produce around a third of its electricity. Fossil fuels provide around half of its energy needs and several new coal plants are either in construction or planned.

CCS aims to snare CO2 as it is pumped out from fossil-fuel burning plants, liquefy it and bury it underground, usually in disused natural gas storage chambers, to stop it escaping into the atmosphere and causing climate change.

It is also seen as a way of buying time for politicians to forge an effective treaty on greenhouse gases and wean the global economy off cheap but dirty fossil fuels.

Other major emitters including the United States, China and Australia see CCS as crucial and countries have earmarked tens of billions of dollars to develop a technology that is still only at an experimental stage.

But critics say CCS could be dangerous and that the large amount of investment needed would be better spent on renewable sources of energy, like solar and wind power, or on nuclear power.

German Cabinet Relaunches Carbon Storage Bill (REU)

By Markus Wacket And Vera Eckert

Reuters, April 14, 2011

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FACTBOX-German CCS Bill Details, Initiatives (REU)

By Vera Eckert

Reuters, April 14, 2011

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