NUCLEAR REGULATORY COMMISSION NEWS SUMMARY

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TODAY'S EDITION

NRC NEWS:

TVA Considers Improvements At Its Six US Reactors. The New York Times (4/15, A6, Wald, Subscription Publication, 950K) reports that the "Tennessee Valley Authority said Thursday it was considering millions of dollars of improvements to protect its six nuclear reactors from earthquakes and floods." The TVA said it would considering "reducing the amount of fuel in its spent fuel pools" and transfer older fuel to "passively cooled 'dry casks' and adding additional backup diesel generators." The TVA

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said while none of six nuclear units are earthquake prone areas, "it was looking at 'potential vulnerabilities from a chain of events, such as damage from a tornado or earthquake combined with flooding from a dam failure.'"

The Chattanooga Times Free Press (4/14, Flessner, 78K) reported that the TVA also plans to "immediately add satellite telephones and small portable generators and could add more dry cask storage and hardened water supply pipes at its nuclear power plants, TVA Chief Operating Officer Bill McCollum said today." McCollum told the "TVA board today that TVA is looking at both short-term and long-term changes to minimize a nuclear plant accident like what happened in Japan." He said the agency is "trying to assure that we're ready for the unexpected."

Prior to the TVA Board meeting, the Tennessean (4/15, 129K) reported that "nuclear issues" were expected to be "high on the agenda of the Tennessee Valley Authority's board meeting" 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."

In a later version Chattanooga Times Free Press (4/15, Flessner, 78K) reports, "During the board's public listening session in Chattanooga, most of the 14 speakers asked the board to review or even phase out its commitment to nuclear power." Sandra Kurtz of the group Bellefonte Efficiency & Sustainability Team, noted the decision in Japan to put diesel tanks at a level where a tsunami could wash them away, saying "The real cause of the Fukushima nuclear crisis is human error." She added, "Human error can happen here, too." But Rick Roden of the local Chamber of Commerce and Goodrich A. 'Dus' Rogers of the Economic Development Board "urged TVA directors to finish the long-delayed Bellefonte reactor."

WIAT-TV Birmingham, Alabama (4/14) also covered the story.

TVA To Delay Decision On New Bellefonte Reactor. According to the Chattanoogan (4/15), TVA's COO Bill McCollum said that the "previously approved construction at Watts Bar Nuclear Plant Unit 2 in East Tennessee and engineering work at the Bellefonte site in northern Alabama are proceeding on schedule. Mr. McCollum said TVA staff will ask the board to make a decision on whether to move ahead with construction of a nuclear unit at the Bellefonte site 'after TVA has a clear understanding of the Japanese nuclear situation and any potential impact on the project.'"

The AP (4/15) reports, "TVA has decided to delay recommending a go-ahead on a reactor at its Bellefonte Nuclear Plant in northeast Alabama while the utility studies how to prevent anything like the radiation leak from Japan's tsunami-flooded nuclear plant."

TVA's McCollum Says Its Nuclear Plants Are Not Built In Earthquake-Prone Areas. On its website, WRCB-TV Chattanooga (4/15, Boyd) reported that in the "understatement of the month," TVA Chairman Dennis Bottorff said, "We probably are watching the Japan (nuclear) crisis even more closely than the common person in the street is." WRCB-TV noted that "Sequoyah, at Soddy Daisy, is among the five power plants that the Nuclear Regulatory Commission (NRC) considers most at risk for an 'earthquake that could cause catastrophic failure.'" But TVA's COO "Bill McCollum considers that a bit of a misnomer. 'Our nuclear plants are not built in areas where there are likely to be earthquakes,' says McCollum."

Residents Concerned About Safety Issues. On its website, WDEF-TV Chattanooga (4/14) reported that many Tennessee Valley residents "urged TVA's board to look away from nuclear power to meet the energy demands of this region. Gretel Johnston says 'you are simply gambling with our money and our lives.'" The Fukushima plant disaster "prompted a renewed call to halt work on new reactors at Bellefonte and Watts Bar," and the board "extended funding for engineering and design work at Bellefonte, but delayed further action to provide more time to review lessons learned from Japan."

WTVC-TV Chattanooga (4/14, Pless) reported on its website that during Board meeting's public comment period, "concerns over hundreds of 'events' at nuclear plants revealed just how many incidents go unreported for months." Spent fuel storage concerns in the "Tennessee Valley and the huge costs of securing and maintaining it were top of mind for several people. TVA officials maintain their nuclear fleet is safe and not subject to the vulnerabilities that have affected plants in Japan."

Growth Seen In East Tennessee Regions Near Sequoya, Browns Ferry And Watts Bar Plants. On its website, WBIR-TV Knoxville (4/14, Welsch) reported that "Despite the potential for catastrophe near nuclear sites, the three nuclear plants closest to Knoxville have seen an increase in neighbors." The "50 mile evacuation zones surrounding the Sequoya, Browns Ferry, and Watts Bar Nuclear plants all saw double digit increases in population from 2000 to 2010," a figure which makes that "about three times the growth rate seen by Rhea and Meigs counties during the same time period."

Increased Levels Of Radioactive Iodine Found In Chattanooga Drinking Water. The Chattanooga Times Free Press (4/15, Sohn, 78K) reports that radioactive iodine-131 was measure in Chattanooga drinking water at the second-highest levels measured in "anywhere in the US." But according to authorities, the "levels measured so far in Chattanooga's drinking water — although spiked — is not high enough to be dangerous. ... 'The results being reported

are well under the levels of health concerns,' said Tennessee American Water Co. spokeswoman Kim Dalton."

Sen. Alexander, NRC Commissioner Ostendorff To Visit Watts Bar Monday. According to the Chattanoogan (4/15) reports, "Senator Lamar Alexander will visit the Watts Bar nuclear plant on Monday, with Commissioner Bill Ostendorff of the Nuclear Regulatory Commission." Of the "upcoming visit, Sen. Alexander said, 'I want to make sure that TVA is doing all it can to learn from the tragedy in Japan and that the six TVA reactors are operating as safely as possible."

Japan Atomic Disaster Shadow Likely To Loom Over TVA. The Scottsboro (AL) Daily Sentinel (4/15, Bonner, 5K) reports, "Japan's ongoing nuclear disaster will affect TVA's nuclear generation plans in both the short and long-term, according to reports presented at the utility's board of directors meeting held in Chattanooga Thursday." Van M. Wardlaw, executive vice president of enterprise relations said while "presenting the 20-year vision for the utility" that "TVA's Integrated Resource Plan is focused on what is best for the region we serve." He added, "It gives us diverse options, flexible options. It is a compass not a GPS." The IRP, "which was approved unanimously by the board, does include nuclear power as a viable option for producing electricity over the 20-year period," the Sentinel adds.

Blog: Radiation From Fukushima Disaster Spreading, Activist Says. In a piece for the blog website, Clean Energy News (4/15) Sara Barczak if Southern Alliance for Clean Energy, writes, "After over a month downplaying the disaster" at the Fukushima plant, "officials finally upgraded the disaster to a level 7 on the International Nuclear and Radiological Event Scale," and increased the evacuation zone "beyond the original 20-kilometer" radius. Also, radioactive contamination has been found in fish caught off the coast of the Ibaraki prefecture, and low levels of "strontium have also been detected in plants and soil outside of the 30-km zone around the plant."

In Southeast, Extreme Heat Is A Growing Concern For Nuclear Power Operators.

SolveClimate News (4/15, Kenward) reports, "On July 8, 2010, as the temperature in downtown Decatur, Alabama, climbed to a sweltering 98 degrees Fahrenheit, operators at the Browns Ferry nuclear power plant a few miles outside of town realized they had only one option to avoid violating their environmental permit: turn down the reactors." TVA, which owns the nuclear plant, had to run the Browns Ferry at half its capacity when the adjacent waters of the Tennessee River hit 90 degrees Fahrenheit. For the next eight weeks, the plant continued to operate at only half of its regular output. The article notes that the total cost of the lost power amounts to more than $50 million – a cost passed to TVA's customers. TVA spokesman Ray Golden said that that the utility was impacted by the heat, and added that it "had to reduce power at the plant and get it from somewhere else."

Unidentified NRC Worker Say Middle Managers Could Be Cut To Reduce Budget.

The Washington Post (4/15, Rein, 572K) reports, "With the budget for the rest of the fiscal year finally passed and more cuts to spending on the way, we asked federal workers, contractors and others with in-depth knowledge of the workings of federal government to answer a simple question: What needs to be trimmed from the budget?" The Post notes some of their responses, one of which came from NRC. That response said, "Most middle [managers]; many have old-time skills and non-innovative processes. ... Redundant training, which has nothing to do with real-world skills."

Clean Energy Advocate Says Has High Praise For NRC.

The Syracuse, New York cable outlet, Your News Now (4/14) reported, "Radiation levels have dropped low enough to allow police to search for bodies in the rubble outside Japan's tsunami flooded nuclear plant," and crews are out searching a six mile radius at the Fukushima site. A "nuclear expert spoke with students at Syracuse University Thursday." Will Cothen of Clean Energy America said the "Nuclear Regulatory Commission in the US is the best in the world and they continue to learn and adapt in light of what has happened in Asia. 'One of the things we're looking at is how to deal with the most unimaginable situations and the actions that we need to be able to take in those situations and having some of these alternate ways of mitigating accidents.'"

Groups Demand NRC Suspend All Licensing Activities Until Broad Review Completed.

Bloomberg News (4/15, Lomax) reports, "The US should suspend licensing decisions for new and existing nuclear plants while it investigates Japan's reactor crisis, environmental groups said." On a conference call with reporters, lawyer Diane Curran said the groups "seek a 'credible Three Mile Island-style review' of Japan's failed reactors and implications for US safety," and added that the NRC "should 'immediately suspend all licensing activities.'"

Platts (4/15, Dolley) adds the "groups said 'the commission should suspend all decisions regarding the issuance of construction permits, new reactor licenses, combined construction permit and operating licenses, early site permits, license renewals, or standardized design certification' pending completion of reviews now being conducted by the NRC staff of lessons learned from the ongoing accident at Tokyo Electric Power Co.'s Fukushima 1 plant." The groups said the NRC's findings should "be supplemented by an investigation by a presidential

commission, similar to the Kemeny Commission, which was created by President Jimmy Carter to investigate the 1979 accident at Three Mile Island-2." Institute for Energy and Environmental Research president, Arjun Makhijani, "said the events at Fukushima are 'rewriting the book on nuclear reactor accidents,' and 'continuing business as usual in licensing and reactor certification in the face of the unprecedented, hugely complicated, and ongoing Fukushima accident would be rash.'"

According to the International Business Times (4/15), Sara Barczak of Southern Alliance for Clean Energy, "said the problem is that the nuclear industry has downplayed the seriousness of the Fukushima crisis and has pushed for building reactors whose safety is questionable." Barczak pointed to TVA's proposed Bellefonte Nuclear Generating Station and said the "reactor is a 1960s-era design, as construction was originally started in the late 1970s before being suspended in 1988. She said only two other reactors of this type have been built and neither is still operating."

The Cape Cod Times (4/15, Cassidy) notes the "45 groups and individuals, including a Duxury-based organization focused on safety issues related to the Pilgrim Nuclear Power Station in Plymouth, filed a 35-page petition" with the NRC. Pilgrim Watch founder Mary Lampert, "said outstanding concerns about spent fuel rods, buried electric cables and emergency planning zones must be addressed" before relicensing at plants like Pilgrim Station proceeds.

Fukushima Plant Crisis Reenergizes Anti-Nuclear Movement. The Kansas City Star / Chicago Tribune (4/15, Wernau) reports, "When the Fukushima Dai-ichi nuclear power plant in Japan was knocked out with one mighty wave, the all-but-forgotten anti-nuke movement suddenly powered up in the US." Beyond Nuclear's Paul Gunter said he "barely found time to sleep" as web traffic spiked, "and Gunter's mailing list exploded with new members." In Pennsylvania, Eric Epstein of Three Mile Island Alert said he was deluged with media requests, traveling to the "infamous plant" as often as "11 times a day for TV interviews about whether what happened in Japan could happen here."

Anti-Nuclear Group Makes "Peace Pilgrimage" From Indian Point To Vermont Yankee. The Peekskill-Cortlandt Patch (4/15, Pesheva, Giegerich) reports on the "peaceful anti-nuclear power group" that started "its journey at Indian Point and walked on Route 202 in Peekskill and Yorktown on Monday as part of its Peace Pilgrimage for a Nuclear Free World." The group "will continue walking northeast over the next two weeks until they reach their final destination, Vermont Yankee Nuclear Power Plant in Vermont. They will walk 206 miles, averaging about 15 to 18 miles a day and starting around 8:30 a.m. every morning."

In a news release on VTDigger (4/15), Deb Katz of Citizens Action Network wrote that the marchers "will arrive at Vermont Yankee April 24. Sister Jun Yasud said, 'The current crisis in Japan is a call to renew our efforts for a nuclear free world. A walk will pray for those affected in Japan and envision a world without nuclear energy or bombs.'"

California Lawmakers Press NRC To Halt Relicensing Work Pending Seismic Studies. The AP (4/15, Weintraub) reports, "California lawmakers kept up the pressure Thursday for a harder look at earthquake safety at the two nuclear power plants in the state, questioning why federal regulators won't halt relicensing work until new seismic maps are completed." Sen. Alex Padilla, who chairs the California State Senate energy committee, said that since the state's nuclear plants, Diablo Canyon and San Onofre Station "face the highest seismic risk of any in the United States, continued scrutiny is needed to make the plants as safe as possible." According to Troy Pruett of the NRC, the agency has not responded yet but plans to move forward with other parts of the license review. In an abbreviated version, the AP (4/15, Weintraub) says, "Sen. Sam Blakeslee, whose district includes Diablo Canyon, says the commission sees earthquake risk through 'rose-colored glasses.'" An NRC "official says the agency would act immediately on fresh evidence about earthquake risk even if the license is renewed."

The Ventura County (CA) Star (4/15, Herdt, 67K) reports, "A top regional official of the US Nuclear Regulatory Commission told a legislative committee Thursday that the agency intends to proceed with its safety and environmental analysis for extending the license of the Diablo Canyon nuclear power plant, despite a request from the plant's operator that the agency take no final action until after more thorough seismic studies are completed." Troy Pruett, deputy regional director of the NRC's division of reactor projects said the agency hopes to proceed as scheduled with its review. "Staff has invested many thousands of hours in environmental and safety review,' Pruett told members of the Senate Energy, Utilities and Communications Committee. 'Our desire now is to publish that.'" Sen. Blakeslee told Pruett, "You're telling me you're going to proceed with business as usual? That's unacceptable."

KEYT-TV Santa Barbara, CA (4/14, 6:36 p.m. PT, 20,703) reported that California lawmakers "are criticizing two of the states nuclear plants," which includes Diablo Canyon nuclear plant in San Luis Obispo County. KEYT-TV adds that "lawmakers questioned the nuclear regulatory commission about why the agency has not suspended work on relicensing

the Diablo Canyon nuclear power plant" and they also wanted "more scrutiny of an offshore earthquake fault discovered in 2008." California State Senator Same Blakeslee said that the NRC "sees earthquake risk through 'rose colored glasses.'" A NRC official "says the agency would act immediately on fresh evidence about earthquake risk even if" Diablo Canyon's "license is renewed."

KOVR-TV Sacramento, CA (4/14, 10:34 p.m. PT, 111,881) provide similar coverage.

Edison To Propose $64 Million Fault Study For San Onofre Station. The Orange County (CA) Register (4/15, Brennan) reports, "A new, $64 million study of earthquake fault patterns around the San Onofre nuclear plant will be proposed Friday by Southern California Edison, its scope broadened and its cost estimate more than doubled because of the nuclear disaster in Japan." SCE will propose to the California Energy Commission that the study be paid for through customer rates, "although Edison says that would add up to less than one percent of present overall rates." Edison is "still evaluating what type of technology to use, but sonar would likely be used to map the ocean floor near the nuclear plant, while seismic vibration measurements as well as lidar, which uses light beamed from planes, would be used on land."

Policymakers Want PG&E To Clarify Intentions On Diablo Canyon Relicensing. On its website, KVEC-AM San Luis Obispo, California (4/14, Harris) reported that few are "completely satisfied with PG&E's recent request to delay a final decision on renewing Diablo Canyon Nuclear Power Plant's operating licenses until in-depth seismic studies are complete." Even the NRC "has not decided how it will proceed in light of the PG&E request." Two days after its initial request, "PG&E sent a second letter to the NRC making it clear that the utility wants the processing of its renewal application to continue, but the issuance of a final decision should be delayed."

The San Luis Obispo (CA) Tribune (4/15, Sneed) reports the "San Luis Obispo Mothers for Peace want all license renewal activities stopped until the earthquake studies are done in light of the nuclear disaster in Japan, not just a possible postponement of a final decision." Jane Swanson of the Mothers group said "There are multiple lessons yet to be learned both from the future seismic studies and from the ongoing crisis at the Fukushima plants." NRC spokesman "Victor Dricks said the agency has not decided how it will proceed in light of the PG&E request."

The San Luis Obispo (CA) New Times (4/15, Fountain, 42K) reports that the seismic studies, currently in their "initial stages," were to have been "finished by 2015. However, in its letter to the NRC, PG&E said it plans to 'accelerate' completion of the studies—but exactly what an acceleration means isn't yet clear. 'It's that we're going to be pursuing [the studies] more aggressively,' said PG&E Spokesman Paul Flake."

Capps, Blakeslee Renew Call For NRC To Halt Relicensing Activity. In an op-ed appearing in the San Luis Obispo (CA) Tribune (4/15), State Sen. Sam Blakeslee and US Rep. Lois Capps write, "Though PG&E acceded to our request" and asked the NRC to "delay its license renewal application while it completes recommended high energy, 3-D seismic studies of the new fault, the NRC has yet to agree to a delay nor has it agreed to suspend the application process." With the "ball" now "clearly in the NRC's court," Capps and Blakeslee say they are renewing the "call to the NRC to halt the relicensing process until the proper seismic studies are performed, independently reviewed, and furnished to state and federal regulators so that they may make informed, responsible decisions about relicensing."

NRC Discusses Safety Issues At Shearon Harris. The AP (4/14) reported, NRC regulators visited North Carolina to "answer questions about the safety performance at the Shearon Harris power plant." Agency staff discussed Thursday night the NRC's "role in ensuring safe plant operation," announcing that it had determined "that the Progress Energy plant 10 miles southwest of Raleigh met all the agency's safety objectives in 2010 and doesn't require any additional oversight."

WTVD-TV Raleigh-Durham, NC (4/14, 11:09 p.m. ET, 94,661) reported that a letter was sent out to residents living near the Shearon Harris nuclear plant assuring them that the plant is safe and "detailing the result of every incident at the plant in the past year." The NRC added that the plant "has very few safety issues and that may be why more people are willing to move near" it. On its website, WTLD-TV Raleigh-Durham NC (4/14) also reported.

NRC Holding Annual Safety Meeting At Plant Vogtle. The Augusta (GA) Chronicle (4/14) reports that NRC "will hold a public meeting Tuesday, April 19, to discuss Plant Vogtle's annual safety evaluation and assessment." The meeting will only detail the evaluation for Vogtle's current reactors and will not include discussion of "additional reactors planned in the future." During 2010, NRC found that the plant met safely and failed to find anything that would warrant increased inspection or oversight.

Georgia Regulators Setting Schedule For Vogtle Construction Costs. The AP (4/14) reports that the Georgia Public Service Commission met yesterday to discuss construction costs associated with Georgia Power's "proposed nuclear plant," which could "run over budget." Utility regulators were expected "to set a schedule for

deciding whether to cut the earnings of Georgia Power if construction costs" rise. PSC's staff have "proposed taking a carrot-and-stick approach," and will allow Georgia Power to garner extra earnings if construction costs fall below $5.8 billion, while the PSC will take some revenue if costs exceed $6.4 billion.

WJB-TV Augusta, GA (4/14, 12:09 p.m. ET, 16,679) reported that a committee of the Public Service Commission met yesterday and was "expected to set a schedule for deciding whether to cut the earnings of Georgia Power if construction costs on a proposed nuclear plant runs over budget." WJB-TV also reported that regulators would like to trim Georgia Power's earnings off the new reactors at Plant Vogtle if its construction costs exceed $6.4 billion. WJB-TV adds that this "issue has dragged on for more than two years for without a resolution."

Southern's Fanning Addresses US Chamber On Nuclear Safety, EPA's Overreach. Georgia Public Broadcasting (4/14) reports on its website that Southern Company CEO Thomas Fanning told "US Chamber of Commerce gathering" that the additional reactors planned for Plant Vogtle will be safe. According to Fanning, the reactors "will have a 'completely different approach to nuclear safety.'" Fanning said the decision to review safety at the nation's nuclear plants is wise, but assured that "no one should worry over the nation's first new reactors in 30 years." Accordingly, Fanning said, "The site for our new units is not in a seismic sensitive area. And we're going to use the newest technology employing a completely different approach to nuclear safety."

The Birmingham (AL) News (4/15, Orndorff) adds that Fanning said the Japanese disaster should not deter the construction of new nuclear plants. During his US Chamber speech, Fanning remarked, "What's happened in Japan recently has made me more convicted than ever that we need to develop this generation of nuclear for America." Fanning's speech also included criticism of the EPA saying, "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." After his speech, Fanning refused to comment "whether some of the company's older coal-fired power plants may be shut down."

ClimateWire (4/15, Kirkland) also covers Fanning's Chamber speech, calling Southern "one of the biggest and most politically influential US electric utilities." Fanning's speech is seen as part of a growing trend among utility CEOs "giving their own policy speeches in Washington rather than leaning heavily on industry groups like the Edison Electric Institute to carry a common theme to Congress and the media."

Study Finds Millstone Brings $1.2 Billion A Year To Economy. The New London Day (4/15, Daddona) is reporting that according to a study by Dominion the Millstone Power Station "generates $1.2 billion a year in economic benefits, including $122 million in capital spending and tax revenues of nearly $34 million." The power company "has been touting the nuclear complex's economic impact in Connecticut to lawmakers as it continues to fight a plan to tax its production of electricity." The study found "that Millstone operations produce about $1.1 billion in economic benefits to the state each year, which supports 3,315 jobs."

Connecticut Tax On Nuclear Generation Draws Opposition. The New Haven Register (4/15, Turmelle, 69K) reports, "Dominion Energy officials said Wednesday they would spend 'tens of millions of dollars' shutting down the Millstone Nuclear Power Plant the company owns in Waterford if Connecticut lawmakers impose a tax on electricity generators that would cost the utility $320 million a year." Dominion officials "acknowledged there are other possible alternatives besides closing the plant, including a court challenge of the generation tax if it becomes law." But they maintained "the company is not bluffing with its threat to close the plant and that a shutdown would cost the state $1.2 billion in both direct and indirect economic benefit."

An article highlighting the tax proposal of Gov. Dannel Malloy by the Waterford Patch (4/15, Petrone) quotes Dominion's Ken Holt saying, "We have expressed our concerns. ... Any tax that is put on Dominion will go on to the consumers." The Governor's "proposal taxes all energy generators at the same rate, including Millstone. SB 1176 stands to make $335 million from Dominion, and less than $10 million from all other energy generators combined." The Waterbury Republican-American (4/15, Hughes) also provides coverage of this story.

Delaware Officials Says State Is Prepared For Radiological Incident. The AP (4/15) reports, "The state's top homeland security official says Delaware is prepared to handle a radiological incident in the state." On Tuesday, Lewis Schiiliro said "that he does not have any specific concerns about the Salem/Hope Creek nuclear complex in New Jersey or other nuclear facilities." Delaware "is also within 50 miles of other nuclear generating stations - Limerick Nuclear Generating Station and Peach Bottom Atomic Power Station in Pennsylvania and Calvert Cliffs Nuclear Generating Station in Maryland."

NRC Says UniStar Not Eligible To Build A New Calvert Cliffs Reactor. The Bay Net (4/15, Madden) reports, "The company that has applied for permission to build a third nuclear reactor at Calvert Cliffs Nuclear Power Plant in Lusby has been told by federal officials it doesn't

meet the ownership requirements" According to the NRC "last November's acquisition by Electricite de France (EDF) of Constellation Energy's 50 percent interest in UniStar rendered the Calvert Cliffs 3 application in noncompliance of the federal code governing nuclear plant ownership." A spokesman from UniStar said, "While EDF and UniStar disagree with the Nuclear Regulatory Commission's conclusion regarding UniStar's present governance structure, we are pleased that the NRC will continue to review all other aspects of our pending application." The "NewsWatch" section of the Gaithersburg Gazette (4/15) also covers this story.

UniStar Evaluating Building Third Reactor At Nine Mile Point. An article that highlights a speech made by a nuclear expert at Syracuse University by YNN (4/15) briefly notes, "Here in New York, UniStar is evaluating whether or not to build an additional reactor at Nine Mile Point in Oswego. The company is in the beginning stages of safety reviews."

Safety Grades At Wisconsin Nuclear Plants Markedly Improved In Recent Years. The AP (4/15) reports, "Wisconsin's two nuclear power plants will be under less scrutiny from federal regulators because of improved safety grades. The two-reactor Point Beach plant and single-reactor Kewaunee plant drew extra attention from regulators earlier in the decade because of spotty safety records." The NRC will still give the plants a safety review "during the next six months, as will all US nuclear plants because of the earthquake and tsunami in Japan." WTAQ-AM (4/15) also covered this story on its website.

Oconee Station Operated Safely NRC Says. The Greenville News (4/15, Simon, 58K) reports, "Oconee Nuclear Station met all safety requirements in 2010, according to the US Nuclear Regulatory Commission, which will present and discuss its annual safety performance review of Oconee in a public meeting Tuesday. Although all safety objectives were met, all three Oconee units were under additional NRC oversight in 2010 due to an inspection finding that raised safety concerns." According to the NRC, the plant had a "failure to adequately maintain the plant's standby shutdown systems that can be used if normal and emergency systems are unavailable." The Anderson Independent-Mail (4/14, 39K) also covers the meeting.

Dry Cask Expected To Emerge As Consensus Solution For Spent Fuel Storage. MIT's Technology Review (4/15, Talbot, 50K) reports, "One of the lesser-noted facts of the Fukushima nuclear disaster—where loss of coolant in spent-fuel pools has resulted in massive radiation releases—is that some fuel at the plant was stored in so-called dry casks, and these casks survived the March 11 earthquake and tsunami intact." The Review says that that fact is likely to spur on calls to move spent fuel from reactor cooling pools to dry casks, and MIT nuclear engineer, Ron Ballinger said, "What will likely happen very quickly is that the NRC and utilities will arrive at a consensus that moving fuel to dry storage needs to be accelerated to get as much spent fuel out of the pools as fast as possible."

Nuclear Power Bill Subject Of Debate Among Iowa Lawmakers. The AP (4/14) reported, "Iowa legislative leaders say several measures that have drawn opposition remain in play as the session inches toward adjournment. Speaking at a news conference Thursday, Democratic Senate Majority Leader Mike Gronstal was asked about a bill allowing utilities to begin charging ratepayers for the cost of a nuclear power plant before construction begins." Gronstal "also was questioned" about an abortion bill and another regarding livestock, and he said "lawmakers are working privately to resolve differences over the bills."

Texas Senate Approves Bill Allowing Radioactive Dump To Accept More Waste. The AP (4/14, Vertuno) reported, "A low-level radioactive dump in remote West Texas could take in waste from dozens of states under a bill the Texas Senate approved Wednesday. The site in Andrews County could be ready to accept the waste by next fall, said a spokesman for Dallas-based Waste Control Specialists, which operates the site." According to the AP, "Environmentalists have resisted the move, warning that it would result in radioactive material rumbling through the state on trucks with few safeguards in case of an accident."

Revised "Safe & Green" Letter Concerning Shutdown Of Vermont Nuclear Plant Released. The Brattleboro Reformer (VT) (4/14, Cone, 8K) reports, "The newly revised Safe & Green letter regarding the shutdown of the Vermont Yankee nuclear power plant in Vernon [VT] was released by the Town Clerk's office Wednesday evening. The Selectboard will vote on whether or not to sign the letter, which is much the same as the original document, at its next regular meeting." According to the Reformer, "Safe & Green, a grassroots effort to close Vermont Yankee and replace it through conservation, efficiency and renewable solutions, has presented the letter to selectboards and city councils in Vermont, New Hampshire and Massachusetts cities and towns that neighbor the power plant."

NRC Forum In Minnesota Will Allow Opponents Of Nuclear Power To Air Concerns. The Minnesota Public Radio (4/14, Hemphill) reported on its

Website, "Opponents of nuclear power will meet in Red Wing [MN] Thursday to express their opposition to extending the life of the Prairie Island nuclear plant." According to MPR, "The Nuclear Regulatory Commission, or NRC, holds these meetings around the country on a regular basis. ... The NRC is considering Xcel's request to extend the life of the Prairie Island plant for 20 years, and to produce more power there."

DOE Fosters College Nuclear Programs With Grant. Georgia Public Broadcasting (4/14) reports that to help support two new nuclear facilities in Georgia that will demand "nearly 10,000 new nuclear workers," the Department of Energy has granted from colleges in the August area $1 million to establish nuclear programs. "Andy Hauger is a physics professor at Augusta State University, one of the school's sharing in the money. He says the money will pay for lab equipment needed to train students in nuclear science technology." Other grant recipients include Augusta Tech, Aiken Tech, and the University of South Carolina in Aiken and Salkehatchie.

Obama To Nominate Ostendorff To Another Term As NRC Commissioner. From the office of the Press Secretary, the White House (4/14) announced President Barack Obama's intent to nominate William C. Ostendorff, to another term as Commissioner, Nuclear Regulatory Commission. "Bill Ostendorff was sworn in as a member of the Nuclear Regulatory Commission on April 1, 2010 for a term ending June 30, 2011. Prior to his appointment to the Nuclear Regulatory Commission, he served as Director of the Committee on Science, Engineering and Public Policy at the National Academies."

Local Communities Support Expanding WIPP's Use As Nuclear Waste Repository. Reuters (4/15, O'Grady) reports that community officials in southeast New Mexico, home to the Waste Isolation Pilot Plant, are supporting expanded use of the site as a nuclear waste repository, in light of the apparent end to plans to use Yucca Mountain as a permanent site and the ongoing nuclear crisis in Japan. Although WIPP is legally designated to accept only defense-generated radioactive waste, John Heaton, a former state representative from Eddy County, New Mexico, said the ancient salt bed could also accommodate high-level commercial waste, following additional studies. Heaton said, "We are convinced more and more every day that we are on the right track."

Population Density Near US Nuclear Facilities Increasing Census Data Shows. On its website, MSNBC (4/15, Dedman) reports that "A new map of data from the 2010 US Census shows that the number of people living within the 10-mile emergency planning zones around nuclear power plants rose by 17 percent in the past decade, compared with an overall increase of less than 10 percent in the US population." MSNBC asks why the population would "rise sharply near nuclear power plants, even in lower-growth states outside the Sun Belt." The article suggests normal population expansion could account for part of the growth. "Another reason: Nuclear reactors use water for cooling, from lakes, rivers or oceans, so the reactors are typically built on waterfront property."

Questions Raised About US Spent Nuclear Fuel Storage Policy. CNN (4/15, Fitzpatrick, Griffin) reports on the lack of a permanent storage facility for spent nuclear fuel and how the Fukushima plant crisis has placed that issue squarely into focus. CNN notes that ratepayers have been paying "a tax, whether you realize it or not, to fund the storage of nuclear waste" in a safe place. "Collected at an estimated $750 million a year, the Nuclear Energy Institute now says this so-called 'nuclear waste fund' amounts to close to $30 billion," but it isn't being used to "pay for the storage of a single ounce of spent nuclear fuel." Washington lawyer Jay Silberg, who represents some of the nation's biggest nuclear power companies, has "been involved in lawsuits against the government, trying to make it pay for what he says it promised to do way back in 1982."

Equipment From SRS, Other Sites Headed To Japan. The Augusta (GA) Chronicle (4/15, Pavey) reports, "Storage tanks, pumps and monitoring equipment from Savannah River Site will be shipped from South Carolina to Japan to help in the battle to stabilize the damaged nuclear reactors at Fukushima." DOE spokesman Jim Giusti said, "This is what we can send them at this point to support their activities." He added that "equipment is also being gathered from other federal nuclear sites around the county," and "its transfer is being expedited as a 'government to government diplomatic exchange' that will convey the gear directly to the Japanese government."

INTERNATIONAL NUCLEAR NEWS

Japanese Regulators Say High Radiation Level From "Outside Debris." On its website, CNN (4/15, Smith) reports Japan's Nuclear and Industrial Safety Commission "discounted concerns about damage to the still-potent spent fuel from the Fukushima Daiichi nuclear power plant's No. 4 reactor Thursday, saying high radiation levels reported earlier this week 'most probably' came from outside debris. A high reading above the pool prompted the plant's

owner, the Tokyo Electric Power Company, to take a sample from the spent fuel pool on Tuesday." But Hidehiko Nishiyama, the chief spokesman for the regulatory agency, said "the radiation levels are far lower than they would be if there were damage to the fuel rods."

Journalists Detail Trip To Stricken Nuclear Plant. The Los Angeles Times (4/15, Glionna, 657K) reports on the trip made by two journalists to the gate of the stricken Fukushima nuclear plant, in which they carried a radiation gauge. They "made an agreement: If the dosimeter hit 15, we'd turn around." The journalists and their driver and interpreter made it the gate, but, "suddenly, as we approached the main gate, security guards were upon us, two figures who'd seemingly stepped out of 'Star Wars,' menacing in their dual-intake respirator masks and head-to-toe white hazmat gear." The journalists wanted to visit the site, a decision they day they did not make lightly, because they wanted to see what it looked and smelled like, and to see whether they would be allowed inside. "The best description of the scene: silence."

NPR (4/15, Memmott) adds of the journalists' adventure that Steve Herman from Voice of America said that "for most of the 20-kilometer journey we spotted only police, military and other official vehicles. ... Not a single person was seen outside in Futaba and Okuma, which until March 11 [the date of the eartquake and tsunami that devastated the area] had a combined population of about 18,500." Herman added that at the gate they found an "extremely ironic proclamation" in the form of a sign that read, "Zero disasters for this year."

Uncertainties Surround Future Cleanup Efforts. The New York Times (4/15, Tabuchi, Subscription Publication, 950K) reports, "Even before the troubled Fukushima nuclear plant has been brought under control, two rival conglomerates likely to be part of an eventual cleanup are estimating that the effort could take 10 years — or 30." The widely divergent estimates – the shorter coming from Toshiba and the longer forecast from Hitachi – "underscore the basic uncertainties clouding any forecast for Fukushima: when cooling stems will be restored and radiation emission halted; how soon workers can access some parts of the plant; and how bad the damage to the reactors, their fuel, and nearby stored fuel turns out to be." The Times points out that the NRC "has warned that at least one reactor's fuel may even have leaked out of the reactor pressure vessel, something that has never before happened in a nuclear accident."

Japan To Provide More Information On Radioactive Water Dumping. The Wall Street Journal (4/15, Obe, Iwata, Subscription Publication, 2.02M) reports that the Japanese government announced it would provide new details on the radioactive water that has been dumped into the ocean from the Fukushima Daiichi nuclear power plant. Hidehiko Nishiyama, a Nuclear and Industrial Safety Agency senior official and spokesman, said Thursday that Japan has a responsibility to provide the additional information because "there are countries that are worried about the impact of the operation on the ocean."

Pump Manufacturer: Fukushima Encasement Would Be More Difficult Than Chernobyl. In an interview with Reuters (4/15, Cox), Gerald Karch, an executive with Putzmeister, the firm that manufactured pumps that assisted with relief efforts at Chernobyl, said that encasing Fukushima's reactors would be more difficult than the job at Chernobyl, because there was only one reactor to be encased at the European site. Karch said, "In Chernobyl, where a single reactor was encased, 11 trucks were in action for a number of months. In Fukushima we're talking about four reactors." Although no decision has been made to encase Fukushima's reactors, he added, "In my opinion, when a closed-circuit cooling system has been developed and successfully set up, there will be no other option but to encase the reactors in concrete."

TEPCO To Begin Initial Payments To Evacuees. The New York Times (4/15, Bradsher, Subscription Publication, 950K) reports, "The Tokyo Electric Power Company announced plans on Friday to distribute 50 billion yen, or $600 million, in initial payments to 50,000 people evacuated because of the accident at its Fukushima Daiichi nuclear power plant, as technicians continued to struggle to repair cooling and electrical systems at the damaged reactors." The Japanese government said that TEPCO "acted after a request from Banri Kaieda, the minister of economy, trade and industry." TEPCO president Masatake Shimizu "said that single-person households would receive about $9,000 and larger households would receive about $12,000."

With a different take on the government's role in TEPCO's decision to award payments to evacuees, the AP (4/15) reports that the Japanese government "ordered the operator of a tsunami-damaged nuclear plant Friday to pay $12,000 to each household forced to evacuate because of leaking radiation, but some of the displaced slammed the handout as too little." AFP (4/15) and Bloomberg News (4/15, Nakayama, Alpeyev) also cover this story.

WTEN-TV Albany, NY (4/15, 5:19 a.m. ET, 5,932) reported that the Japan's trade ministry is ordering the Tokyo Electric Power Company (TEPCO) to pay $12,000 to each household forced to evacuate due to the radiation leaks in its Fukushima Dai-ichi nuclear plant. A ministry spokesman says that the "arrangement is a provisional one, with more compensation expected. Roughly 48,000 households within about 19 miles of the...nuclear plant would be eligible for the payments." TEPCO's arrangement with Japan's trade

ministry received widespread local TV coverage with more than 50 stories on broadcasts throughout the day, nationwide.

Toshiba's CEO Says Daiichi Will Have Little Effect On Bottom Line. Bloomberg News (4/15, Yasu, Shiraki) reports, "Toshiba Corp., Japan's biggest maker of nuclear reactors, rose to the highest level in 10 days in Tokyo trading after President Norio Sasaki said the company may beat its profit forecast" to post a 2% gain for the day. Sasaki believes that the March 11 earthquake will have a limited impact on Toshiba's factories. Sasaki added that Toshiba "is sticking with its goal of winning 39 reactor orders by 2015," despite the fact it helped build the failed reactors at Daiichi. He also disclosed that clients with pending orders for reactors haven't cancelled or changed their plans. As a result of the tsunami that knocked out the Daiichi plant, Sasaki called on strategies to protect nuclear power plants from tsunamis.

However, Japan Today (4/15) reported, "Sasaki said Thursday the company may be forced to revise its plan to win orders to build 39 nuclear reactors around the world by fiscal 2015 following the nuclear power plant accident." Sasaki cautioned, "at this point, no one has told us about dropping (plans to build new nuclear plants), but they may be delayed even if we win orders." Meanwhile, "Hitachi Ltd has also said it plans to review its goal of winning orders for 38 nuclear power generation projects by fiscal 2030 and revise downward its goal of posting sales of 380 billion yen in fiscal 2020 in the nuclear power business."

The Financial Times (4/14, Soble, Subscription Publication, 448K) similarly reports this, detailing that Sasaki explained that Daiichi may slow Toshiba' growth in the near-term, but over the long-term, the disaster will have a miniscule effect on the company. During his speech, Sasaki touted that environmental advantage nuclear has over other energy sources.

The Wall Street Journal (4/15, Osawa, Iwata, Subscription Publication, 2.02M) specifies that Sasaki believes that the company's goal to a ¥1 trillion revenue goal from its nuclear unit may be delayed from 2014 until 2015. Toshiba's Sasaki plans to augment its business with greater investments in additional power systems, including solar and fossil fuels, Nikkei (4/15) reports. Reuters (4/15) also covers this.

Japanese Experts Suggest Banking Workers' Stem Cells For Future Treatment. The AP (4/15) reports that Japanese experts from institutions including Toranomon Hospital and the Japanese Foundation for Cancer Research in Tokyo have suggested that "workers at Japan's troubled nuclear plant should store blood cells now in case they need them later as treatment for radiation overdose." The AP explains that "high doses of radiation can destroy the blood-making cells of the bone marrow, a potentially fatal outcome that can be treated with transplants of blood stem cells," but receiving such transplants "takes time, and potential incompatibility between the donated cells and the recipient can lead to severe complications," the experts said.

Bloomberg News (4/15, Hallam) adds that "storing the workers' blood would make transplants easier because the body will recognize and accept its own cells. That eliminates the needs for drugs that suppress the immune system, which might make a patient vulnerable to infections," the experts wrote in a letter published by The Lancet. Citing a March 29 statement from the Japanese Society for Haematopoietic Cell Transplantation, they said that "about 107 transplant teams are standing by to handle the cells," and more than 50 European hospitals have offered their assistance if necessary.

Reuters (4/15, Steenhuysen) reports the experts write that so far Japanese nuclear regulators have rejected the idea because it would cause a "physical and psychological burden for nuclear workers." They also admitted that this was not a perfect solution to the workers' potential health problems, because the radiation could also attack cells in their lungs, skin, and digestive system, which a stem cell transplant could not address.

N12LI-TV New York, NY (4/15, 5:24 a.m. ET, 52,130) reported that "workers at Japan's damaged nuclear plant are being told to store their blood cells" since, according to experts, could "be used to revive blood-making cells in bone-marrow damaged by high amounts of radiation."

Travel Ban Lifted. WNBC-TV New York, NY (4/15, 5:05 a.m. ET, 88,920) reported that the US government has lifted its travel ban to Japan but still advises that Americans should "stay out of the 50-mile evacuation zone around the Fukushima nuclear plant" and be aware that there is still a "serious threat of aftershocks."

Countries Pledge To Act On Fukushima Lessons.

The AP (4/15, Oleksyn) reports, "Countries attending a nuclear safety conference pledged Thursday to act on lessons learned from the Japanese reactor crisis triggered by last month's devastating earthquake but stressed they needed more specifics to do so." All the nations are party to the Convention on Nuclear Safety, which was agreed to following the Three Mile Island and the Chernobyl nuclear accidents. The AP adds that "a vice-president of the gathering, Bill Borchardt of the United States, said more information was needed in order to know how best to respond and proceed in the aftermath of the Fukushima accident that has raised fears over radioactive fallout and questions about the safety of nuclear power." Borchardt said there was "much more to be learned before we can even understand what the full range of follow-up actions would be for both the regulators in each of the nations and for the operators of the nuclear power plants around the world."

Nuclear Regulators Delay Fukushima Review Until August 2012. Bloomberg News (4/15, Tirone) reports that the 72-nation Convention on Nuclear Safety "ended a closed-door meeting by delaying for 16 months consideration of the failures that triggered the meltdown at Japan's Fukushima Dai-Ichi plant." They "pledged to hold an extraordinary meeting in August 2012 to review the breakdown of safety systems at Fukushima, according to a seven-paragraph statement released today in Vienna." According to the statement, "It is understood that the lessons-learned process cannot be completed until sufficient additional information is known and fully analyzed," adding, "Japan has committed to provide this information as soon as possible."

Reuters (4/15, Westall) adds that the statement also assured, "(We) are committed to draw and act upon the lessons of the Fukushima accident." Reuters points out that the meeting, which was scheduled prior to the events unfolding in Japan, was the first international forum on nuclear safety since the crisis began. The group also said it supported plans to hold a ministerial conference on nuclear safety in June focusing on the Japanese disaster, which will be hosted by the UN's International Atomic Energy Agency.

Siemens Rethinking Nuclear Unit. The Wall Street Journal (4/15, Fuhrmans, Subscription Publication, 2.02M) reports that Siemens may abandon plants to become a global nuclear leader in light of the events in Japan. Leading Siemens executives are discussing whether the company should rethink a partnership with Rosatom, the Russia's state nuclear provider. Unlike their counterparts at other nuclear companies, Siemens executives have been guarded in their remarks to the press about nuclear energy. Some Siemens employees and executives believe Siemens' nuclear ambitions contrasted with the vision of CEO Peter Loscher, whom seeks to make the company an environmental leader.

Areva's Lauvergeon Defends Reactor Costs, Touts Nuclear Potential. BusinessWeek (4/15, Brady, 921K) carries a piece by Areva CEO Anne Lauvergeon. The Areva chief details her biography from leading Cogema to being considered by President Sarkozy for a cabinet position. Lauvergeon says that she's firmly committed to Areva and nuclear power and sees the industry as one with great potential. She defends the cost of Areva reactors, saying "we build them to withstand the crash of a wide-body aircraft or any type of serious accident, including a core meltdown. There is a cost." She adds, "I believe that low-cost reactors are not and should not be the future."

Germany's Chancellor Under Pressure To Close All Nuclear Power Plants. Bloomberg News (4/15, Czuczka, Comfort) reports that German "Chancellor Angela Merkel faces a bid by members of the upper house of parliament to force her to abandon nuclear power as she tries to rally German state leaders behind an overhaul of energy policy by the middle of May. The main opposition Social Democratic Party will put a bill to the upper house in Berlin today calling for the immediate closure of eight reactors and all 17 nuclear plants to be shut within about a decade." According to Bloomberg, the "bill steps up the pressure on Merkel to speed the exit from atomic power as she works on an unprecedented shift in the energy mix driving Europe's biggest economy."

Czech Nuclear Plant Shuts Down Reactor Again Due To A Malfunction. The AP (4/14) reported, "An official says a Czech nuclear power plant is shutting down one of its four reactors for the second time this month due to a malfunction that poses no safety threat. Petr Spilka, spokesman for the Dukovany nuclear plant says the problem occurred on one of the reactor's 12 fittings that regulates the flow of water." Spilka "said Thursday it would take several days to fix the problem, which last occurred in the plant in 1985."

India Facing Shortage Of Nuclear Power Specialists. The New York Times (4/15, Timmons, Subscription Publication, 950K) reports, "Besides political protests, India's nuclear energy ambitions face another big roadblock, critics say: a shortfall of trained people to run, repair and regulate power plants. If it proceeds with plans to build 44 nuclear plants over the next decade, India needs to add 10,000 to 19,000 skilled people to the nuclear industry, according to PricewaterhouseCoopers." However, "India's top universities are graduating only about 50 nuclear specialists a year" and "special graduate programs approved by the Department of Atomic Energy to address the shortage will add only about 100 master's-level graduates this year."

China Remains Committed To Nuclear Expansion. Bloomberg Businessweek (4/15, Roberts, 921K) reports on China's continued pursuit of nuclear power, evident at the "Ninth China International Exhibition on Nuclear Power Industry" which opened in Shenzhen April 6, "drawing 300 companies from around the globe," even as the Fukushima Dai-Ichi plant "was on everyone's mind." Attending were "industry leaders Areva and Hitachi, as well as mainland companies that may someday challenge them: China Guangdong Nuclear Power, China National Nuclear Power, and China Power Investment. China still seems committed to boosting its nuclear power from 10.8 gigawatts, or 2 percent of its energy mix today, to up to 80 gigawatts and 5 percent by 2020," but it will need to "bring 10 new reactors online every year" to reach that goal.

China May Give Green Light To Building Of Nuclear Plant In Eastern Province. Bloomberg News (4/15) reports, "China may approve construction of a nuclear plant in the eastern Chinese province of Shandong's Rongcheng city in 'near future', the China Business News reported, citing an unidentified person familiar with the situation."

NUCLEAR REGULATORY COMMISSION NEWS CLIPS

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T.V.A. Considers Improvements For 6 US Nuclear Reactors (NYT)

By Matthew L. Wald

New York Times, April 15, 2011

WASHINGTON — The Tennessee Valley Authority said Thursday it was considering millions of dollars of improvements to protect its six nuclear reactors from earthquakes and floods.

It is the first American reactor operator to announce safety changes that it is weighing since an earthquake and tsunami set off a nuclear crisis at the Fukushima Daiichi plant in Japan last month. Other operators have said publicly that they might have to make changes, but they have avoided saying what those were.

The T.V.A. issued a fact sheet saying that it was considering reducing the amount of fuel in its spent fuel pools by transferring older fuel to passively cooled "dry casks" and adding additional backup diesel generators.

It also listed three changes that are less commonly discussed: improving electrical switchyards to make them more resistant to earthquakes, adding small generators to recharge cellphone batteries and keep the lights on, and reinforcing the pipes that provide cooling water to spent fuel pools.

Of the six reactors operated by the T.V.A., three are boiling water reactors that resemble the Fukushima reactors. The authority said that none of its reactors are in areas where an earthquake risk is high. But it said it was looking at "potential vulnerabilities from a chain of events, such as damage from a tornado or earthquake combined with flooding from a dam failure."

Nuclear critics have argued that all plants should be required to undertake such analyses of simultaneous events, although the Nuclear Regulatory Commission has generally rejected such hazards as too unlikely for such studies to be mandated. The commission's staff recently began a 90-day review of how prepared American reactors are for severe accidents, but the first progress report on that effort is not expected until early next month.

The spent fuel storage problem has been debated for years. After the attacks of Sept. 11, 2001, Congress asked the National Academy of Sciences to look into the problem, and in 2005 the academy reported that the pools might in fact be vulnerable to terrorism. It said the Nuclear Regulatory Commission should evaluate whether some of the fuel should be moved to dry casks.

Lately some members of Congress have suggested more use of dry casks.

When spent fuel is removed from a reactor, it continues to generate heat and must be kept submerged for about five years. But after that it can be sealed inside a steel can that is filled with inert gas to prevent rust; the can is then loaded into a small concrete silo with air vents. Air circulating around the can keeps the fuel well below the melting point.

American reactor operators have so far resorted to that technique only when their pools have reached capacity. The pools were designed in an era when nuclear engineers thought the fuel would be hauled away from reactors after a few years for recycling or burial and are therefore quite small; most reactors have installed new equipment in their pools to be able to squeeze in more than was originally intended. But some engineers say that this raises the risk that if the pool were emptied, the fuel could heat to the point that the metal it contains is ignited.

Thinning out the pools by removing old fuel would still leave the hottest materials in place but would reduce the chance of fire.

Robert Alvarez, a former Energy Department official, calculated recently that removing the backlog of fuel older than five years from the spent fuel pools of all 104 operating reactors would cost $3.5 billion to $7 billion and take several years to accomplish.

TVA Adding Satellite Phones, Portable Generators At Nuclear Plants (CHTNGA)

By Dave Flessner

Chattanooga Times Free Press, April 15, 2011

TVA will immediately add satellite telephones and small portable generators and could add more dry cask storage and hardened water supply pipes at its nuclear power plants, TVA Chief Operating Officer Bill McCollum said today.

The federal utility is making the changes — and studying other plant changes — in response to the earthquake-damaged nuclear plant in Japan.

McCollum told the TVA board today that TVA is looking at both short-term and long-term changes to minimize a nuclear plant accident like what happened in Japan.

The utility may add more diesel generators as backup power, McCollum said.

TVA officials insist its nuclear plants are safe.

"We are trying to assure that we're ready for the unexpected," McCollum said.

TVA put off a decision today on whether to finish the Bellefonte Nuclear plant in Northeast Alabama while the staff assesses the Japanese nuclear disaster.

"We continue to view nuclear power as a viable option for the future, but we are taking a pause as we consider the future of our Bellefonte plant," TVA Chairman Dennis Bottorff said.

TVA To Discuss Nuclear Safety At Meeting (TENN)

Tennessean, April 15, 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/index.htm.

TVA Board Discusses Changes To Nuclear Reactors (CHTNGA)

By Dave Flessner And Pam Sohn

Chattanooga Times Free Press, April 15, 2011

TVA immediately will add satellite telephones and small portable generators at its three operating nuclear plants, and could within months strengthen power and water supplies to spent fuel pools and speed up the transfer of nuclear waste from pools to dry cask storage.

Chief Operating Officer Bill McCollum told board members Thursday at a meeting in Chattanooga that reviews after the Japanese nuclear crisis confirm that the utility's six reactors and five spent fuel pools are safe.

They already had been "retrofitted with safety measures to assure defense-in-depth," he said. "But we are working to assure that we're ready for the unexpected."

TVA board Chairman Dennis Bottorff said the board has hired consultants to help assess the utility's nuclear program.

While TVA reassesses its existing plants, the board delayed a decision on whether to complete a reactor at the 30-year-old Bellefonte Nuclear Plant in Hollywood, Ala.

"We continue to view nuclear power as a viable option for the future," Bottoroff said. "But we also think it's a good time to take a pause."

During the board's public listening session in Chattanooga, most of the 14 speakers asked the board to review or even phase out its commitment to nuclear power.

"The real cause of the Fukushima nuclear crisis is human error," said Sandra Kurtz, a member of the Bellefonte Efficiency & Sustainability Team, referring to a Japanese decision to put diesel tanks at a level where a tsunami could wash them away. "Human error can happen here, too."

But Jackson County, Ala., Chamber of Commerce President Rick Roden and Economic Development Board President Goodrich A. "Dus" Rogers urged TVA directors to finish the long-delayed Bellefonte reactor.

"We trust TVA to do the right thing," Roden said. "Take what you learned from Japan to make Bellefonte the most reliable and safe plant in our backyard."

Lessons learned

Shortly after a 9.0 earthquake and tsunami triggered the Japan crisis, TVA established a centralized response center to monitor conditions at the Fukushima Dai-ichi plant and coordinate with the Institute of Nuclear Power Operations and the World Association of Nuclear Operators.

Since then, TVA has reviewed local plant requirements and response plans to a slate of disasters, single or multiple.

One example would be damage from a tornado or earthquake combined with flooding from a dam failure, with emergencies involving one or more reactor.

That look prompted a 90-day plan to add satellite phones and portable generators. It also has prompted a recommendation for the following changes within 12 months:

- Move additional nuclear fuel from spent-fuel pools into dry cask storage
- Harden cooling-water supply pipes to spent-fuel pools
- Add a fifth generator for backup power at Sequoyah and Watts Bar nuclear plants.
- Harden electrical switchyards to better withstand seismic impacts.

TVA Focused On The Future (WIAT)

WIAT-TV Birmingham (AL), April 15, 2011

The Tennessee Valley Authority, which operates a nuclear plant in northeast Alabama, is holding a series of meetings to discuss the future of its operations.

TVA executives have opted to delay recommending a go-ahead on a reactor at its Bellefonte Nuclear Plant. Instead, TVA managers will study how to prevent the types of radiation leaks effecting Japan.

In what's considered a major victory for environmental groups across Alabama, TVA has agreed to phase out 16 percent of it's coal fired plants over the next five years.

They also agreed to modernize pollution control systems on three dozen units across the southeast, including here in Alabama, Kentucky and Tennessee.

The company will also invest $350 million in programs designed to help customers in those states, conserve energy.

TVA Officials Say They Will Learn From Nuclear Calamity In Japan (CHATNOOG)

Chattanoogan, April 15, 2011

TVA's chief operating officer Bill McCollum briefed the TVA board of directors Thursday on the utility's nuclear operations and on potential implications of last month's nuclear-plant problems in Japan.

Mr. McCollum told directors that safety is TVA's top priority in designing and operating its plants and that its nuclear program will incorporate lessons learned from Japan into the operations, designs and features of its nuclear plants, including those under construction and projects that are under consideration.

The previously approved construction at Watts Bar Nuclear Plant Unit 2 in East Tennessee and engineering work at the Bellefonte site in northern Alabama are proceeding on schedule. Mr. McCollum said TVA staff will ask the board to make a decision on whether to move ahead with construction of a nuclear unit at the Bellefonte site "after TVA has a clear understanding of the Japanese nuclear situation and any potential impact on the project."

Chief Financial Officer John Thomas told the board that colder weather has increased demand for TVA electricity and fuel expenses since the fiscal year began in October, but uncertainty resulting from the slow US economic recovery and from the Japanese nuclear situation could increase the volatility of TVA's revenue for the remainder of the year.

Mr. Thomas added that TVA has managed cash flows well and is on track to achieve its fiscal 2011 financial objectives, which include avoiding increases in the base wholesale rate for electricity during the fiscal year.

The board also voted to re-elect director Dennis Bottorff of Nashville as chairman. Mr. Bottorff became chairman last year, succeeding director Mike Duncan of Inez, Ky., who stepped down as chairman but remains on the board. The board also named Director William Sansom to serve as vice chairman.

In other business, the board of directors:

Authorized the CEO to approve certain major contracts for electrical transformers;

Approved a pilot program for additional customer participation in the Valley Investment Initiative economic development program; and

Approved de-watering facilities for bottom ash at the Kingston Fossil Plant and for bottom ash and gypsum at the Bull Run Fossil Plant, part of ongoing efforts to convert coal byproducts to dry storage.

The Tennessee Valley Authority, a corporation owned by the US government, provides electricity for utility and business customers in most of Tennessee and parts of Alabama, Mississippi, Kentucky, Georgia, North Carolina and Virginia – an area of 80,000 square miles with a population of 9 million. TVA operates 29 hydroelectric dams, 11 coal-fired power plants, three nuclear plants and 11 natural gas-fired power facilities that can produce about 34,000 megawatts of electricity, delivered over 16,000 miles of high-voltage power lines.

TVA Board Weighs Impact Of Japan's Nuke Problems (AP)

Associated Press, April 15, 2011

CHATTANOOGA (AP) — The Tennessee Valley Authority board is discussing its nuclear ambitions in the aftermath of the emergency in Japan.

The TVA board's Thursday agenda in Chattanooga includes a report on its nuclear safety review.

TVA has decided to delay recommending a go-ahead on a reactor at its Bellefonte Nuclear Plant in northeast Alabama while the utility studies how to prevent anything like the radiation leak from Japan's tsunami-flooded nuclear plant.

TVA managers will present the utility's 20-year energy plan to the board. That plan recommends reducing the agency's reliance on coal-powered plants and pursuing new natural gas and nuclear capacity.

TVA also is considering programs to increase power generated from wind, solar and biomass while promoting conservation.

Post Japan Crisis, TVA Reinvests In, Reconsiders, Nuclear Power (WRCB)

By Gordon Boyd

WRCB-TV Chattanooga, TN, April 15, 2011

CHATTANOOGA (WRCB) - Rarely known to exaggerate, TVA Chairman Dennis Bottorff may have uttered the understatement of the month at the annual Board meeting of the Tennessee Valley Authority in Chattanooga, Thursday.

"We probably are watching the Japan (nuclear) crisis even more closely than the common person in the street is," says Bottorff.

TVA generates almost a third of its electricity from nuclear power. The facility in Chattanooga's side yard, Sequoyah, at Soddy Daisy, is among the five power plants that the Nuclear Regulatory Commission (NRC) considers most at risk for an 'earthquake that could cause catastrophic failure.'

But Chief Operating Officer Bill McCollum considers that a bit of a misnomer.

"Our nuclear plants are not built in areas where there are likely to be earthquakes," says McCollum.

McCollum maintains that Sequoyah's emergency generators and electrical gear sit high enough that the worst floods can't get to them. And backup pumps can keep the reactors cool if the main diesels fail.

What's more, McCollum claims, Browns Ferry, near Athens, Alabama, is built to stand up a quake ten times stronger than our country's ever recorded.

"Having people come in and see the actual facility did take some of the mystery out of this," TVA Chief Executive Officer Tom Kilgore says.

Eyewitness News was among a number of media outlets to tour Browns Ferry, March 25.

TVA's Board has decided to implement more protective measures. Several could be in place by mid-July; including more satellite phones to serve as back-up communication, and more portable generators to power lights or to re-charge batteries.

The Board also is considering whether to thicken the reactors' cooling pipes.

But perhaps the biggest aftershock, how the Japanese crisis could affect TVA's decisions regarding Watts Bar Unit #2, near Spring City; and the scuttled Bellefonte site in Hollywood, Alabama.

"What we're asking management to do is expand the scope of the feasibility study," Bottorff says.

Last year, TVA estimated that a build-out of only one of Bellefonte's reactor could cost almost $4 billion.

Forty-five environmental groups, including the Knoxville-based Southern Alliance for Clean Energy (SACE) have asked the NRC to suspend licensing for all nuclear plants until it can review Japan's response to its crisis.

TVA Plans Short, Intermediate, & Long Term Safety Improvements At Nuclear Plants (WDEF)

WDEF-TV Chattanooga, TN, April 14, 2011

One by one, folks from across the Tennessee Valley urged TVA's board to look away from nuclear power to meet the energy demands of this region.

Gretel Johnston says "you are simply gambling with our money and our lives." Sandra Curtz says "we do not want to be guinea pigs for nuclear power roulette. Steven Smith says "you have options other than Bellefonte and I think you need to pursue those options and not put us sort of all at risk."

The disaster at Japan's nuclear plant prompted a renewed call to halt work on new reactors at Bellefonte and Watts Bar.

The board extended funding for engineering and design work at Bellefonte, but delayed further action to provide more time to review lessons learned from Japan. TVA Chief Operating Officer Bill McCollum says "we're continuing to get information from Japan."

TVA developed short, intermediate, and long term plans to add additional defense and depth to deal with simultaneous disasters. Short term, McCollum says "providing additional satellite phones for emergency responders to use in the event that normal communication methods are damaged by an event or unavailable. Additional small portable electric generators to be able to accomplish functions like powering lighting, charging batteries, or providing local power for other vital equipment."

While these things can be accomplished in 90-days, McCollum says TVA will need 12-months or more to move spent fuel to dry cast storage canisters; install hardened water pipes with outside connections; and add additional diesel generators at Sequoyah and Watts Bar.

Since only design and engineering are underway at Bellefonte, McCollum says there's still time to incorporate lessons learned from Japan in that project.

He'll ask the board to make a decision on whether to move ahead with construction after gaining a clear understanding of the Japanese nuclear situation.

Concerns Over Nuclear Safety Voiced At TVA Board Meeting (WTVC-TV)

By John Pless

WTVC-TV Chattanooga, TN, April 14, 2011

A number of people are voicing their concerns about the safety of TVA's fleet of nuclear power plants.

During the public comment period of the TVA Board meeting in Chattanooga Thursday morning, concerns over hundreds of "events" at nuclear plants revealed just how many incidents go unreported for months.

Citizens said the nuclear disaster in Japan have highlighted their ongoing fears over nuclear power.

Citizens are urging the TVA Board to scrap aggressive plans to expand their nuclear fleet and invest money in other, more clean technologies like solar and wind.

Concerns over the massive amounts of nuclear waste stored in the Tennessee Valley and the huge costs of securing and maintaining it were top of mind for several people.

TVA officials maintain their nuclear fleet is safe and not subject to the vulnerabilities that have affected plants in Japan.

East TN Not Phased: Nuclear Neighborhoods Growing (WBIR)

By Anthony Welsch

WBIR-TV Knoxville, TN, April 14, 2011

Ask Glenn Garrett or his brother Don as they fish near Watts Bar, it's not the nuclear plant that kept them in Tennessee, or even the dam that their father helped build.

The reason they grew up near Crossville and always came back has to do with everything around nuclear facility.

"I used to drive a truck and people would ask me, 'what's the prettiest country I've seen?' and I'd tell them, 'that Cumberland County sign when I get back'," Glenn Garrett said. "We've got the most beautiful area of the world right here."

Like a lot of East Tennesseans, he can tell you about how far he lives from Watts Bar, the closest nuclear reactor to his home.

"I believe it's 25 miles," Garrett said.

But that close proximity has never phased them. A recent poll and census data suggests the Garretts are not alone.

Despite the potential for catastrophe near nuclear sites, the three nuclear plants closest to Knoxville have seen an increase in neighbors. The 50 mile evacuation zones surrounding the Sequoya, Browns Ferry, and Watts Bar Nuclear plants all saw double digit increases in population from 2000 to 2010.

In the area surrounding Watts Bar, that population increase was nearly 13% over the past decade. That's about three times the growth rate seen by Rhea and Meigs counties during the same time period.

That increase includes Dustin Ely. A job manufacturing catalytic converters in Detroit for General Motors went away and now he's in East Tennessee, living nearly in the shadow of what is expected to soon be two nuclear reactors at Watts Bar.

"I don't worry about it because, well, I know I'm safe. If something did happen, I've seen plenty of signs around that say things like 'escape route', you know, things like that," Ely said.

Following the nuclear disaster in Japan, Gallop conducted a poll of Americans and found 58% still believe nuclear power is safe. 6% were not sure and 36% felt nuclear power was definitely not safe.

However, fewer than half felt nuclear power was necessary in helping the United States meet power demands of the future.

Now, Ely's looking for a job with the Tennessee Valley Authority

"From what I understand, there are like 2,000 employees over there," he said.

And Thursday afternoon, there's also a couple of fishermen over there. While they can't quite cast to the Watts Bar stacks from their position, it's clear their chief concern has more to do with fishin' than with nuclear fission.

"It never bothered us. We never heard anybody say anything about it. We're just thankful to have electricity," Garrett said.

Japan Radiation Found In Local Water (CHTNGA)

By Pam Sohn

Chattanooga Times Free Press, April 15, 2011

While a cloud of radiation from Japan's maimed and melting nuclear plant snaked across the Pacific and curled along America's jet stream, Chattanooga collected the second-highest radioactive iodine-131 level measured in drinking water anywhere in the US

Radioactive iodine-131 is easily absorbed by the human thyroid and can cause thyroid cancer.

But authorities say there is good news.

They say levels measured so far in Chattanooga's drinking water — although spiked — is not high enough to be dangerous.

And unlike most radioactivity types, iodine-131 is short-lived. Its half-life is eight days, meaning half of the radioisotope's radioactivity decays in that time.

"The results being reported are well under the levels of health concerns," said Tennessee American Water Co. spokeswoman Kim Dalton. "We will continue to follow the situation closely."

Iodine-131 is produced by the fission of uranium atoms in nuclear reactors and by plutonium (or uranium) in the detonation of nuclear weapons.

The radioactive plume that prompted Chattanooga's findings swirled through the region on the jet stream early in the Fukushima-Dai-ichi Nuclear Plant crisis. The Japanese plant was crippled March 11 when a 9.0 earthquake and tsunami hit the island nation.

The Chattanooga water sample showing radiation was collected March 28, according to US Environmental Protection Agency's nationwide radiation monitoring system, known as RadNet. The finding was posted in the RadNet database April 8.

Since then, US and Japanese authorities have said more radiation has been released, but new sampling data has not yet been posted because of the time it takes to collect and analyze samples, according to EPA and state officials.

The EPA's maximum allowable amount for iodine-131 in drinking water is 3.0 picocuries per liter, according to EPA spokeswoman Dawn Harris-Young. Chattanooga had 1.6 picocuries per liter.

A picocurie is a tiny fraction of a curie. A curie is a measurement of radioactive decay.

The RadNet database on Wednesday afternoon listed 69 drinking water samples collected and analyzed across the nation since March 28. More than half — 42 — found no detection of iodine-131.

RadNet also is sampling air, rainwater and milk. No Chattanooga-area samples have been posted in rainwater databases. Earlier this month, officials detected air samples near Sequoyah with radioactive isotopes.

Milk samples taken in Athens, Tenn., and Knoxville on March 31 showed no detection for iodine-131, according to the databases.

LOOKING AHEAD

With greater radiation releases in Japan in recent days, Mike Stafford, director for the nuclear and radiological protection division at Oak Ridge National Laboratory, acknowledged that officials may see higher sample readings.

But he said the duration of spikes shouldn't last much longer if Fukushima conditions stabilize. He also said radiation may not show up again in the same places across the US

"You'll see patterns that will be linked to the jet stream and where there was a rain right before [the sample was taken]," he said.

While Chattanooga's drinking water sample measured 1.6 picocuries per liter, the highest reading on one of Oak Ridge's five sample spots registered 0.63 and was collected the same day as Chattanooga's. Another of Oak Ridge's sample spots, collected the following day, showed no detection.

Meg Lockhart, a spokeswoman for the Tennessee Department of Environment and Conservation, said the level detected in Chattanooga water is so low that even an infant would have to drink 600 liters of water to receive a dose equivalent to one day's background radiation in nature.

EPA, too, has stressed that levels seen to date are low and are not expected to cause health effects.

But EPA's website acknowledges risks from too much exposure. Radioactive iodine can cause thyroid problems, but it also can help diagnose and treat thyroid problems, according to EPA.

Still, the agency says physicians must maintain "a fine balance between the risks and benefits of using radioactive iodine because this small, additional exposure may tip the balance in favor of cancer formation."

The National Academies of Science has said there is no safe level of exposure to radiation.

MORE UNKNOWNS

Neither EPA nor state and local authorities will acknowledge where the Chattanooga drinking water sample was taken.

"We do not divulge that information," Harris-Young said.

Previously she and TDEC officials indicated they thought the samples were taken from water taps at Tennessee American Water Co.

Dalton, Tennessee American's spokeswoman, seemed to deny that by questioning where that information came from.

"We have been in contact with the regulatory agencies to determine the location of the samples taken," Dalton wrote in a e-mail.

SIDEBAR:

TOP FIVE

The five cities with the top five iodine-131 detections in drinking water are:

Philadelphia/Queen — 2.2 picocuries per liter

Chattanooga — 1.6 picocuries per liter

Philadelphia/Belmont —1.3 picocuries per liter

Oak Ridge/371 — 0.63 picocuries per liter

Philadelphia/Baxter — 0.46 picocuries per liter

Source: US Environmental Protection Agency

FAST FACTS

* Iodine-131 is produced by fission of uranium atoms during operation of nuclear reactors and by plutonium (or uranium) in the detonation of nuclear weapons.

* Iodine released to the environment from nuclear power plants is usually a gas. It emits beta particles during radioactive decay.

* Anywhere spent nuclear fuel is handled, there is a chance that iodine-131 and longer-lived iodine-129 will escape into the environment.

* Nuclear fuel reprocessing plants, which dissolve the spent fuel rods in strong acids to recover plutonium and other valuable materials, also release iodine-129 and -131 into the airborne, liquid, and solid waste processing systems.

Source: US Environmental Protection Agency

Alexander, Nuclear Regulatory Commissioner To Visit Watts Bar Nuclear Plant (CHATNOOG)

The Chattanoogan, April 15, 2011

Senator Lamar Alexander will visit the Watts Bar nuclear plant on Monday, with Commissioner Bill Ostendorff of the Nuclear Regulatory Commission, which regulates nuclear reactor and nuclear material safety in the US

Of the upcoming visit, Sen. Alexander said, "I want to make sure that TVA is doing all it can to learn from the tragedy in Japan and that the six TVA reactors are operating as safely as possible. Nuclear power produces 80 percent of the Tennessee Valley's clean, reliable, emissions-free electricity. There has never been a fatality at an US commercial or naval reactor, and in the Three Mile Island accident, no one was hurt."

Mr. Ostendorff was appointed to the NRC by President Barack Obama. Immediately prior to his appointment, Mr. Ostendorff served as the director of the Committee on Science, Engineering and Public Policy and as director of the board on Global Science and Technology at the National Academies of Science.

He served as an officer in the US Navy from 1976 until he retired in 2002 in the grade of captain, having commanded an attack submarine, an attack submarine squadron and served as Director of the Division of Mathematics and Science at the US Naval Academy.

TVA To Retire 18 Coal-fired Units (SDS)

By Ken Bonner

Scottsboro (AL) Daily Sentinel, April 15, 2011

Japan's ongoing nuclear disaster will affect TVA's nuclear generation plans in both the short and long-term, according to reports presented at the utility's board of directors meeting held in Chattanooga Thursday.

"TVA's Integrated Resource Plan is focused on what is best for the region we serve," Van. M. Wardlaw, executive vice president of enterprise relations said in presenting the 20-year vision for the utility. "It gives us diverse options, flexible options. It is a compass not a GPS."

The IRP, which was approved unanimously by the board, does include nuclear power as a viable option for producing electricity over the 20-year period, including several choices for the Bellefonte Nuclear Power Plant near Scottsboro.

TVA Chief Operating Officer Bill McCollum said that engineering and design work ongoing at Bellefonte would take into account lessons learned from the failure of reactors to natural catastrophe at Japan's Fukushima Dai-ichi nuclear facility.

"We will definitely make improvements at Bellefonte," McCollum said. "We will incorporate lessons learned in going forward. Our plants remain safe and we intend to keep them safe.'

TVA Board Chairman Dennis Bottorff, who was reelected to the position for an additional one-year term, praised McCollum and his team for monitoring the Japanese situation and how the utility is reacting to it now and for the long term.

"Nuclear power is one of the best options," Bortorff said. "We need to take into account what happened in Japan, what we learn and incorporate it into our entire nuclear fleet."

The IRP was developed over two years with the assistance of a Stakeholder Review Group that consisted of representatives of the business, consumer, political and environmental communities providing a range of expertise and viewpoints. It also allowed for public input through meetings held at various locations in the service region, online and by mail.

The process "added important perspectives as we formulated our Integrated Resource Plan," TVA President and CEO Tom Kilgore said. "Diversity proved to be the most prudent course in meeting future energy needs in all the various future scenarios we studied. A variety of electricity sources, rather than heavy reliance on any single source, reduces long-term risks and helps keep costs steady and predictable."

The plan recommends utilizing a diverse mix of power generation sources, including nuclear power, renewable energy and natural gas. It also incorporates traditional coal and hydroelectric power and places an emphasis on energy efficiency.

As part of its efforts to provide cleaner power for the 9 million customers it serves in seven southeastern states, TVA will retire 18 of its coal-fired units including six at the Widows Creek Fossil Plant in Bridgeport. Units will also be retired at TVA's Johnsonville and John Sevier plants.

"We have the oldest and largest coal fleet in the nation," Kilgore said. "Our plants average 47 years old. We can't keep all of our plants on line."

The retirements will help TVA reduce emissions of sulfur dioxide and nitrogen oxides. The utility will idle approximately 2,700 megawatts of its 17,000-megawatt coal-fired capacity by the end of 2017. It will be replaced with low-emission or zero-emission sources.

The process will be implemented over six years. Few if any job losses are anticipated as part of plan. Some of the employees likely effected will retire, others will stay on at their current locations to dismantle or modify units and some will be asked to be flexible and move to other plants.

"In the longer term, these actions reinforce our vision to keep bills low, keep our service reliability high and further improve air quality as we modernize the TVA power system," Kilgore said.

TVA estimates that it will invest an additional $3-5 billion in the next 10 years on new emission-control equipment and upgrades of existing equipment at the coal-fired units it will continue to operate. In an agreement with the Environmental Protection Agency the utility will provide $350 million to fund environmental improvements and will pay a $10 million civil penalty to end ongoing litigation over regulatory compliance.

TVA's vision includes high reliability, promoting and encouraging economic development in the area, assisting in creating employment opportunities across the region and reducing emissions. It also stresses the need for energy efficiency and promotes expanding the utilities participation in an electric vehicle project to provide public charging stations in Chattanooga, Knoxville, Memphis and Nashville.

The utility will continue to utilize renewable generation options such as wind, solar and biomass and is considering expanding its use of natural gas fired power plants. The idea behind the IRP, according to Wardlaw, is to provide a guide for providing "low-cost, cleaner energy."

TVA's next board meeting is scheduled for August 18 in Knoxville. Its last meeting of 2011 is tentatively scheduled for November 17 in Starkville, Mississippi.

CleanEnergy Footprints: April 14: Japan Nuclear Disaster Update (CENEWS)

By Sara Barczak

Clean Energy News, April 15, 2011

After over a month downplaying the disaster at the Fukushima nuclear reactors in Japan, officials finally upgraded the disaster to a level 7 on the International Nuclear and Radiological Event Scale. Previously, the ranking was 5, meaning "accident with wider consequences." Before now, Chernobyl was the only accident rated 7, which is the highest on the scale and indicates a "major accident." Also this week, the evacuation zone was increased beyond the original 20-kilometer zone. Now all those within the 20-30 km zone are being asked to stay indoors and to prepare to leave within a month.

Radioactive contamination is being found in more areas. Highly radioactive fish have been caught off the coast of the Ibaraki prefecture, outside of the 20-km evacuation zone. Low levels of strontium have also been detected in plants and soil outside of the 30-km zone around the plant. Despite the low levels, this is a cause for concern as there is no set 'safe' limit for exposure to strontium, which can cause bone cancer and leukemia.

Unfortunately, Japan will be dealing with repercussions from both the earthquake/tsunami and the Fukushima Daiichi disaster for years to come. Current speculations claim that it will take at least 5 years just to deal with the 60,000 tons of radioactive water that has flooded the basements of the reactor buildings; these speculations do not even take into consideration the new radioactive waste being created as the struggle to get the nuclear complex under control continue.

And the reality is that it will take years to fully understand the far-reaching impacts of this situation. We continue to hold the people of Japan in our thoughts and prayers as they struggle through this complex, seemingly never-ending tragedy.Some additional resources to consider:

Videos released this week show the Fukushima Daiichi nuclear complex being inundated by the tsunami and footage of a Geiger counter tour within the evacuation zone;

An International Nuclear and Radiological Event Scale fact sheet details the types of nuclear events and how they are classified by severity, as well as a historical overview of past events;

A summary of past significant nuclear events as analyzed by Tom Cochran of the Natural Resources Defense Council;

Nuclear Information Resource Service (NIRS) has short, frequently updated summaries of the situation at the Fukushima Daiichi nuclear complex;

"Chernobyl: A Million Casualties" is a 30-minute program produced by EnviroVideo that will be broadcast on Saturday, April 16, at 6:00 a.m., 10:00 a.m., and 9:00 p.m., EDT, on Free Speech TV in 39 states and on the DISH Network (Channel 9415) and DIRECT TV (Channel 348). The program is also available on YouTube and at envirovideo.blip.tv;

The Emergency Petition for the NRC filed today by 45 groups across the US calls on the Nuclear Regulatory Commission to suspend all reactor licensing until lessons can be learned from the Fukushima disaster, a thorough analysis can be done of US safety systems and new rules and guidelines can be established based on that analysis. See the press release and read about it in today's article from the International Business Times.

In the United States, the public is concerned about radiation that has been detected in multiple US cities. Cesium-137, for instance, has been found in milk supplies in Montpelier, Vermont. Phoenix and Los Angeles milk supplies are registering levels of iodine-131 at the legal maximum limits set by the Environmental Protection Agency (EPA). Rainwater and drinking water in multiple cities are registering higher than normal, but mostly below regulated 'safe' levels for both contaminants, which are proven to increase the risk of cancer.

While radioactivity from the Fukushima Daiichi reactor complex continues to be measured here in the US, the EPA continues to debate whether it should increase the 'allowable limits' of various radioactive contaminants. According to the Public Employees for Environmental Responsibility, "The internal documents show that under the updated PAG [Protective Action Guides] a single glass of water could give a lifetime's permissible exposure. In addition, it would allow long-term cleanup limits thousands of times more lax than anything EPA has ever before accepted. These new limits would cause a cancer in as much as every fourth person exposed." This debate has been underway for a long time. You can find more background information from NIRS here.

FPL's Turkey Point in Miami-Dade County

Another primary concern in the US relates to evacuation zones. Turkey Point in south Florida and Indian Point near New York City are particularly vulnerable considering the high population densities of Miami-Dade county and New York City. US officials have recommended a 50-mile evacuation zone around Fukushima, but still maintain a standard of 10 miles around US nuclear reactors.

The integrity of the Nuclear Regulatory Commission (NRC) as a regulatory body is also being called into question, with rumors of "regulatory capture" and comparisons to the Minerals Management Service (MMS), the regulatory body that oversees offshore drilling permits. MMS came under scrutiny during the Gulf Horizon oil disaster. Accusations charge that the NRC has at times put industry profit and interest before safety by allowing spent fuel pools to exceed design limits, and that the agency cannot stay objective when 90 percent of its budget comes from industry fees.

As the Japanese nuclear disaster ensues, the so-called "nuclear renaissance" here in the US continues to falter. The NRC has denied Unistar's combined operating license application to build and operate a third reactor at their Calvert Cliffs plant in Maryland, stating that the corporation is not compliant with laws that prohibit nuclear projects that are dominated by foreign interests. American-owned Constellation Energy pulled out of the project late last year, leaving the majority French government-owned Electricite de France as the primary investor.

Tennessee Valley Authority (TVA) has extended the timeline on its decision to complete the two reactors at Bellefonte, a troubled project that was abandoned in 1985 after billions of dollars had already been spent. Bellefonte was an agenda item for TVA's board meeting this week, with the notation "Extension of Decision and Budget." However, as reported in the Chattanoogan, in light of the Japan nuclear disaster, TVA's COO Bill McCollum said at today's TVA board meeting that a decision on the Bellefonte project would occur, "after TVA has a clear understanding of the Japanese nuclear situation and any potential impact on the project." Read the SACE blog posting about the numerous safety concerns regarding Bellefonte.

And in North Carolina, the utility push to get even worse state legislation passed to make it easier to charge electric customers in advance in order to fund new reactor proposals (referred to as "SuperCWIP") was dealt a setback. According to the Charlotte Business Journal:

"The public advocate for North Carolina utilities customers has reversed position and will oppose any proposal to make it easier for utilities to recover some costs for nuclear plant construction before plants are built. Robert Gruber, executive director of the Public Staff of the N.C. Utilities Commission, says the nuclear crisis in Japan may drive construction costs for new nuclear plants in the United States prohibitively high. He says the only prudent course is to put off any legislation until federal regulators establish new safety rules based on lessons learned at the four crippled Fukushima reactors in northern Japan. After that, the impact on plant costs can be evaluated."

It seems clear to many that the time is now for regulators, policymakers, utilities and the nuclear industry to take a step back and pause in order to fully understand how the events unfolding in Japan could have implications for nuclear power here in the US This careful consideration will benefit ratepayers, US taxpayers and the communities near existing and proposed new reactors. The phrase "an ounce of prevention is worth a pound of cure" has never been more appropriate. Caution should predominate before billions more dollars are spent and lives are at risk.

–SACE staffer Mandy Hancock contributed to this blog

In Southeast, Extreme Heat Is A Growing Concern For Nuclear Power Operators (SCN)

By Alyson Kenward

SolveClimate News, April 15, 2011

On July 8, 2010, as the temperature in downtown Decatur, Alabama, climbed to a sweltering 98 degrees Fahrenheit, operators at the Browns Ferry nuclear power plant a few miles outside of town realized they had only one option to avoid violating their environmental permit: turn down the reactors.

For days, the Tennessee Valley Authority (TVA), which owns the nuclear plant, had kept a watchful eye on the rising mercury, knowing that more heat outside could spell trouble inside the facility. When the Tennessee River, whose adjacent waters are used to cool the reactors, finally hit 90 degrees Fahrenheit and forced Browns Ferry to run at only half of its regular power output, the TVA hoped the hot spell would last just a few days.

Eight weeks of unrelenting heat later, the plant was still running at half its capacity, robbing the grid of power it desperately needed when electricity demand from air conditions and fans was at its peak.

The total cost of the lost power over that time? More than $50 million, all of which was paid for by TVA's customers in Tennessee.

"Last summer, the water in the Tennessee River warmed up early and stayed warm," says TVA spokesman Ray Golden. "When it got hot again in July and August, we were impacted by that and had to reduce power at the plant and get it from somewhere else."

With river water so warm, the nuclear plant couldn't draw in as much water as usual to cool the facility's three reactors, or else the water it pumped back into the river could be hot enough to harm the local ecosystem, says Golden.

But for every day that the Browns Ferry plant ran at 50 percent of its maximum output, the TVA had to spend $1 million more than usual to purchase power from somewhere else, he says.

No Threat of Meltdown, But Hefty Fines

What happened in northern Alabama last summer, at the largest of TVA's nuclear power plants, did not present a human safety concern. Operators knew there was never a risk of an explosion or nuclear meltdown, nor was there a threat of leaking radioactive material.

But the prolonged spell of hot weather put the TVA at risk of violating environmental permits, with hefty fines as one consequence and potential harm to the Tennessee River ecosystem as another.

It's not the first time high temperatures have affected the performance of the Browns Ferry plant, and extreme heat is a growing concern for power plant operators across the Southeast. While some nuclear plants can improve their cooling procedures to cope with the intake of warmer water, the upgrades can cost hundreds of millions of dollars and still don't offer an indefinite defense against extreme heat.

Because scientists say the Southeast (like many other parts of the world) can expect to see more frequent and intense heat waves by the end of this century, the problems for nuclear power and the people that rely on it for electricity may only be beginning.

Extreme Heat Limits Nuclear Energy Production

The disaster still unfolding at Japan's Fukushima Daiichi nuclear plant has refocused America's attention on nuclear power, calling into question its future role in the country's energy portfolio.

Many advocates of nuclear power say that we need to maintain — and even expand — nuclear power to get away from using fossil fuels such as coal, and to help lower greenhouse gas emissions.

But nuclear power has a paradoxical relationship with climate change. Even though it might help mitigate long-term global warming, nuclear power is already being challenged by rising temperatures and the increasing number of heat waves around the world. Throughout the last decade, several plants have had to reduce electricity production during heat waves, just when electricity demand typically reaches peak levels.

"It's a dilemma between mitigation of climate change and adaptation to it," says Natalie Kopytko, an energy policy doctoral student at the University of York in England. Having recently studied the ways in which climate change could have a negative

impact on nuclear power, she says nuclear power is caught in the middle because it could be used to help lower greenhouse gas emissions, but global warming is making the technology less effective at providing electricity.

Most nuclear power plants draw water from nearby sources to help cool the reactors. Several American plants are on the coast and rely on ocean water, but the vast majority of nuclear reactors in this country (89 of the total 104) are inland, next to freshwater sources, and many of these are constantly cycling through river or lake water.

Normally, there isn't much difference between the water cooling process of inland and coastal facilities, but when hot weather strikes, a slow-moving and shallow river or a lake heats up a lot quicker than the ocean does. And when a nuclear power plant is drawing in such warm water, it can end up releasing unusually hot water back into the river. That's because the water gains heat while cycling through the plant.

Laws to Ensure Water Temps at Safe Levels

Power companies like the TVA can't control the weather. Nevertheless, plant operators are bound by environmental guidelines that are meant to keep temperatures at a safe level for fish in the river. For example, the Alabama Department of Environmental Management (ADEM) stipulates Browns Ferry cannot release water back into the Tennessee River that is above 90 degrees Fahrenheit.

"I know this past summer the TVA was worried about exceeding their permits," says Scott Hughes from the ADEM. "But they adjusted their operations and stayed within the limits."

The 90 degree Fahrenheit ceiling has been especially problematic for the TVA because in the past five years, the river water has, on several occasions, warmed that much on its own. And each time, Browns Ferry has been forced to reduce electricity production. This puts a pinch in the electricity supply for the more than 2.1 million homes and businesses that depend on electricity from Browns Ferry.

More importantly, the problem gets transferred to the pocketbooks of TVA's customers.

"When we can't generate that power from our nuclear plant, we have to go elsewhere in the energy market to get it," says the TVA's Golden. "In some cases, we have to increase the production from some of our other plants, including coal plants, and in other cases we go to other companies and buy power."

In addition to finding power from other sources, last summer the TVA called upon its customers to cut down on their electricity use throughout July and August. But the request came at the hottest time of the year, when electricity demand is usually at its highest.

Other large-scale power plants, including coal and biomass plants, are also vulnerable to heat waves and are subject to the same kind of environmental permits for hot water.

But according to the TVA's Golden, while "it is also a problem for coal-fired power plants, the size of nuclear power plants is much larger so the cooling problem is bigger." That's because cooling at many nuclear power plants isn't as efficient as at coal-fired power plants, and the nuclear power plants usually require more water for their cooling than other types of plants.

Heat Waves in Southeast on the Rise

What happened last summer at Browns Ferry may be a sign of what people living in the Southeast can expect in the future. As average global temperatures rise, studies show the risk of heat waves also increases. New research suggests extreme heat will become a more regular occurrence across the US

"One of the things that is happening is that the heat wave season, the time over which heat waves might occur, is actually getting longer," says Kenneth Kunkel, a climate scientist from the Cooperative Institute for Climate and Satellites in North Carolina. "Consequently, you can get heat waves a lot earlier in the year, and the season can also extend a lot longer."

Kunkel and his colleagues have recently modeled the future of heat waves across the United States, depending on what global greenhouse gas emissions are like during the rest of this century. In the Southeast, they found that by 2100, every year there could be between 60 and 80 more days with heat wave-level temperatures than there are currently. More frequent heat waves will mean higher Tennessee River water temperatures.

A separate Climate Central analysis shows similar trends for the region. For example, each summer between June and September, there is an average of 44 days when the temperature is above 90 degrees Fahrenheit in Athens, Ala., a location nearby to the Browns Ferry nuclear power plant. By the end of the century, however, Athens should expect to see about 80 summer days above 90 degrees Fahrenheit.

That 80-day estimate is based on a future climate scenario with relatively low greenhouse gas emissions; if atmospheric carbon dioxide emissions continue to climb at the current rate or higher, Athens could see even more of those exceptionally hot days.

"It may be that humans are able to adapt to the higher temperatures," says Kunkel, "but of course, a nuclear power plant is just going to have to deal with the conditions."

When Nuclear is Primary, Extreme Heat Can Hit Hard

The vulnerability of nuclear power to heat waves isn't restricted to the Southeast. In the summer of 2003, during a record-breaking heat wave in Western Europe, millions of people across France and Italy suffered through an extended power shortage after the French network of 19 nuclear power plants had to reduce their operations.

In France, over 70 percent of the country's electricity comes from nuclear power, and Italy also purchases about a third of its electricity from French nuclear providers.

During the heat wave, France took some of the pressure off its electrical grid by purchasing power from other sources, promoting energy conservation among citizens and industry, and by exporting less to Italy — causing many Italian towns to endure blackouts.

Although the energy shortage can't be solely blamed for the thousands of heat wave-related deaths in France and Italy that summer, it put a strain on people who lost air conditioning, as well as hospitals.

In Illinois, where a larger portion of electricity comes from nuclear power than any other state, plants have also fallen prey to summer heat waves. Back in 1988, which featured an unusually hot and dry summer, several reactors were reduced to just one-third of their maximum power output during a 90-day bout of abnormally hot weather.

But while inland nuclear power plants everywhere are threatened by heat waves, the dilemma may be growing worse in the Southeast.

Last summer was the hottest on record for the region. An early season heat wave in May warmed the Tennessee River more than usual for that time of year. And then more hot weather settled in a few months later and sent water temperatures soaring; August 4, 2010 marked the hottest single day in the TVA region in more than 50 years — temperatures in Nashville climbed as high as 111°F, for example.

The power lost at Browns Ferry during the late summer heat wave of 2010 was enough to catch the TVA's attention. In late August, the company decided to invest in more cooling infrastructure at their biggest nuclear power plant.

"At Browns Ferry, we're spending about $160 million on retrofits to improve the cooling," says Golden. "It's an awful lot of money but the project should pay for itself in just a few short years — especially if there are more heat waves."

The upgrade has added a larger cooling tower to the nuclear plant than the one originally there, which helps bring down the temperature of the water before it is sent back into the river. A few more similar improvements will be made in the next two years, says Golden.

Other power companies may have to explore similar options in the years to come. Installing better cooling to combat high water temperatures, and designing more efficient closed-loop systems that don't constantly demand fresh water are technically feasible, says Golden, but they could prove to be prohibitively expensive upgrades for older power plants.

The Browns Ferry upgrades will be enough to combat heat waves similar to those seen in 2010. Whether they are able to withstand the earlier and more intense heat waves of the future, on the other hand, isn't something the TVA can tell just yet. The repairs may end up being just a short-term solution for a long-term problem the nuclear industry is facing.

Senior Scientist Claudia Tebaldi conducted heat wave calculations for this story.

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Federal Workers Tell Us What Should Be Cut From The Budget (WP)

By Lisa Rein

Washington Post, April 15, 2011

With the budget for the rest of the fiscal year finally passed and more cuts to spending on the way, we asked federal workers, contractors and others with in-depth knowledge of the workings of federal government to answer a simple question: What needs to be trimmed from the budget?

Here are some suggestions from online responses. We have identified only the employees' departments.

Treasury Department

Social Security: The retirement age should be adjusted every five years based on updated life-expectancy rates. If the average life expectancy in the 1930s was 73 and the retirement age was 64, then the retirement age for Social Security going forward should be the 2011 average life expectancy less nine years. To the extent there is a large disparity in the retirement age under current law and the "new" retirement age, the spread should be phased in over the same number of years as the difference (add one year longer per year of disparity).

Social Security payments received by individuals with adjusted gross income greater than $500,000 (or $1 million jointly) should be subject to 100 percent tax. If a recipient knows he will be above the threshold, he could make an irrevocable election with SSA to forgo payments for the balance for the next year (or permanently) — thus not taking them into income. The election would not affect survivor benefits.

Agriculture Department

I would reduce the Paperwork Reduction Act. Making sure the government doesn't impose excessive paperwork and information-collecting on the public is laudable, but there should be a threshold for reporting. What constitutes information collection and a "burden" is ridiculous. . . . The government is spending much more time and money justifying the collection of information than the public is spending actually providing the information.

Defense across the board. The food-stamp program needs major overhaul. Way too many people are just plain living off of it now. It accounts for over 75 percent of the USDA budget.

Interior Department

All subsidies to oil and coal industry, agricultural subsidies in most cases, and defense should be cut by 25 percent. Bush tax cuts should be eliminated. Corporations should be taxed at 15 percent.

Social Security Administration

Corporate subsidies, foreign aid to some countries, US defense of foreign countries, tax cuts to the very wealthy, tax concessions/subsidies to churches, congressional perks, subsidies to private schools and colleges.

Internal Revenue Service

Bottom line, there are way too many levels of management, too many executives, too much duplication of effort, too many meetings, etc. We simply have too much "managing" going on: meetings about meetings, time spent fine-tuning the administration of the organization and so on. We could greatly reduce our budget by simplifying the management areas of responsibility, thereby reducing the executive and upper-level management ranks. We also have too many employees (many of them in higher pay brackets) in the administrative areas and too few in the field, assisting taxpayers. (By the way, I work in headquarters, so I don't say this out of malice but based on firsthand observation.)

National Institutes of Health

I think the workforce needs to be

looked at. There are a lot of workers who are not doing 100 percent of what they should be doing. Due to such things as the misuse of EEO (equal employment opportunity), there are a lot of employees who are able to hold onto their positions, collect paychecks and not do what they were hired to do. This creates more work for those who do their jobs, as well as a waste of taxpayers' money. A really good way to accomplish this is to do an overhaul of the PMAP system, that is, the performance-based system that the grade-scaled federal employees are on. Under this system, most employees receive a "fully successful," even if they are not performing their duties, due to their supervisor's fear of backlash from that employee. If the PMAP system can be redone in order to have it more based on performance, employees who are not performing can be let go easier, and this will cut costs.

Environmental Protection Agency

Management. The layers of management are insane. . . . It takes 13 steps and five layers to get a signature from our office director, more to get a signature to the assistant secretary/administrator.

Nuclear Regulatory Commission

Most middle mangers; many have old-time skills and non-innovative processes. . . . Redundant training, which has nothing to do with real-world skills.

Nuclear Expert Speaks At SU (YNN)

YNN, April 14, 2011

SYRACUSE, N.Y. – Radiation levels have dropped low enough to allow police to search for bodies in the rubble outside Japan's tsunami flooded nuclear plant. For the first time, crews are searching within a six mile radius of the Fukushima site. They believe as many as 1,000 bodies of missing victims may be in the area.

Inside the plant, workers are running into new setbacks as they struggle to stabilize the reactors.

Here in the United States, nuclear experts say they are learning a tremendous amount from the disaster in Japan. A nuclear expert spoke with students at Syracuse University Thursday. He says the Nuclear Regulatory Commission in the US is the best in the world and they continue to learn and adapt in light of what has happened in Asia.

"One of the things we're looking at is how to deal with the most unimaginable situations and the actions that we need to be able to take in those situations and having some of these alternate ways of mitigating accidents," said Will Cothen of Clean Energy America.

Here in New York, UniStar is evaluating whether or not to build an additional reactor at Nine Mile Point in Oswego. The company is in the beginning stages of safety reviews.

US Should Halt Approvals For Nuclear Reactors, Groups Say (BLOOM)

By Simon Lomax

Bloomberg News, April 15, 2011

The US should suspend licensing decisions for new and existing nuclear plants while it investigates Japan's reactor crisis, environmental groups said.

The groups seek a "credible Three Mile Island-style review" of Japan's failed reactors and implications for US safety, lawyer Diane Curran said today on a conference call.

The Nuclear Regulatory Commission should "immediately suspend all licensing activities," Curran said, speaking for 45 groups and individuals including the Knoxville, Tennessee-based Southern Alliance for Clean Energy, the Institute for Energy and Environmental Research of Takoma Park, Maryland, and San Luis Obispo Mothers for Peace.

The NRC is conducting a two-step safety review of US nuclear plants after a magnitude-9 earthquake and tsunami on March 11 crippled Tokyo Electric Power Co.'s Fukushima Dai-Ichi plant in Japan with fires, explosions and radiation leaks.

A 90-day review that started last month will identify near- term changes that might be needed at US reactors, NRC Chairman Gregory Jaczko said April 12. It would be followed by a six- month examination based on additional information on the Japanese reactor crisis, Jaczko said.

The NRC can order US plants to add safeguards during the review, he said. New-reactor applications and proposals to extend licenses can be reviewed because the agency's processes "are robust enough to deal with the new issues" that may arise after the Japanese nuclear disaster, he said.

After a 1979 accident resulting in a partial meltdown at the Three Mile Island nuclear plant near Middletown, Pennsylvania, former US President Jimmy Carter appointed an independent commission to conduct a six-month investigation.

On March 25, the New York-based Natural Resources Defense Council urged President Barack Obama to appoint a similar panel to investigate Japan's nuclear crisis and implications for US reactor safety. The NRC should suspend work on license renewals for reactors in earthquake-prone areas until the investigation is finished, the NRDC wrote to Obama.

Groups Petition US NRC To Suspend Nuclear Power License Reviews (PLATTS)

By Steven Dolley

Platts, April 15, 2011

A coalition of 45 groups and individuals has asked the US Nuclear Regulatory Commission to "immediately suspend" all licensing of new nuclear power reactors and license renewals for operating reactors "until the the agency completes a thorough post-Fukushima reactor crisis examination," the coalition said Thursday.

The groups said "the commission should suspend all decisions regarding the issuance of construction permits, new reactor licenses, combined construction permit and operating licenses, early site permits, license renewals, or standardized design certification" pending completion of reviews now being conducted by the NRC staff of lessons learned from the ongoing accident at Tokyo Electric Power Co.'s Fukushima 1 plant.

In a news conference, the petitioners said the agency's reviews should be supplemented by an investigation by a presidential commission, similar to the Kemeny Commission, which was created by President Jimmy Carter to investigate the 1979 accident at Three Mile Island-2.

Diane Curran, an attorney representing the petitioners, said the NRC is legally obligated under the National Environmental Policy Act to complete its review of the Fukushima accident "before it allows another reactor to operate."

The petition said that NEPA and the Atomic Energy Act "forbid the NRC from issuing licenses for which it lacks reasonable assurance or safe operation or for which it failed to consider all information significantly bearing on the environmental impacts of reactor operation."

Arjun Makhijani, president of the Institute for Energy and Environmental Research, said the events at Fukushima are "rewriting the book on nuclear reactor accidents," and "continuing business as usual in licensing and reactor certification in the face of the unprecedented, hugely complicated, and ongoing Fukushima accident would be rash."

The NRC is actively reviewing 13 applications to build 22 new nuclear units and considering some new designs for certification. The agency announced March 21 that it would conduct a 90-day review of lessons learned from the Fukushima accident, followed by a six-month review that would begin when more solid information becomes available.

NRC Chairman Gregory Jaczko said last month that some of these applications are "in the last phase" of their reviews and the NRC could be ready to decide on them by "later this summer or early fall." Jaczko said he would like to see NRC's Fukushima reviews "very far along if not resolved" by that time.

"If information tells us we need to make changes to our licensing process, we will do that," Jaczko said.

After Fukushima, Groups Ask NRC To Suspend Licensing Plants (INTLBIZ)

International Business Times, April 15, 2011

Several advocacy groups have petitioned the Nuclear Regulatory Commission to suspend reactor licensing until a full review of the Fukushima disaster in Japan is complete.

Public Citizen, Southern Alliance for Clean Energy and San Luis Obispo Mothers for Peace are among the organizations urging the NRC to delay licensing while the agency and a presidential commission conduct a full study of the Fukushima disaster's implications.

The Fukushima Daiichi nuclear power station, operated by Tokyo Electric Power Co., was hit by a tsunami in the wake of the Tohoku Earthquake

on March 11. The tsunami knocked out the generators that ran the cooling systems. That resulted in a partial meltdown in at least one of the six reactors on the site, as well as hydrogen explosions that destroyed two reactor buildings. Spent fuel in a reactor that was already shut down for maintenance was damaged when the water that cools them partially boiled away.

At a press conference, the groups said they were concerned that the NRC was bowing to pressure from the nuclear industry and moving forward with new plant licenses. The major concern, they said, was that operators may not have studied what happens when grid power to cooling systems is lost.

Another issue is whether many plants that are already under construction may require expensive retrofits, the cost of which could ultimately fall on ratepayers.

Sara Barczak, high risk energy director at the Southern Alliance for Clean Energy, said the problem is that the nuclear industry has downplayed the seriousness of the Fukushima crisis and has pushed for building reactors whose safety is questionable.

Barczak pointed to the Bellefonte Nuclear Generating Station in Alabama as an example. The reactor is a 1960s-era design, as construction was originally started in the late 1970s before being suspended in 1988. She said only two other reactors of this type have been built and neither is still operating.

Dr. Arjun Makhijani, president, Institute for Energy and Environmental Research, said the biggest issue is that the Fukushima crisis is the first time a nuclear accident has involved spent fuel rods, and it is important to study what an accident that involves a loss of coolant would mean in American reactors.

Makhijani said the petition isn't a bid to stop constructing nuclear plants entirely or shut them all down, though some of the groups backing it might have that goal. "I know we have 104 operating reactors, and we can't shut them down overnight," he said. "We have a serious interest in keeping them safe while they are operating."

He added that opposition to nuclear power by environmentalists wasn't necessarily what stopped construction before. "It was Wall Street," he said, noting that many companies were not seeing a sufficient return on investment.

NRC Asked To Suspend Licensing Decisions (CAPECOD)

By Patrick Cassidy

Cape Code Times, April 15, 2011

A group of nuclear safety activists and other organizations called Thursday for a suspension of all licensing activities for reactors in the United States until a "Three Mile Island style" review of the Japanese nuclear crisis is complete.

The 45 groups and individuals, including a Duxury-based organization focused on safety issues related to the Pilgrim Nuclear Power Station in Plymouth, filed a 35-page petition with the Nuclear Regulatory Commission demanding that the agency suspend all pending proceedings on nuclear licensing decisions until the review is complete.

The Pilgrim plant's operating license expires in 2012, and Entergy's request to extend the license for another 20 years is pending.

Mary Lampert, founder of Pilgrim Watch, said outstanding concerns about spent fuel rods, buried electric cables and emergency planning zones must be addressed at Pilgrim before the plant's license is extended.

The NRC has embarked on a "two-pronged review" of US nuclear power plants in response to the Japanese reactor events, the agency's spokesman Neil Sheehan wrote in an e-mail to the Times.

"The review will have both near-term and long-term components," Sheehan wrote. "In the meantime, our assessment is that US reactors can continue to operate safely. We have no current plans to halt licensing reviews, including our evaluation of relicensing applications."

Japan Crisis Renews Interest In US Anti-nuke Movement (KCS)

By Julie Wernau

Kansas City Star, April 15, 2011

When the Fukushima Dai-ichi nuclear power plant in Japan was knocked out with one mighty wave, the all-but-forgotten anti-nuke movement suddenly powered up in the US

Paul Gunter, director at Maryland-based Beyond Nuclear, barely found time to sleep. Web traffic spiked, and Gunter's mailing list exploded with new members.

David Kraft, who for 30 years has quietly operated a Chicago-based nonprofit committed to ending nuclear power, scored his organization's first face-to-face meeting with the governor of Illinois. The state boasts the largest number of nuclear plants in the country.

And in Pennsylvania, Eric Epstein, chairman of Three Mile Island Alert, was deluged with media requests. He trekked to the infamous plant as many as 11 times a day for TV interviews about whether what happened in Japan could happen here.

The renewed interest in nuclear power comes at a time when it has become more accepted, somewhat aligned with the green movement, and opponents had largely dwindled to a small band of scientists and aging hippies.

"From my vantage point, many of our meetings look like AARP reunions," Epstein said. Prior to the accident in Japan, he said, "this younger generation was more interested in a rainforest in Brazil than they were a nuclear power plant in their backyard."

That may have changed as a result of Japan.

"You're dealing with a crisis that's going to have an ongoing impact," said Peter Kuznick, director of American University's Nuclear Studies Institute. "The worst thing from the standpoint of the nuclear industry nationally is that this is going to remain in the eyes of the public for a long time."

In Chicago last week, gray-haired protestors donning anti-nuke buttons from the Cold War era and dreadlocked 20-somethings in hazmat suits joined forces to stage the city's first anti-nuke demonstration in 10 years, rallying outside the World Nuclear Fuel Cycle Conference at the Swissotel Chicago.

The rally was a first for 23-year-old Carlyn Crispell, a student at the School of the Art Institute of Chicago, who admitted that protesting nuclear power hadn't been her top priority.

Her Facebook profile picture features a soot-spewing coal plant overlaid with the words, "Coal power's toxic fallout is poisoning our community." But last week Crispell sparred with Facebook friends who defended nuclear power as a clean energy source.

"I think most environmentalists are anti-nuclear," she said. "Maybe it's just the crowd I run with?"

Over the years the nuclear power industry has worked hard to align itself with the green movement, a cause near and dear to young activists.

"Environmentalists are torn about this," said Regina Axelrod, professor and chairwoman of the political science department at Adelphi University in New York and an expert on nuclear power and energy policy. "They think that climate change is the most profoundly dangerous issue we have to deal with in stabilizing planet Earth, which is under attack."

It's the reason people like Kraft have invested so much time trying to win over students to his cause.

"We're getting older," Kraft, 59, said. "We definitely need to bring in some young folks."

He said he fanned interest in the Chicago protest rally by attending a clean-energy discussion at the University of Illinois at Chicago. Kraft parked himself at a table near the back of the room and stacked it with three piles of anti-nuke literature, including brochures and maps of Illinois' 11 operating reactors. He kept the flier about the anti-nuclear rally face down until the discussion ended and students began filing out.

Over the three decades since Kraft took up the anti-nuclear banner, he has become more polished, less strident, more politically astute.

Kraft's group supports a "methodical replacement" of nuclear power. "Even if you could shut down every nuclear reactor in the United States today, you wouldn't want to. It's not only insane, it would probably black out most of North America. You can't do it."

His political savvy was reflected in the planning that went into last week's 45-minute meeting with Gov. Pat Quinn. Kraft had decided arguments couldn't be too technical and activists present couldn't be too combative. They needed to control half the agenda; the governor the other half. It would be wise to bring another activist group but not one that would dilute the message.

While Kraft's organization boasts a core of about 30 people, he brought just two: the state director of a public advocacy group and another with political background.

"I needed people who have the background and sensitivity to deal with a politician of this stature," he said.

Kraft, who went to the meeting dressed in a suit and hiking boots, offered the governor practical solutions to his group's concerns, ones that he felt also would fly politically in Illinois. For every bullet point, Kraft handed a folder of materials to Quinn's aides, with each page highlighting key information.

Pleased with how the meeting went, Kraft said, "I think they understand now that these are go-to people that they can turn to."

His upbeat attitude contrasts with activists like Ralph Nader. Last month, Nader renewed a nearly 2-year-old request to US Secretary of Energy Steven Chu to meet with several anti-nuke groups.

Chu has yet to respond.

"These guys are digging in their heels," Nader said in an interview. "They're playing Russian roulette with a technology that is uneconomical, unsafe and unnecessary, and cannot exist without government subsidies."

Kraft was 27when he watched "The China Syndrome," a thriller that played in movie theaters just two weeks before the Three Mile Island partial core meltdown. Outside the theater, he encountered anti-nuclear activists passing out leaflets. The more Kraft learned about nuclear power, the more he became an opponent.

In 1981, Kraft and six others formed Nuclear Energy Information Service, with a mission to end nuclear power. Two decades passed before the organization grew large enough to be able to pay him a salary. Today he remains the only paid employee at NEIS headquarters, a cramped second-floor office in Logan Square, filled with neat stacks of anti-nuke literature, post-it note reminders and homemade bumper stickers.

Anti-nuke activists say sticking to a single issue for decades tends to focus on technical and complex issues, and at times is downright boring.

"It's like being a prison guard," said Epstein, of Three Mile Island Alert, who tends to radiation monitors the group set up more than 15 years ago at the site because they didn't trust the government.

Even after Three Mile Island and reports of cancer deaths in Ukraine from the nuclear meltdown in that country, health and safety concerns have proven a difficult sell.

"It's hard to do a ballistics analysis on a neutron particle that gives you cancer," said Gunter, of Beyond Nuclear. "It's not like you find a body in your yard with a bullet hole."

Raising funds also is difficult for single-issue organizations, Kraft said. Grant-making organizations like to see a broader focus and more collaboration. Most anti-nuclear organizers say they have kept themselves afloat by having other full-time jobs. Kraft's organization reported total revenue of about $50,000 in 2008.

"We fund ourselves," Kraft said. "We get no government grants, no corporate grants."

It's the smaller victories, activists said, that keep them going. For example, Kraft's group helped maintain a moratorium on new nuclear reactors in Illinois that has been in effect for 24 years.

And Epstein's group has had visitors from all over the world looking to copy its system of radiation monitors around Three Mile Island.

Jeff Garrett, chief executive of Skokie, Ill.-based CTLGroup, which works with the nuclear industry, credits the vigilance of anti-nuclear groups for helping make the nuclear industry one of the "most regulated" and, therefore, safe.

"Watchdog organizations demand that," he said.

Peaceful Anti-Nuclear Energy Group On Route From Indian Point To Vermont (PCP)

By Plamena Pesheva, Liz Giegerich

Peekskill-Cortlandt Patch, April 15, 2011

In an effort to show solidarity to those who suffered from the tragedy in Japan and to support a nuclear-free future world, a peaceful anti-nuclear power group started its journey at Indian Point and walked on Route 202 in Peekskill and Yorktown on Monday as part of its Peace Pilgrimage for a Nuclear Free World.

The group will continue walking northeast over the next two weeks until they reach their final destination, Vermont Yankee Nuclear Power Plant in Vermont. They will walk 206 miles, averaging about 15 to 18 miles a day and starting around 8:30 a.m. every morning.

Anti-nuke Protesters Walk From Indian Point To Vermont Yankee (VTD)

By Deb Katz

VTDigger, April 15, 2011

Nuclear-Free Walkers from Indian Point to Vermont Yankee

On April 10, two dozen people began a 206-mile walk from Indian Point Nuclear Power Station in the Hudson Valley of New York to Vermont Yankee in Vernon, Vermont. Japanese Buddhist nun Jun Yasuda is leading the walk as a meditation on peace and a nuclear free world. They will arrive at Vermont Yankee April 24. Sister Jun Yasud said, "The current crisis in Japan is a call to renew our efforts for a nuclear free world. A walk will pray for those affected in Japan and envision a world without nuclear energy or bombs."

The Safe and Green Campaign and Citizens Action Network are recruiting local walkers and sponsoring events in the Brattleboro area. Safe and Green organized the successful walk from Brattleboro to Montpelier in January of 2010, just prior to the Vermont Senate's vote to close Vermont Yankee in 2012.

On Sunday April 24, the public is welcome to join the walkers for their last 9 miles to Vermont Yankee. At 10:15 am they will leave West Brattleboro (55 Marlboro Road), on Route 9 two miles west of I-91 Exit At noon, walkers can join the last six-mile leg of the walk at the Marlboro Graduate Center in downtown Brattleboro. After a prayer vigil at the Vermont Yankee gates, car pools will return to Brattleboro and West Brattleboro. At 5:00 pm, there will be a simple dinner at the West Village Meeting House (All Souls Unitarian Church) in West Brattleboro. All are welcome; a $5 donation is requested.

Those interested in walking should register by e-mail safeandgreencampaign@gmail.com.

The walk is initiated by the Nipponzan Myohoji Buddhist order, based at the Grafton Peace Pagoda in New York and in Japan. They are 'engaged' Buddhists whose founder was inspired by the walks of Gandhi and Martin Luther King. These actions are in response to the disaster at Fukushima, the 25th anniversary of the Chernobyl disaster, and the similarities of the nuclear reactors at Fukushima, Indian Point and Vermont Yankee. Entergy owns both US plants, and both are seeking to extend their license to operate for another twenty years. Vermont Yankee and the Fukushima reactors share the same GE design, manufacture and age. "We walk together in love and solidarity to pray for those affected by the tragedy in Japan and as a meditation upon a future world that is nuclear free," says the order, "So that all living beings upon the earth may live in peace and safety."

On Tuesday, April 26, a memorial vigil will be held to honor the 25th anniversary of the Chernobyl nuclear reactor disaster. The memorial will be from 9:00 AM – 1:00 PM at Wells Fountain in downtown Brattleboro. Japanese Buddhists from the Grafton, NY, Peace Pagoda will lead the vigil with drumming, chanting and prayers. The vigil is sponsored by the Nuclear Free Future Coalition of Western Ma., The Citizens Awareness Network and the Traprock Center for Peace and Justice.

The Chernobyl, Russia nuclear power station exploded at 1:32 am on April 26, 1986, sending plumes of radioactive fallout into the atmosphere. Radiation was found in every country in the northern hemisphere, and some parts of Europe are still impacted. Today, there is an uninhabitable wasteland for 25 kilometers around Chernobyl, including the abandoned city of Pripyat.

– 30 —

The Japanese Buddhists live at the Grafton Peace Pagoda, a Buddhist center founded by Nipponzan Myohoji . Sister Jun Yasuda led a 206-mile walk from Indian Point to Vermont Yankee, as a meditation on peace and a nuclear free world. Their walk, which will arrive at Vermont Yankee on Sunday, April 24, was inspired by the Chernobyl anniversary, the nuclear disaster in Fukushima, Japan, and the similarities of the Fukushima reactors to Indian Point and Vermont Yankee.

Lawmakers Seek Studies For Calif. Nuclear Plants (AP)

By Adam Weintraub

Associated Press, April 15, 2011

California lawmakers kept up the pressure Thursday for a harder look at earthquake safety at the two nuclear power plants in the state, questioning why federal regulators won't halt relicensing work until new seismic maps are completed.

"The seismic safety of our plants cannot be an afterthought," said Sen. Alex Padilla, D-Los Angeles, chairman of the Senate energy committee.

It's the second time a state Senate committee has addressed nuclear safety since a massive earthquake and tsunami on March 11 damaged several nuclear reactors in Japan.

Given that California's nuclear plants - Diablo Canyon near San Luis Obispo and San Onofre north of San Diego - face the highest seismic risk of any in the United States, continued scrutiny is needed to make the plants as safe as possible, Padilla said.

Pacific Gas and Electric Co., which operates Diablo Canyon, has applied to renew licenses that expire in 2024 and 2025.

This month, after pressure from state lawmakers and California's US senators, PG&E asked the US Nuclear Regulatory Commission to delay issuing the licenses until it completes three-dimensional seismic maps of a newly discovered offshore fault less than a half-mile from Diablo Canyon.

The NRC has not responded but was moving forward with other parts of the license review, according to Troy Pruett, deputy director for reactor projects for an NRC division in Dallas.

The NRC staff has spent thousands of hours preparing an environmental and safety review and wants to get that information to the public for review even if the seismic mapping work continues, Pruett said.

State Sen. Sam Blakeslee, R-San Luis Obispo, said the newly discovered Shoreline fault presents a threat to Diablo Canyon, and the mapping work is crucial to understanding that threat.

"How can you possibly make an assertion about the safety ... if you have not yet reviewed the data?" he asked.

"We're reviewing the data we have in hand," Pruett replied.

"The data you have in hand is not adequate," Blakeslee replied.

Pruett said the licensing work and seismic safety studies are related but independent.

"If NRC became aware of a seismic or safety concern that threatened safe operation, we would take action immediately," he said.

Blakeslee, a geophysicist who has been a frequent critic of Diablo Canyon and PG&E, pointed out the NRC signed off on the original license based on seismic studies by the utility indicating there were no faults nearby, but since then two faults have been discovered.

"I'm very concerned that the NRC is looking at this issue with rose-colored glasses," he said.

Pruett said available evidence, including reports from NRC inspectors working on site, indicates both California plants are being operated safely.

PG&E and Southern California Edison, which operates San Onofre, have said their reactors are different from those damaged in Japan.

The California facilities have been designed to withstand earthquakes and tsunamis and have redundant safety systems if a disaster or malfunction jeopardizes the reactors, the utilities contend.

Critics say those designs date back decades and engineering assumptions can be wrong.

A realistic assessment of risk has to be part of the discussion on nuclear power, said Rochelle Becker, executive director of the Alliance for Nuclear Responsibility.

"Ratepayers shouldn't be paying a penny for license renewal until seismic studies are completed," she said.

Lawmakers Seek Studies For Calif. Nuclear Plants (AP)

By Adam Weintraub

Associated Press, April 15, 2011

California lawmakers are pushing for tougher scrutiny of earthquake risk at the state's two nuclear plants, questioning whether updated safety measures and studies are needed after the earthquake and tsunami that devastated nuclear plants in Japan.

During a legislative hearing Thursday, lawmakers questioned a Nuclear Regulatory Commission official about why the agency has not suspended work on relicensing the Diablo Canyon plant near San Luis Obispo until new studies are completed. They want more scrutiny of an offshore fault discovered in 2008.

Sen. Sam Blakeslee, whose district includes Diablo Canyon, says the commission sees earthquake risk through "rose-colored glasses."

A commission official says the agency would act immediately on fresh evidence about earthquake risk even if the license is renewed.

State Senator Tells Feds To Pause License Review For Diablo Canyon Nuclear Plant (VENCSTR)

By Timm Herdt

Ventura County (CA) Star, April 15, 2011

SACRAMENTO — A top regional official of the US Nuclear Regulatory Commission told a legislative committee Thursday that the agency intends to proceed with its safety and environmental analysis for extending the license of the Diablo Canyon nuclear power plant, despite a request from the plant's operator that the agency take no final action until after more thorough seismic studies are completed.

The federal licensing agency hopes to proceed as scheduled with its review, said Troy Pruett, deputy regional director of the Nuclear Regulatory Commission's division of reactor projects.

"Staff has invested many thousands of hours in environmental and safety review," Pruett told members of the Senate Energy, Utilities and Communications Committee. "Our desire now is to publish that."

The senator, whose district includes the site of the nuclear plant, assailed the federal agency for what he called its decision to look at Diablo Canyon seismic issues "through rose-colored glasses" despite the damage to nuclear reactors in Japan resulting from last month's earthquake and tsunami.

"You're telling me you're going to proceed with business as usual? That's unacceptable," Sen. Sam Blakeslee, R-San Luis Obispo, told Pruett.

Blakeslee testified earlier this week at a hearing in Congress on the issue of seismic safety and nuclear reactors — an issue of specific concern in California because it is home to the only two of the nation's 104 nuclear plants located in earthquake-prone areas.

In Washington, D.C., Blakeslee told Pruett, "I heard the same doublespeak from your boss."

Blakeslee urged the federal agency to hold off on its safety review until it receives updated data from three-dimensional seismic mapping studies that PG&E is now undertaking.

The Diablo plant is licensed through 2024. In November 2009, it applied to the federal agency for a 20-year extension.

Blakeslee last month asked the utility to suspend that process. PG&E stopped short of asking for a suspension of review, but did send a letter this week asking that the Nuclear Regulatory Commission not complete its process until the updated seismic data is obtained.

The plant, near San Luis Obispo, sits near the offshore Hosgri Fault, capable of producing a 7.5 magnitude earthquake. In addition, a fault discovered in 2009, called the Shoreline Fault, sits less than a mile from the plant.

More studies are needed to determine the length of the fault and its possible interaction with the Hosgri Fault, Blakeslee said.

Pruett acknowledged the NRC considers the Shoreline Fault the biggest seismic threat at Diablo Canyon. Because of its proximity, he said, an earthquake along that fault would produce greater ground-shaking at the site.

A PG&E official testifying at the hearing said he believes the NRC's intent to continue with its safety and environmental reviews is proper.

"It seems like it would be more beneficial to the public to get that information out for review," said Loren Sharp, director of technical services at the Diablo Canyon plant.

The draft safety and environmental reviews are now set for release in June.

Pruett said the commission has not yet formally responded to PG&E's letter, but that its staff hopes to abide by the existing timetable.

$64 Million Quake Study For Nuclear Plant (OCR)

By Pat Brennan

Orange County Register, April 15, 2011

A new, $64 million study of earthquake fault patterns around the San Onofre nuclear plant will be proposed Friday by Southern California Edison, its scope broadened and its cost estimate more than doubled because of the nuclear disaster in Japan.

Edison will propose the study to the California Energy Commission; if approved, it would be paid for through customer rates, although Edison says that would add up to less than one percent of present overall rates.

The study will use state-of-the-art technology, characterizing in three dimensional detail the sea floor near the coastal plant and the geological picture beneath the land surface.

Edison is still evaluating what type of technology to use, but sonar would likely be used to map the ocean floor near the nuclear plant, while seismic vibration measurements as well as lidar, which uses light beamed from planes, would be used on land.

"One of the distinctions of the new study will be the use of new technology that can look deeper beneath the ocean and land surface to see what geologic conditions may exist," said Edison spokesman Gil Alexander.

A company that could be chosen by Edison to conduct the study, Fugro Earthdata, Inc., has been mapping the California coastline since 2006 using a combination of sonar for ocean floor measurements and lidar.

The $25 million state effort involving state and federal agencies is still under way, said Fugro president Ed Saade.

"California was way ahead of the curve, way ahead of the rest of the nation and the world, trying to get a baseline for offshore sediments and habitats," he said. "But also for setting a baseline for sea-level rise monitoring, even tsunami inundation modeling."

The intensive mapping effort around San Onofre will augment existing data to create a sharper picture of earthquake and tsunami hazards facing the nuclear plant.

But the study, estimated at $31 million in November 2010, grew substantially in scope after Edison officials decided to expand it in light of the Japanese nuclear disaster.

Edison officials outlined why they believe the San Onofre plant is well protected against earthquakes and tsunamis in a hearing on Thursday before the state's Energy, Utilities and Communications Committee on nuclear power plant safety.

Edison officials say the plant is built to withstand shaking from a 7.0 quake, the maximum thought possible when the plant was being designed. It also has a 30-foot seawall, thought higher than necessary to protect against tsunamis.

But California's US senators, Barbara Boxer and Dianne Feinstein, have questioned whether the plant's protections are sufficient, citing a 2008 report from the Energy Commission that said San Onofre could experience larger quakes than it was designed for.

Officials at California's other nuclear plant, Diablo Canyon near San Luis Obispo, are embroiled in disagreements over their own pending seismic study and its effect on relicensing.

The company earlier this week asked the Nuclear Regulatory Commission to delay issuing any new licenses until seismic tests can be completed, no later than 2015.

But the San Luis Obispo County Board of Supervisors wants the plant's operator, Pacific Gas & Electric, to go further: withdraw its relicensing application entirely.

The board voted Tuesday to send the company its request by letter.

The plant's licenses for its two reactors expire in 2024 and 2025.

The main concern is over the possiblity of simultaneous shaking by two faults near the plant.

The licenses for San Onofre's two reactors expire in 2022. Edison officials have not yet decided whether to pursue relicensing for San Onofre, but said in a statement Thursday that they believe relicensing efforts and the seismic study could be done at the same time.

Diablo Canyon Licensing Renewal Update (KVECAM)

By King Harris

KVEC-AM San Luis Obispo, CA, April 15, 2011

San Luis Obispo, CA -- Few are completely satisfied with PG&E's recent request to delay a final decision on renewing Diablo Canyon Nuclear Power Plant's operating licenses until in-depth seismic studies are complete. The Nuclear Regulatory Commission has not decided how it will proceed in light of the PG&E request.

Two days later, PG&E sent a second letter to the NRC making it clear that the utility wants the processing of its renewal application to continue, but the issuance of a final decision should be delayed. This prompted supervisors Tuesday to request clarification from the utility about its intentions. Mothers for Peace is holding a peaceful protest over re-licensing of the plant Saturday April 12 at noon in Avila Beach.

A Bad Reaction To Diablo License Debate (SLOT)

By David Sneed

San Luis Obispo (CA) Tribune, April 15, 2011

Few are completely satisfied with PG&E's recent request to delay a final decision on renewing Diablo Canyon nuclear power plant's operating licenses until in-depth seismic studies are complete.

Organizations as diverse as the county Board of Supervisors and the anti-nuclear group San Luis Obispo Mothers for Peace want all license renewal activities stopped until the earthquake studies are done in light of the nuclear disaster in Japan, not just a possible postponement of a final decision.

"There are multiple lessons yet to be learned both from the future seismic studies and from the ongoing crisis at the Fukushima plants," said Jane Swanson, Mothers for Peace spokeswoman.

NRC spokesman Victor Dricks said the agency has not decided how it will proceed in light of the PG&E request.

For its part, PG&E says the delay request to the NRC is not just window dressing. It is intended to give the NRC as much information as possible about Diablo Canyon's earthquake danger before its licenses are renewed, said Kory Raftery, PG&E spokesman.

"If the seismic data leads to the conclusion that changes are required at Diablo Canyon, we will act on that issue immediately with the NRC rather than waiting until our current licenses expire," he said.

County supervisors and others remain confused and skeptical. They cite a seemingly contradictory chain of events that began with a formal request to the NRC on Sunday to "delay the final processing" of its license renewal application pending completion of the seismic studies.

This was followed two days later with a second letter to the NRC making it clear that the utility wants the processing of its renewal application to continue — only issuance of a final decision should be delayed. This prompted supervisors Tuesday to request clarification from the utility about its intentions.

PG&E executives have promised to give regular public updates at board meetings as additional information becomes available.

One thing is clear: Diablo Canyon's renewal process is shaping up to be one of the lengthier ones.

The seismic report to the NRC that would allow final relicensing could be sent as late as the end of 2015, six years after the utility applied for renewal. Renewal typically takes from two to six years to complete.

If there is no local opposition to license renewal, the process can take two to 2½ years, Dricks said. However, Mothers for Peace has filed formal objections with the NRC.

These require local hearings before an NRC panel called an Atomic Safety and Licensing Board, which can add years to the process. Dates for those hearings have not yet been set, Dricks said.

PG&E Cries Uncle (SLONT)

By Matt Fountain

San Luis Obispo (CA) New Times, April 15, 2011

Nearly a year and a half after Pacific Gas & Electric (PG&E) announced it was seeking to relicense the Diablo Canyon Nuclear Power Plant, the energy company has succumbed to pressure to delay its relicensing efforts.

Though the utility hasn't halted the federal process, it sent a letter to the Nuclear Regulatory Commission on April 10 requesting the agency not finalize its application until in-depth 3D seismic studies are completed.

Currently in their initial stages, those studies were previously expected to be finished by 2015. However, in its letter to the NRC, PG&E said it plans to "accelerate" completion of the studies—but exactly what an acceleration means isn't yet clear.

"It's that we're going to be pursuing [the studies] more aggressively," said PG&E Spokesman Paul Flake. "As of right now, I don't have any information on how soon we can finish. The thing we're asking is that the NRC delay their final decision until we are done."

Flake said the decision was made as a direct response to local concerns over seismic safety following the ongoing Japanese nuclear disaster.

"Basically, we're trying to be responsive to what we're hearing, and what we've heard is an extreme amount of interest after what happened in Japan," Flake said. "When the studies are done, we will have that added assurance of the safety of the plant."

However, many critics, including David Weisman of the nuclear watchdog group the Alliance for Nuclear Responsibility, say the announcement was little more than a public relations move that creates more questions than answers, including the accuracy of "accelerated" seismic studies, and how those studies will be reviewed.

"They're handing out this brightly colored lollypop, but we're not suckers," Weisman said.

"We are currently reviewing [PG&E's request] to see what impact—if any—it will have on the review schedule," NRC Spokesman Victor Dricks told New Times.

A spokesperson for Republican State Sen. Sam Blakeslee—a geophysicist by training, who had repeatedly called for PG&E to halt the relicensing process until the studies are completed—told New Times the senator was notified of the announcement as he traveled to Washington, D.C., to testify before the US Senate Committee on Environment and Public Works on the nuclear emergency in Japan and its implications for the United States.

"I commend PG&E for taking the responsible action of delaying relicensing until critical seismic questions are answered. It's our duty to learn and apply the lessons of Japan to ensure we protect our communities," Blakeslee said in a statement within an hour of PG&E's announcement.

"We respect that this is a difficult decision that demonstrates their willingness to prioritize the safety of Californians," he said.

PG&E's move didn't go far enough for the SLO County Board of Supervisors, however, who on April 12 voted to send a letter to PG&E requesting the utility completely halt its relicensing bid until completion of the studies, noting the utility is requesting customer money to pay for them.

Viewpoint: Before Diablo Relicensing, Concerns Must Be Answered (SLOT)

By State Sen. Sam Blakeslee And US Congresswoman Lois Capps

San Luis Obispo (CA) Tribune, April 15, 2011

Over the last couple of weeks, we have independently called for a suspension of the relicensing effort under way at Diablo Canyon nuclear power plant until a myriad of questions regarding the seismic setting at the facility are answered.

This week, we both testified before the US Senate Committee on Environment and Public Works, which is chaired by Sen. Barbara Boxer, reiterating our deep concerns about the Nuclear Regulatory Commission's decision to process the relicensing application for Diablo Canyon, in spite of the newly discovered offshore fault system that lies within hundreds of meters of the plant.

Though PG&E acceded to our request and asked the Nuclear Regulatory Commission to delay its license renewal application while it completes recommended high energy, 3-D seismic studies of the new fault, the NRC has yet to agree to a delay nor has it agreed to suspend the application process.

The ball is now clearly in the NRC's court, and we are renewing our call to the NRC to halt the relicensing process until the proper seismic studies are performed, independently reviewed, and furnished to state and federal regulators so that they may make informed, responsible decisions about relicensing.

We want answers to the major questions surrounding the seismic setting and emergency preparedness at Diablo Canyon. This includes issues regarding the ability of the plant and the area's infrastructure to withstand an earthquake and nuclear accident at the same time and how long the plant would be self-sustaining in the event of such damage. This is particularly pertinent given that just last month the NRC confirmed that Diablo Canyon is one of two nuclear power plants in the highest-risk seismic areas in the country.

We are, to put it lightly, concerned that the NRC has not taken seriously a 2008 California Energy Commission report clearly delineating that more information is needed to determine the true seismic risk surrounding Diablo Canyon. Simply put, a new fault line was discovered a mere half mile from the plant and given the complexity of the fault system, could potentially intersect the dangerous and powerful Hosgri fault that lies three miles offshore, we need to know what kinds of risk this fault system now poses to the facility, prior to relicensing the plant through 2045.

California law, authored by Sen. Blakeslee, requires the California Energy Commission to perform seismic assessments of our state's nuclear plants. As a result of that legislation, the Energy Commission recommended — and our state Public Utilities Commission directed — that independent, peer-reviewed, advanced seismic studies are performed prior to applying for relicensing. The California Coastal Commission has also filed comments in the license renewal proceedings reiterating the same concerns.

To address this, Congresswoman Capps has called on the NRC to establish an independent panel, including representatives from the affected federal and state agencies, to review the findings on these studies prior to moving forward with the relicensing process.

It's important to note that there is no hurry to relicense Diablo Canyon, as the current operating licenses run to 2024 and 2025. Surely, that is more than enough time to adequately address seismic concerns in a thoughtful and transparent manner, so that the NRC and the California Public Utilities Commission has the full spectrum of information on which to base critical decisions on the plant's future operations. Furthermore, this pause in the relicensing would not prejudice NRC from granting PG&E new licenses after considering all the seismic studies should the utility still be able to demonstrate its ability to run the plant safely and efficiently and to be able to prepare for and deal with potential disasters.

To be clear, we are not calling for Diablo Canyon to be shut down or for the plant to be denied a new operating license. What we have done is ask that the relicensing process be halted until comprehensive, independent analyses of the seismic setting are done and that they be considered as part of the relicensing process.

While the tragic events in Japan have brought seismic concerns at Diablo Canyon to the forefront, these concerns are not new for us or the communities we represent on the Central Coast. And while we know Diablo Canyon provides more than 3 million people in California with affordable electricity, safety must always be everyone's No. 1 concern.

Now that PG&E has indicated that a delay in relicensing is solely the NRC's call, we urge the agency to make the right one:

Suspend the relicensing process and allow time for independent, advanced and peer-reviewed studies to be completed and analyzed before moving forward.

Sam Blakeslee, R-San Luis Obispo, represents San Luis Obispo County in the state Senate.

Lois Capps, D-Santa Barbara, represents portions of San Luis Obispo County in Congress.

Nuclear Regulators To Discuss Plant Safety In NC (AP)

Associated Press, April 15, 2011

HOLLY SPRINGS, N.C. – Nuclear regulators are visiting North Carolina to answer questions about the safety performance at the Shearon Harris power plant.

Staff from the US Nuclear Regulatory Commission will also discuss Thursday night the agency's role in ensuring safe plant operation. The NRC found that the Progress Energy plant 10 miles southwest of Raleigh met all the agency's safety objectives in 2010 and doesn't require any additional oversight.

The meeting is open to the public. Representatives from Progress Energy will also participate in the meeting.

Panel Tries To Ease Concerns Of Residents Near Nuke Plant (WTLD)

WTLD-TV Raleigh, NC, April 15, 2011

NEW HILL (WTVD) -- People living near the Shearon Harris Nuclear Power Plant want to know if the facility is safe and voice their concerns.

Residents have received e-mails and have access to information detailing the result of every incident at the plant in the past year.

Thursday night the public can take their concerns to the Nuclear Regulatory Commission and Progress Energy officials at a public meeting. The NRC and Progress energy are meeting to review evaluations of Shearon Harris.

According to the NRC, the plant had very low safety issues, which may explain why more people are willing to move near the plant.

According to US Census data analyzed by Longcreative, the number of people living within the 10-mile emergency planning zones around nuclear power plants rose by 17 percent in the past decade. Among the 100 most populous cities on the map, 26 of them have a nuclear plant within 50 miles.

Raleigh and Durham are among those cities with more people trading in their nuclear fear for a place to call home.

The map shows more than 2.5 million people live within in 50 miles of Shearon Harris and more than 9,000 are within five miles.

The meeting begins at 7 p.m. at Shearon Harris.

NRC Plans Tuesday Vogtle Meeting (AUGC)

Augusta Chronicle, April 14, 2011

The US Nuclear Regulatory Commission will hold a public meeting Tuesday, April 19, to discuss Plant Vogtle's annual safety evaluation and assessment.

The meeting, which begins with an open house at 6 p.m. and includes a presentation at 6:30 p.m., covers only the site's two existing units – and not the additional reactors planned in the future. There will be a question and answer session after the presentation. The meeting will be held in the Burke County Public Library, 130 Ga. Highway 24 S. in Waynesboro, Ga.

The Vogtle plant, which has two pressurized-water reactors, is located near Waynesboro, about 26 miles southeast of Augusta. It is operated by Southern Nuclear Operating Co.

Overall, the NRC staff concluded that the Vogtle plant operated safely in 2010, and there were no inspection findings or performance indicators that would cause the NRC to increase its level of oversight and inspection. Based on the plant's performance, the NRC staff plans to continue the detailed routine or baseline inspections all nuclear power plants receive.

Regulators Weigh Timeline On Nuke Plant Case (TIFTON)

Associated Press, April 14, 2011

ATLANTA — Utility regulators are expected to set a schedule for deciding whether to cut the earnings of Georgia Power if construction costs on a proposed nuclear plant run over budget.

A committee of the Public Service Commission planned to meet Thursday to consider a new schedule for the case. The issue has dragged on for more than two years without resolution, and the commission recently decided it needed more information.

The PSC staff has proposed taking a carrot-and-stick approach with the subsidiary of the Atlanta-based Southern Co.

If the company's share of building two new reactors at Plant Vogtle costs less than $5.8 billion, it could earn extra money off its new reactors. If costs exceed $6.4 billion, regulators would trim the company's earnings off the new plant.

'Different Approach' For Safety Of Planned Reactors (GPB)

Georgia Public Broadcasting, April 14, 2011

Southern Company's CEO told a group in Washington that the planned new reactors in east Georgia will have a "completely different approach to nuclear safety". (GPB photo-Noel Brown)

Despite the nuclear disaster in Japan, there should not be any safety concerns for two new nuclear reactors planned at Plant Vogtle near Augusta. That's what Southern Company's top official told a US Chamber of Commerce gathering in Washington Wednesday.

CEO Thomas Fanning says it's wise to review the nation's other nuclear plants, especially in earthquake-prone areas. But no one should worry over the nation's first new reactors in 30 years, slated for east Georgia.

"The site for our new units is not in a seismic sensitive area. And we're going to use the newest technology employing a completely different approach to nuclear safety."

The new Vogtle reactors already have $8 billion in loan guarantees from the government.

Fanning says he's confident federal regulatory officials will license the project by the end of the year.

Southern Co. Chief Tom Fanning Urges Nuclear Push (BIRMNEWS)

By Mary Orndorff

Birmingham (AL) News, April 15, 2011

WASHINGTON – Japan's nuclear catastrophe should not derail the construction of new nuclear power plants in the US, Southern Co. President and CEO Tom Fanning said Wednesday.

"What's happened in Japan recently has made me more convicted than ever that we need to develop this generation of nuclear for America," Fanning said in a major energy policy speech to the US Chamber of Commerce.

Fanning, who has led the Atlanta-based utility giant since December, said his company's current fleet of six nuclear units at three plants – including one in southeastern Alabama – are safe, but that new designs are even safer.

The company is planning to add two more units to a plant in Georgia to generate 2,200 megawatts of electricity by 2017. A key design improvement is that they will rely on gravity to disburse water and shut down a reactor safely in the event of a loss of power, he said.

The Fukushima plant that failed after a massive earthquake and tsunami struck Japan has prompted American regulators to review safety systems, especially those nuclear plants in areas prone to earthquakes and along the coastline.

Fanning, addressing an audience of business advocates at US Chamber headquarters across from the White House, was also critical of the US Environmental Protection Agency for what he says are aggressive regulations that sidestep the role of Congress is setting national energy policy, and will lead to higher electricity prices for customers.

"The existing coal industry is under attack by some in America," Fanning said. "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."

Southern Co.'s subsidiary, Birmingham-based Alabama Power Co., operates six coal-fired power plants in Alabama.

Newly proposed rules to regulate more strictly the mercury and other emissions from coal-fired power plants could increase power bills by 20 percent, he predicted. EPA, when it announced the rule in March, estimated it would cause power bills for homeowners to go up by $3 or $4 per month. Fanning, in speaking to reporters after his speech, declined to address the different predictions. He said the industry needs more than 60 days to respond to the EPA's rule and may need more than three or four years to fully comply with the tighter regulations.

EPA is also looking to limit greenhouse gases, "which could lay another costly burden on our energy sector," Fanning said.

Last week the US House passed a bill that would gut the EPA's ability to regulate greenhouse gases, and all seven members of Alabama's congressional delegation -- six Republicans and one Democrat -- voted for it. A similar amendment failed in the Senate, with Alabama's two GOP senators voting for it.

Fanning also declined to discuss whether some of the company's older coal-fired power plants may be shut down, saying those decisions have significant consequences on social policy, such as the loss of jobs and tax revenue, especially in the rural areas where they are located.

Southern Co. CEO Protests 'War On Coal' And Says Nuclear Projects Are On Track (CWIRE)

By Joel Kirkland

ClimateWire, April 15, 2011

The chief executive of Southern Co., one of the biggest and most politically influential US electric utilities, marched well-trodden ground yesterday to defend coal-fired power against tougher air quality rules and said his company will press ahead with nuclear expansions.

"Coal is under attack, there's no question," asserted Chairman and CEO Thomas Fanning after a speech at the Washington headquarters of the US Chamber of Commerce.

Fanning, who took the helm in December, hit US EPA hard in a speech that had been billed as a road map for energy policy and creating jobs. He pressed the agency to slow down its implementation of court-ordered rules targeting toxic air pollution, and he warned that a three-year time frame to upgrade or shut down the dirtiest plants would be too costly.

"Nationally, those energy costs could rise as much as 20 percent as a result of this new proposed regulation, and reliability could suffer," he said.

Starting down the path of limiting greenhouse gas emissions tied to climate change "could lay another costly burden on our energy sector," he told the business crowd.

"EPA clearly has an important and critical role to play," he added. "But they do not set policy. That is the job of Congress."

Atlanta-based Southern, which produces electricity for some 4.4 million customers across the Southeast, has often led the charge for investor-owned utilities banding together during recent energy and climate policy battles on Capitol Hill. That cohesion among utilities has appeared more fragmented in recent months, as messaging about energy policy and environmental regulations is increasingly tethered to a utility's specific energy portfolio.

Pushing company-based strategies

Utility CEOs have appeared more comfortable giving their own policy speeches in Washington rather than leaning heavily on industry groups like the Edison Electric Institute to carry a common theme to Congress and the media. In yesterday's appearance before the chamber, Fanning joined the likes of Exelon CEO John Rowe, who in March extolled the virtues of natural gas as a cleaner fuel for power generation in a speech before the American Enterprise Institute.

Rowe, whose Chicago-based company operates the largest US fleet of nuclear power plants, gave his talk just days before a massive earthquake and tsunami caused major damage at Japan's nuclear power plants. Fanning wasn't so lucky.

With two nuclear plants planned for Georgia, Fanning and the Nuclear Regulatory Commission (NRC) have been answering questions about safety standards they're using for the new units. Southern, which has already spent $2 billion on the nuclear project, has said safety is improved by using Westinghouse Electric's new AP1000 reactor. The NRC is expected to issue construction and operating licenses by year's end.

Fanning said Southern and the nuclear industry "need to be thoughtful" about the disaster that continues to play out at Japan's Fukushima Daiichi nuclear complex. And he sought to link concerns about safety and the cost of building nuclear power plants to anti-nuclear politics.

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

Fanning sidestepped concerns about backup power capacity and spent fuel disposal issues that dog nuclear power, and he said US nuclear plants have a "terrific track record" in excess of any "reasonable occurrence" of a natural or man-made disaster that could cripple a power plant or trigger a meltdown.

Losing market and clout to natural gas

In terms of cost and regulatory policies, both nuclear power and coal are running up against the emerging heft of cheap natural gas. Gas produces far smaller amounts of toxic and carbon emissions when powering electric turbines and is competing more favorably against coal on price.

In another example of shifting messages in the energy industry, Fanning warned against an overreliance on gas as a substitute for coal and cast far more doubt than Rowe on domestic supply. "Pending federal regulations have virtually declared a war on coal. As a result, much of our industry is rushing to gas-fired generation," Fanning said.

"Whatever you believe about the future price of natural gas, it's reasonable to believe it will remain volatile," he said.

Fanning's position stands in contrast to claims made by natural gas producers and by others in the energy industry that development of massive new onshore gas fields is a bankable "game changer." Domestic natural gas prices that had shot up to nearly $15 per million British thermal units last decade could remain closer to $4 or $5 for decades, they assert, which would compete with Southern's fleet of coal and nuclear power plants.

Fanning spent much of his time talking about coal, however.

"Decisions are being made today that will limit our ability long-term to use coal, and, therefore, negatively impact the economy," Fanning said in the speech.

He asserted there are "enormous social consequences" to shutting down 30- or 40-year-old coal-fired power plants, including loss of jobs he claims could never be replaced in full.

Frank O'Donnell, president of Clean Air Watch, in a brief sent to reporters criticized Southern for battling regulators on implementation of new air quality standards. He took aim at Republican leaders and Southern, which has a long history of big

spending to lobby Congress, for downplaying the public health benefits associated with cutting toxic air emissions from coal-fired power plants.

Burn US coal here or abroad?

O'Donnell cited an EPA projection that enforcing the fleet of standards required under the Clean Air Act would prevent as many as 26,000 premature deaths a year and create new jobs, as utilities and factories replace their dirtiest plants and boilers.

"But that appears to be of little interest to the Republican leaders of the House Energy and Commerce Committee," O'Donnell wrote, taking special aim at Rep. Ed Whitfield (R-Ky.), a powerful subcommittee chairman. Whitfield, he asserted, is a "big defender of coal dating back to his days as a lobbyist for the coal-hauling CSX railroad company."

As Fanning spoke, the left-leaning Center for American Progress blasted out a brief arguing that a big expansion of US coal exports would conflict with environmental and economic goals. "If the United States is serious about combating the perils of climate change through economic and environmental transformation," said policy analysts Tom Kenworthy and Kate Gordon, "should we really be encouraging the export of American coal to Asian markets?"

The center's brief gets into an issue that so far has flown just under the radar in the national energy debate. Gasoline prices and EPA air quality and greenhouse gas regulations are dominating the discussion. As this goes on, the largest US coal producers are trying to push through significant expansions of export terminal capacity along the West Coast so they can send more American coal to Asia, particularly China.

Peabody Energy and Arch Coal, the two largest producers, have been telling their shareholders that bigger coal shipments to China will cushion them against the financial impact of declining coal consumption in the United States.

Fanning jumped into the fray yesterday, suggesting above all that the United States should continue to use cheap domestic coal to meet its energy needs.

"The coal will get sold and the coal will be consumed," Fanning said. But he said US energy policies will ultimately steer US coal reserves toward US plants or to Asia. "It would be a shame to give those advantages to somebody else."

Study: Millstone Adds $1.2B A Year To Economy (NLDAY)

By Patricia Daddona

New London (CT) Day, April 15, 2011

The Millstone Power Station, which employs 1,080 people at its Waterford complex, generates $1.2 billion a year in economic benefits, including $122 million in capital spending and tax revenues of nearly $34 million, according to a study commissioned by owner Dominion.

Dominion has been touting the nuclear complex's economic impact in Connecticut to lawmakers as it continues to fight a plan to tax its production of electricity. The company is opposing a legislative proposal that would tax the electric output of Millstone at 2 cents a kilowatt hour, or as much as $335 million a year.

Dominion has said the tax, if passed, would force the company to shut down one, if not both, reactors. Millstone's two nuclear reactors generate 2,100 megawatts of electricity, which is enough to supply about 500,000 homes.

The economic impact study by Chmura Economics & Analytics of Richmond, Va., was completed in late March. Dominion periodically reviews Millstone's economic impact on the community and decided to seek revisions of outdated figures when the tax proposal was introduced "so that we had current numbers to talk about when discussing the bill," said company spokesman Ken Holt.

"It's absolutely valuable to (Connecticut)," state Rep. Betsy Ritter, D-Waterford, said of the study. "When we look at tax policy, you have to evaluate the economic impacts. These are big numbers, so I think it needs to be part of the discussion."

Chmura found in its study that Millstone operations produce about $1.1 billion in economic benefits to the state each year, which supports 3,315 jobs. The company's capital spending alone at Millstone produces about $122 million annually in economic benefits and supports another 915 jobs, the report stated.

The study looked at both direct impact, such as jobs at the plant, as well as indirect and "induced" impacts, such as products from suppliers and workers spending their earnings as consumers.

In total, the study found that Millstone supports 4,230 jobs a year.

Over the past three years, Dominion has invested an average of $90 million annually at Millstone and is likely to continue to invest similar amounts, Chmura found.

In addition, the nuclear complex generates as much as $33.6 million a year in state and local taxes. Those estimates are conservative, relying only on tax revenues from direct impacts, according to the study consultant.

The analysis "clearly demonstrates that Millstone has a huge impact on Connecticut's economy as a whole - especially on the local area," said Holt. "Not only does the station directly support the community with spending and jobs, but that spending also creates jobs in the community."

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

Millstone Owner Threatens Shutdown If Taxed (video)- The New Haven Register (NHR)

By Luther Turmelle, North Bureau Chief

New Haven Register, April 15, 2011

Dominion Energy officials said Wednesday they would spend "tens of millions of dollars" shutting down the Millstone Nuclear Power Plant the company owns in Waterford if Connecticut lawmakers impose a tax on electricity generators that would cost the utility $320 million a year.

Officials with the Virginia company acknowledged there are other possible alternatives besides closing the plant, including a court challenge of the generation tax if it becomes law.

But they insisted the company is not bluffing with its threat to close the plant and that a shutdown would cost the state $1.2 billion in both direct and indirect economic benefit.

"We believe that, by even discussing, the legislature is doing damage to the state's reputation as a place to do business," Daniel Weekly, Dominion's vice president of government affairs said following a press conference at the Legislative Office Building that included lawmakers from southeastern Connecticut who are opposed to the plan.

David Christian, chief excecutive officer of Dominion Generation, on why the company is considering closing the plant:

A pair of Democratic lawmakers from Waterford, State Rep. Betsy Ritter and State Sen. Andrea Stillman, said the proposed legislation that would tax power generators, SB 1176, would deal Connecticut's economy a major setback it can't afford during tough economic times.

The bill "has the damaging effect of putting our state in one corner and one single corporate entity in the opposite corner, ahead of what promises to be a bruising, knockdown showdown between the two," Stillman said.

Ritter said the proposed legislation ignores "sound environmental, tax and business policies" in favor of "selectively and punitively targeting certain large companies."

The proposed legislation also taxes coal and oil-fired power plants, but at a much lower rate than power generated by nuclear plants, and doesn't tax electricity produced by natural gas-fired units.

Bryan Dorsey, vice president of Canberra Industries, reacts to the threat of the Millstone plant being closed:

That means the bulk of the taxes would be paid by nuclear power plant operators and Dominion is the only company that operates a nuclear plant in Connecticut.

But Dominion's threat to shut down Millstone doesn't sit well with Connecticut's Consumer Counsel Mary Healey.

"I don't like brinkmanship where citizens and ratepayers are concerned," Healey said, adding it is highly unlikely that Dominion would walk away from tens of millions of dollars in payments that the company will receive annually for providing up to 2,100 megawatts of power into the New England power grid on a daily basis.

Those payments now stand at $95 million a year, although they will go down over the next several years, said Joe Rosenthal, the principal attorney for the Office of Consumer Counsel.

Dominion has contracts to provide electricity into the regional power grid through June 2014, Rosenthal said.

Shutting down Millstone would require Dominion to buy power to replace the electricity it has already signed contracts to provide. It would also require approval from grid operator ISO-New England (ISO-NE), Rosenthal said.

When Dominion tried to get the grid operator to grant a request to permanently shut down a coal-fired power plant the company operates in Salem, Mass., ISO-NE refused.

Even if it had to pay the tax, Rosenthal said Dominion would still have a rate of return on its investment that is "well above 11 or 12 percent."

Weekly, the Dominion executive, declined to comment on what the profit margin is for the company's Connecticut operations, but said estimates that it is in the vicinity of 50 percent are "wildly inaccurate."

One Fist Of Iron, The Other Of Steel (WATRFPTC)

By Paul Petrone

Waterford (CT) Patch, April 15, 2011

Most people would be outraged over a 100 percent tax increase. But when you are looking at a 1,000 percent tax increase, it might not seem so bad.

Lately, there has been heavy coverage of a State Bill 1176, which would place a $330 million tax on Millstone Power Station. But before that bill even came out, a $32 million tax was already proposed on Millstone Power Station, by Gov. Dannel Malloy.

Millstone Power Station currently pays $32 million in state and town taxes. A $32 million increase would double that tax rate in one year, a far cry from increasing taxes tenfold like SB 1176 does, but still a substantial amount, Dominion spokesman Ken Holt said.

"We have expressed our concerns," Holt said. "Any tax that is put on Dominion will go on to the consumers."

Dominion makes hundreds of millions of dollars in profit off of Millstone Power Station, according to state estimates. Still, the tax would be passed onto the consumers because of a "legal responsibility to the shareholders," Holt said.

"Any tax on any business will be passed on," he said. "It is just how it is."

Malloy's proposal was made in January as part of his efforts to balance the budget. The energy committee in the state legislature, with no input from Malloy, approved SB 1176 in March.

Malloy's proposal taxes all energy generators at the same rate, including Millstone. SB 1176 stands to make $335 million from Dominion, and less than $10 million from all other energy generators combined.

Both proposals need to be passed by the state legislature to become law.

State And Local Support?

State Rep. Elizabeth "Betsy" Ritter and First Selectman Dan Steward have both been very vocal in their criticism of SB 1176. However, neither showed much emotion in opposition to Malloy's proposal.

"I am not a big fan of any new tax," Steward said. "But it is part of Malloy's 'spread the pain' philosophy."

Steward said the tax would increase the cost of electricity. But it would not have any of the effect that SB 1176 would have, he said.

Ritter was equally ambivalent about Malloy's tax. At least the tax is equitable, she said.

"The governor's proposal ... has many new taxes," she said. "It is part of trying to balance the budget."

Ritter would not say if she was in favor of or opposed to the bill, because it was not yet made available to the legislators. It could be given to the finance committee as soon as Monday, and then it will become more clear, she said.

State Sen. Andrea Stillman, who represents Waterford and is on the finance committee, did not return a voicemail from Patch.

Production Tax?

One thing SB 1176 and Malloy's proposal have in common is that they are both production taxes, Holt said. No other state in the nation has a production tax, he said.

In other states, taxes are based on what electricity is bought at, not simply a flat fee on all energy generated at the plant, Holt said.

If both bills pass as is, Dominion would pay an additional $367 million in state taxes; 11 times what it currently pays in state and town taxes.

However, the reality is if both bills pass, Millstone will pay almost nothing in taxes, because Dominion will shut down the plan, Holt said. At that point the plant would be too expensive to operate, he said.

The $32 million tax alone would not force Millstone to close down, Holt said.

Suffering Budget Jitters (Waterbury)

Business Interests, Local Officials Lobbying To Avoid Taxes, Cuts

By Paul Hughes

Waterbury Republican-American, April 15, 2011

A serious case of budget jitters is breaking out as the legislature and Gov. Dannel P. Malloy work out spending and tax plans for the next two years.

The nervousness was on display Wednesday at the state Capitol, as meetings of the House and Senate provided anxious stakeholders opportunities to lobby lawmakers and make news.

The owners of the Millstone nuclear plants in Waterford are warning that a proposed tax on electricity generation could lead the company to shutter its power station.

"We believe this tax is onerous and disparate in its impact," said David Cameron, chief executive of Dominion Generation, a Virgina-based company that operates Millstone.

Officials Say Del. Can Handle Nuclear Emergency (AP)

Assocated Press, April 15, 2011

The state's top homeland security official says Delaware is prepared to handle a radiological incident in the state.

Lewis Schiliro is the secretary of the state's Department of Safety and Homeland Security. He said Tuesday at a US Senate hearing that he does not have any specific concerns about the Salem/Hope Creek nuclear complex in New Jersey or other nuclear facilities.

Japan's nuclear crisis recently has increased concerns among residents who live near the Salem/Hope Creek complex, which is 2.5 miles from the Delaware shoreline. About 41,000 residents live within 10 miles of the plant.

The state is also within 50 miles of other nuclear generating stations - Limerick Nuclear Generating Station and Peach Bottom Atomic Power Station in Pennsylvania and Calvert Cliffs Nuclear Generating Station in Maryland.

Feds Say UniStar Application Fails To Meet Requirements (BAYNET)

By Marty Madden

Baynet.com (MD), April 15, 2011

The company that has applied for permission to build a third nuclear reactor at Calvert Cliffs Nuclear Power Plant in Lusby has been told by federal officials it doesn't meet the ownership requirements.

In a letter sent last week to George Vanderheyden, president and CEO of UniStar Nuclear Energy, a Nuclear Regulatory Commission (NRC) official stated last November's acquisition by Electricite de France (EDF) of Constellation Energy's 50 percent interest in UniStar rendered the Calvert Cliffs 3 application in noncompliance of the federal code governing nuclear plant ownership.

"UniStar is 100 percent owned by a foreign corporation (EDF), which is 85 percent owned by the French government," stated David B. Matthews, director of the NRC's Division of New Reactor Licensing, Office of New Reactors. "If requested, NRC staff will support a public meeting with UniStar to discuss the results of its review."

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

"We were not surprised by it," said Allison Fisher, a spokeswoman for Public Citizen, a Washington, DC-based consumer watchdog organization, which opposes the Calvert Cliffs 3 project. "They have been trying to find a domestic partner to participate in the expansion of nuclear power and they haven't had any takers."

Fisher said the Calvert Cliffs 3 project might be "the first casualty" in the wake of the ongoing crisis at Japan's Fukushima Dai-ichi nuclear plant. That facility has been plagued by radiation leaks since last month's devastating tsunami/earthquake. Earlier this week Japanese officials stated the crisis at Fukushima Dai-ichi was on a par with the 1986 disaster at Chernobyl.

While Fisher acknowledged Calvert Cliffs is not susceptible to tsunamis, she added, "aging reactors have different vulnerabilities. Just the idea there are unknowns....it could be a different series of events in the US"

"We plan to continue our review of the Calvert Cliffs 3 new reactor application," stated NRC spokesman Neil Sheehan. "For its part, UniStar will have to revisit its approach to satisfying our requirements on foreign ownership of US nuclear power plants."

Hedge Fund Manager Charged In HGS Insider Trading Case (GAITHG)

Gaithersburg (MD) Gazette, April 15, 2011

The Securities and Exchange Commission has charged Joseph F. Skowron III — a former Morgan Stanley manager of the six hedge funds that dumped large chunks of Human Genome Sciences stock after receiving insider tips about its drug trials in 2008 — with insider trading.

Showron, who managed funds affiliated with FrontPoint Partners, received information from Yves M. Benhamou, a member of the steering committee overseeing the Rockville biotech's clinical trial of Albuferon for hepatitis C, according to the SEC complaint. Benhamou told Skowron about two serious adverse incidents with the drug, including one death, prompting Skowron to sell 6 million shares. When the stock price fell 44 percent upon announcing the negative trial results, the hedge funds avoided at least $30 million in losses. HGS has since discontinued developing the drug.

The US Attorney's Office for the Southern District of New York also announced criminal charges against Skowron. The SEC is seeking permanent injunctions and financial penalties against both men. The hedge funds have agreed to pay $33 million in restitution. Benhamou was charged in November with conspiracy to commit securities fraud and other counts.

Protest upheld in $46M federal IT deal

A Chevy Chase information technology company's $46.1 million State Department contract might be in jeopardy after the Government Accountability Office upheld a competing bidder's protest of the award.

Abacus Technology won the award with the low bid, while protester Technology Concepts & Design of Reston, Va., the incumbent contractor and one of four bidders, submitted the highest, $49.6 million.

"We find that the State's assessment of a number of weaknesses in [Technology Concepts'] proposal is unsupported in the record, and sustain [its] protest on this basis," Lynn H. Gibson, general counsel for the GAO, said in a March 25 report. "If [Technology Concepts'] proposal is selected for award, we recommend that the State Department terminate the awardee's contract and make award to the protestor."

Abacus did not respond to a request for comment.

NRC: No license for reactor at Calvert Cliffs

The Nuclear Regulatory Commission said last week it won't issue a license for a third reactor at Calvert Cliffs Nuclear Power Plant in Lusby because the applicant, UniStar Nuclear Energy, is owned by a foreign entity, Eléctricité de France.

NRC regulations prohibit a foreign entity from owning or controlling a US nuclear plant's operations for security reasons. UniStar submitted a combined license application and "negation action plan" in January in an effort to address the issue, citing US individuals who would oversee operations of the reactor, estimated to cost $10 billion. EDF bought out Constellation Energy Group's stake in UniStar last year.

EDF is 85 percent owned by the French government.

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

Michael Mariotte, executive director of the Nuclear Information and Resource Service in Takoma Park, called the proposed reactor "the first US nuclear casualty of the post-Fukushima era" in a press release, referring to Japan's ongoing nuclear emergency.

Mortgage lender defrauded;

defendant gets 65 months

Dema Daiga, 29, of College Park was sentenced Monday in US District Court to 65 months in prison for defrauding a Beltsville mortgage lending company, Landmark Funding, of $664,493 in connection with six Baltimore properties, according to federal prosecutors. Daiga also was ordered to pay restitution.

Daiga worked as a mortgage loan broker and assisted with property appraisals. In 2008, he and another defendant, Oluseun Oshosanya, aka Olu Campbell, who also worked in the mortgage lending field, recruited two straw purchasers and used the names and identifying information of four other individuals, without their knowledge, to apply for mortgages on six properties, according to court records.

They filled out mortgage loan applications on behalf of the straw purchasers and the other individuals, using false employment histories, earnings, assets and other information.

Five of the six properties soon went into default, resulting in a $664,493 loss to Landmark Funding, according to court records. Landmark was forced to lay off at least 20 employees and is no longer in business because of these losses, prosecutors said in a statement.

Oshosanya, 30, of Laurel previously was sentenced to 54 months in prison.

Recycling executive sentenced

in federal bribery case

Jeffrey M. Harmon, 45, of Windsor Mill, the former president of Berg Bros Recycling of Baltimore, was sentenced Tuesday in US District Court in Baltimore to one year and one day in prison and fined $25,000 for conspiring to bribe a National Security Agency official, according to federal prosecutors.

Harmon worked with another Berg employee, Adam W. Berg of Stevenson, 49, the son of the company's owner, and Robert B. Adcock of Parkville, 44, an NSA contracting officer, to have copper cable and other materials from Fort Meade sent to the company for recycling, according to court documents. All told, the company, under the direction of Harmon and Berg, made 39 payments to Adcock totaling $104,989 from May 2004 to March 2006. The next month, Harmon joined another recycling company and paid Adcock an additional $4,931 for recyclables from NSA.

Berg and Adcock have pleaded guilty to conspiracy, according to court records, and await sentencing.

Pawn shop owner is
sentenced in $20M scheme

Louis Leitch Sr., 62, of Baltimore, co-owner of E-Z Money Pawn Shop of Baltimore, was sentenced Tuesday in US District Court in Baltimore to 33 months in prison for conspiring to commit money laundering and trying to evade taxes, federal prosecutors announced.

From 2007 to March 2010, Leitch conspired with others to launder the proceeds of the sale of over-the-counter medications, health and beauty aid products, gift cards, DVDs, tools and other merchandise that had been shoplifted from Target, Safeway, Walmart, Kohl's and other retailers in Maryland and other states, according to his plea agreement. Leitch and others removed security labels, sometimes using a heat gun and lighter fluid, before they were sold, sometimes online via eBay and Amazon.com.

When they raided Leitch's and other pawn shops, federal agents recovered more than $1 million in stolen merchandise, about $1 million in bank accounts, more than $140,000 in cash and 44 firearms, prosecutors said. The entire scheme involved about $20 million in stolen merchandise, with $2.5 million attributable to Leitch, who also failed to file tax returns in 2005 and 2006, evading $401,600 in taxes.

Thirteen defendants have pleaded guilty to the money laundering conspiracy.

Title company executive guilty in fraud case

Daniel E. Fink Jr., 44, of Baltimore, who operated Homemaxx Title & Escrow in Middle River and Parkville, pleaded guilty April 8 in US District Court in Baltimore to wire fraud in a scheme to defraud lenders and homeowners of more than $2.2 million, according to prosecutors.

From February 2003 to July 2004, Fink defrauded lenders, a title insurance company and homeowners, according to his plea. Fink caused title insurance to be issued to individuals purchasing or refinancing real estate, but concealed facts that hurt the buyers' title in the transactions. Fink also made misrepresentations to lenders.

Fink used the money to buy personal gifts for women, including more than $200,000 of escrow money to buy a property in Florida for a female acquaintance, and $59,728 to purchase a new 2004 Mercedes CLK 500 for a woman Fink knew from the Gentlemen's Gold Club, prosecutors said. Fink also used $61,965 to buy a 2003 Hummer H2 and repeatedly spent the proceeds of his scheme at the Gentlemen's Gold Club on gambling and on trips to Paradise Island, Bahamas.

He was indicted in March 2009 and arrested Florida in February 2010, prosecutors said.

Fink is required to pay restitution of $2.2 million. He faces up to 20 years in prison and a $250,000 fine, but prosecutors said they expect a four-year sentence if the plea agreement is accepted. Sentencing is scheduled for June 17.

Merkle lands Olympic marketing deal

Merkle of Columbia has been named agency of record by the US Olympic Committee to market its national direct response fundraising program.

The committee will retain Merkle's services for a 26-month period, covering the 2012 Olympic Games and 2014 Olympic Winter Games, to provide analytical, strategic and creative positioning, mail production and product management services, according to a company statement.

Scheer, university working to develop technology park

Scheer Partners of Rockville is putting its commercial real estate expertise in the life sciences sector to work for the University of Rhode Island.

The university has hired the company to provide consulting services to establish and confirm the viability of developing a research and technology park on its north campus that would house science, engineering and technology companies.

Scheer Partners already is conducting a financial analysis and market research, and compiling a list of companies to target for tenancy. It also is working with economic development officials to secure funding at the state and local levels. The park would initially include a 50,000-square-foot building and in total encompass from 200,000 to 300,000 square feet of space.

University President David M. Dooley said in a statement that "continuing to enhance the University's research agenda, as well as expanding our economic development partnerships, makes such a park a focus for us. URI's grants and research portfolio exceeded $105 million last year."

Constellation goes solar in Holyoke, Mass.

Constellation Energy of Baltimore and Holyoke (Mass.) Gas & Electric Department have announced the development of a new 4.5-megawatt solar installation, scheduled for operation this summer.

The installation will generate electricity for 18,000 customers and will be the largest solar installation in New England, according to a Constellation statement. The system will comprise 18,400 photovoltaic ground-mounted panels at two locations and is expected to produce almost 5,500 kilowatt-hours of electricity annually.

Constellation will build, own and maintain the system and the utility will purchase all of its electricity under a 20-year agreement.

Wisconsin Nuclear Power Plants Improve Safety Records (AP)

Associated Press, April 15, 2011

Wisconsin's two nuclear power plants will be under less scrutiny from federal regulators because of improved safety grades.

The two-reactor Point Beach plant and single-reactor Kewaunee plant drew extra attention from regulators earlier in the decade because of spotty safety records. Operating under new ownership, the plants have improved those safety grades, the Milwaukee Journal Sentinel reported.

The plants will get a safety review by the Nuclear Regulatory Commission during the next six months, as will all US nuclear plants because of the earthquake and tsunami in Japan.

The plants generate nearly one-fifth of Wisconsin's electricity.

Plant operators said the facilities are designed to withstand extreme natural events, such as tornadoes, flooding and earthquakes.

State's Nuclear Plants No Longer Need Extra Security (WTAQ)

WTAQ-AM, April 15, 2011

Wisconsin's two nuclear power plants have improved their safety records in recent years.

As a result, the Kewaunee reactor and the two Point Beach reactors at Two Rivers will not get extra scrutiny from the federal government in 2011. Both will join other US plants in getting federal safety reviews in the next six months in response to the nuclear meltdown in Japan.

The plants' operators say they're designed to withstand tornadoes, earthquakes, and other extreme disasters. The 3 reactors provide about one-fifth of Wisconsin's electricity. And critics said they were among just 6 in the nation which had extra scrutiny from the Nuclear Regulatory Commission for most of the last decade.

Katie Nekola of Clean Wisconsin said things got so bad, the plants were forced to improve. Both have had new owners in the last 6 years who appear to have made safety a priority.

Dominion Resources has owned the Kewaunee plant since 2005. Spokesman Mark Kanz said it took a lot of hard work to get the government's top rating the past two years – and that's where they intend to stay.

Next-Era Energy Resources of Florida bought the Point Beach plant in 2007, and the firm says it's been years since the plant had extra scrutiny for safety problems – even when We Energies owned it.

Oconee Nuclear Station Meets Safety Objectives, NRC Says (GRNVN)

By Anna Simon

Greenville News, April 15, 2011

OCONEE NUCLEAR STATION — Oconee Nuclear Station met all safety requirements in 2010, according to the US Nuclear Regulatory Commission, which will present and discuss its annual safety performance review of Oconee in a public meeting Tuesday.

Although all safety objectives were met, all three Oconee units were under additional NRC oversight in 2010 due to an inspection finding that raised safety concerns.

The NRC cited a failure to adequately maintain the plant's standby shutdown systems that can be used if normal and emergency systems are unavailable. Last December, the NRC completed inspections that determined necessary corrective actions had been completed.

The public meeting will be in Duke Energy's World of Energy at the nuclear station at 7812 Rochester Highway, Seneca. The meeting will begin with a short presentation at 6:30 p.m., followed by an informal open house ending at 8 p.m.

NRC staff will be available to answer questions on the safety performance of the Oconee plant, as well as the NRC role in ensuring safe plant operation.

"The NRC evaluates nuclear power plants in a systemic and detailed way every year," said NRC Region II Administrator Victor McCree. "The inspections and oversight at Oconee ensure that the plant is operated in a way that protects people and the environment."

The three Oconee units will receive detailed baseline NRC inspections in 2011, according to the NRC. In addition, the agency will complete some generic inspections related to spent fuel storage and reactor coolant system maintenance.

Operator licensing examinations also will be conducted and NRC staff will continue to review ongoing significant modifications to the plant.

NRC Schedules Oconee Safety Assessment Meeting (ADERSN)

Anderson Independent-Mail, April 15, 2011

SENECA — The US Nuclear Regulatory Commission staff has scheduled a meeting at 6:30 p.m. Tuesday, April 19, to discuss the agency's assessment of safety performance during 2010 at the Oconee nuclear power plant.

The meeting, in the Oconee World of Energy, 7812 Rochester Highway in Seneca, will begin with a short presentation followed by an informal open house ending at 8 p.m. NRC staff will be available to answer questions on the safety performance of the Oconee plant, as well as the NRC role in ensuring safe plant operation.

The three Oconee units will receive detailed baseline NRC inspections in 2011. In addition, the agency will complete some generic inspections related to spent fuel storage and reactor coolant system maintenance. Operator licensing examinations will also be conducted. The NRC staff will also continue its review of continuing modifications to the plant.

Inspection findings and performance indicators are updated each quarter on the NRC's website, www.nrc.gov.

The Case For Moving US Nuclear Fuel To Dry Storage (TECHREV)

Nuclear waste pools are packed more densely in the US than those at Fukushima, with no removal plan in sight.

By David Talbot

Technology Review, April 15, 2011

One of the lesser-noted facts of the Fukushima nuclear disaster—where loss of coolant in spent-fuel pools has resulted in massive radiation releases—is that some fuel at the plant was stored in so-called dry casks, and these casks survived the March 11 earthquake and tsunami intact.

This fact is likely to result in new calls to move some spent fuel out of water pools at reactor sites in the United States—where it is packed more densely than the fuel in the stricken Japanese pools—and into outdoor dry casks, experts say.

"What will likely happen very quickly is that the [Nuclear Regulatory Commission] and utilities will arrive at a consensus that moving fuel to dry storage needs to be accelerated to get as much spent fuel out of the pools as fast as possible," says Ron Ballinger, an MIT nuclear engineer. In Japan, he says, "the dry storage casks weathered the earthquake and tsunami with zero problems."

Until now, US regulators have decided that keeping fuel in pools—and even allowing the fuel to be more densely packed—is safe. Most US nuclear reactors have air-cooled, dry-cask storage for some reactor waste, but generally this is only because the pools cannot fit any more. Older waste that has had a chance to cool for a few years in pools can be moved to dry casks.

The US is home to at least 65,000 tons of nuclear reactor waste, more than in any other nation, and this figure grows by about 2,200 tons each year.

"In general, US reactors have a great deal more fuel in their spent-fuel-pools than the reactors at Fukushima," says Richard Lester, who heads the Department of Nuclear Science and Engineering at MIT. If a Fukushima-scale event were to strike a typical US nuclear plant fuel pool, he says, "I think you would potentially have a worse situation simply by virtue of there being more fuel—a lot more fuel in the cases of the pools at the US reactors."

Spent uranium reactor fuel generates great quantities of heat even after it is removed from the core of a reactor. For that reason, spent rods must be immersed in deep pools of circulating water for several years in order to cool them enough. But after several years, dry casks become a feasible storage option. The casks—generally barrel-shaped steel-and-concrete structures that stand 20 feet high and sit outdoors—only need passive air cooling.

In a pool, by contrast, the proximity of fuel rods to one another causes heat buildup that requires water to be circulated continually. As Fukushima has demonstrated, pumps and their backup systems can fail, and water in spent fuel pools can leak out or boil away.

Over the past three decades, delays in opening a permanent repository for spent nuclear fuel in the United States has led the US Nuclear Regulatory Commission to allow existing spent fuel pools to be "reracked" to increase the density of rods inside them.

Of 84 current or former US reactor sites holding spent fuel—a figure that includes some sites with more than one power plant—63 already have dry casks, 10 are applying to build them, and 11 haven't yet announced plans, according to Nuclear Regulatory Commission data.

"If there is a loss-of-coolant accident, you are going to be in big trouble, especially with these high-density racks and the pools being heavily loaded—and even more so if there happens to be freshly discharged fuel in the pool," says Allison

Macfarlane, a geologist and associate professor of environmental science and policy at George Mason University, who was one of several coauthors of a 2003 report warning of the danger posed by dense reracking. "A lot of these pools are in upper stories at the power plant," meaning breaches or cracks could let water run out. "If there is a loss of water, you can have a release of radioactivity much larger than Chernobyl, because there is a lot more fuel in the pool than in the core of the reactor."

Last year, President Obama canceled plans to open the Yucca Mountain underground fuel repository 90 miles northwest of Las Vegas, and appointed a commission to come up with alternatives. The commission, due to issue its report in June, has not made any statements about Fukushima. Macfarlane, a commission member, says she could not discuss its possible suggestions. However, the body is scheduled to meet in a public session May 13 in Washington.

The 2003 report said that in the event of coolant loss in a densely packed pool, air cooling would not suffice. Temperatures could rise to 600 °C within an hour, causing the zirconium fuel cladding to rupture, and then increase to 900 °C, whereupon the cladding would burn, resulting in huge quantities of released radioactive material, the report said.

The report proposed immediate reversion to lower-density pool configurations, with more cooled fuel put in dry casks and moved to central sites. In looser-packed pools, the report said, airflow alone could be enough to prevent fire in the event of coolant loss. It said this could be done for no more than $7 billion nationally, which would work out to a wholesale electricity price increase of 0.06 cents per kilowatt-hour generated from the fuel.

These steps were not carried out. A subsequent National Research Council report also said the fire scenarios required more study, and suggested other measures while leaving dense configurations intact. "It appears to be feasible to reduce the likelihood of a zirconium cladding fire by rearranging spent fuel assemblies in the pool and making provision for water-spray systems that would be able to cool the fuel, even if the pool or overlying building were severely damaged," the report said. Fuel rearranging and backup cooling of pools are being implemented, a Nuclear Regulatory Commission spokesman says.

If the US government had followed through on its 1982 commitment to open a spent-fuel repository— and its subsequent contracts with utilities to begin removing the fuel in 1998—the pressure on US spent fuel pools would have been relieved, Lester says. "There were schedules that described how the DOE [Department of Energy] was going to move the fuel, and which fuel would be moved," he says. "I think we can say, on the basis of all of that, that the pools would not be nearly as full as they are now."

He says it was crucial to begin establishing central sites for dry-cask storage as part of a comprehensive plan for waste storage and disposal, which he says should not rule out Yucca Mountain. "One possible use for the site is for temporary storage," Lester says.

Iowa Legislative Leaders Say Nuclear Power Measure, Other Bills Still In Play This Session :: The Republic (REPUBCO/AP)

Associated Press, April 14, 2011

DES MOINES, Iowa — Iowa legislative leaders say several measures that have drawn opposition remain in play as the session inches toward adjournment.

Speaking at a news conference Thursday, Democratic Senate Majority Leader Mike Gronstal was asked about a bill allowing utilities to begin charging ratepayers for the cost of a nuclear power plant before construction begins. He also was questioned about a measure banning abortions after 20 weeks of pregnancy and another outlawing the secret videotaping of livestock operations.

Gronstal says lawmakers are working privately to resolve differences over the bills.

Texas Senate OKs Taking In More Radioactive Waste (AP)

By Jim Vertuno

Associated Press, April 14, 2011

AUSTIN, Texas -- A low-level radioactive dump in remote West Texas could take in waste from dozens of states under a bill the Texas Senate approved Wednesday.

The site in Andrews County could be ready to accept the waste by next fall, said a spokesman for Dallas-based Waste Control Specialists, which operates the site.

Environmentalists have resisted the move, warning that it would result in radioactive material rumbling through the state on trucks with few safeguards in case of an accident.

The Senate bill allows Waste Control Specialists to set disposal fees for 36 states that are not part of the original compact between Texas and Vermont. Previously, environmental regulators were to determine the rates.

Texas and the city and county governments in Andrews will get a share of those fees, said Waste Control Specialists spokesman Chuck McDonald.

"They are anxious to get started," McDonald said. "This paves the way for that to happen."

The bill by Sen. Kel Seliger, R-Amarillo, still needs House approval, which could come next week.

The Senate bill requires that waste from the non-compact states take up no more than 30 percent of capacity at the facility. It also bans waste from foreign countries.

Other states can pay $30 million to join the compact through 2018 before the price increases to $50 million. Generators from non-party states would pay a surcharge for their imported waste.

Supporters say the Andrews County site can be a secure solution for states to dump radioactive waste. Environmentalists worry that Texas may be taking in more waste than it can handle and want the Texas Commission on Environmental Quality to first study the impact of possible transportation accidents or the impact of leakage into ground water.

Those studies could be done in the next two years before the 2013 legislative session, said Tom "Smitty" Smith, director of Texas Public Citizen, a political watchdog group.

"This waste is going to be around tens of thousands of years," Smith said. "What's the rush?"

Selectboard Unveils VY Shutdown Revised Letter (BRATBORO)

By Jaime Cone

Brattleboro Reformer (VT), April 14, 2011

BRATTLEBORO -- The newly revised Safe & Green letter regarding the shutdown of the Vermont Yankee nuclear power plant in Vernon was released by the Town Clerk's office Wednesday evening.

The Selectboard will vote on whether or not to sign the letter, which is much the same as the original document, at its next regular meeting.

At a Selectboard meeting April 5, the board voted to table the issue of signing the letter with the expectation that the document would be revised by board members in time for the next meeting.

Paragraphs were re-arranged and some of the wording is different, but the sentiment of the letter remains the same.

The first two paragraphs state that "full attention should be paid to maintenance and repair of all systems associated with the reactor," and "necessary maintenance and repairs should not be delayed or canceled during the reactor's final months," in light of Vermont Yankee's scheduled closure in 2012.

Some items were removed, including the mention of severance packages for Vermont Yankee employees and the creation of a citizens advisory board to help facilitate communication regarding Vermont Yankee.

Safe & Green, a grassroots effort to close Vermont Yankee and replace it through conservation, efficiency and renewable solutions, has presented the letter to selectboards and city councils in Vermont, New Hampshire and Massachusetts cities and towns that neighbor the power plant.

The letter is addressed to "those with authority over the Vermont Yankee Nuclear Power Station in Vernon, including the Entergy Nuclear Corporation, the Vermont Legislature and Public Service Board and the US Nuclear Regulatory Commission."

David Gartenstein, Selectboard member, said that since the meeting, the letter was made available for comment by Safe & Green members and all members of the Selectboard.

Bob Bady, Brattleboro resident and member of Safe & Green, said he can live with the alterations Selectboard members made to the original letter.

"I don't have any major problems with it," Bady said. "This letter that the Selectboard has proposed is fairly true to the original."

But the paragraph about the citizens advisory board was significant, he said, adding that Safe & Green plans to approach the board again later this spring with more information about the committee they would like to see formed.

"Hopefully in a couple of months or so, when we have a proposal for more specific criteria for forming a citizens advisory committee, then we can bring that to the board. ... we'll work on that this spring and get back to the towns that have signed the letter and see where they're at," Bady said.

Kenneth Schneck, Selectboard member, said that revising the letter was an opportunity to alter its tone.

"For me, as I went through it, it was a matter of tone and really front-loading the Brattleboro concerns," he said. Several points that appeared later in the original letter were moved closer to the beginning.

Selectboard Chairman Richard DeGray said he will not support signing the letter.

"There are more pressing things facing the town than this issue, and I hope it's dealt with quickly and we can get on to more important issues facing the town of Brattleboro," DeGray said.

Selectboard members are expected to vote on whether or not to sign the revised letter at the board's next regular meeting, scheduled for April 19, starting at 6:15 p.m. in the Selectboard Meeting Room of the Municipal Center.

Jaime Cone can be reached at jcone@reformer.com or 802-254-2311, ext. 277.

Opponents To Air Concerns Over Extension Of Prairie Island Nuclear Plant (MPR)

By Stephanie Hemphill

Minnesota Public Radio, April 14, 2011

St. Paul, Minn. — Opponents of nuclear power will meet in Red Wing Thursday to express their opposition to extending the life of the Prairie Island nuclear plant.

The Nuclear Regulatory Commission, or NRC, holds these meetings around the country on a regular basis.

Attorney Paula Maccabee from the grassroots Prairie Island Study Group says — given concerns raised by the accident at a nuclear plant in Japan — it's a good time to take another look at Minnesota's nuclear risks.

"We have stored fuel in casks and in pools right near the Mississippi River, which is the source of our drinking water," Maccabee said.

The NRC is considering Xcel's request to extend the life of the Prairie Island plant for 20 years, and to produce more power there. It already approved similar measures at the plant in Monticello.

About a dozen people attended an NRC meeting in Monticello last week.

Feds Boost College Nuke Programs (GPB)

Georgia Public Broadcasting, April 14, 2011

A grant from the US Department of Energy will foster nuclear studies at five Augusta-area colleges. The award comes with a rise in demand for nuclear workers. (Photo by Noel Brown)

A recent government study says two nuclear facilities near Augusta – Plant Vogtle

and the Savannah River Site

-- will need nearly 10,000 new nuclear workers in the next decade.

To head off an impending worker shortage, the DOE is spending nearly a million dollars to help area colleges set up nuclear programs.

Andy Hauger is a physics professor at Augusta State University, one of the school's sharing in the money. He says the money will pay for lab equipment needed to train students in nuclear science technology.

"It's not inexpensive to run these things and to maintain these labs so this is really a huge jumpstart for this program," says Hauger.

The other schools participating in the grant are Augusta Tech, Aiken Tech and the University of South Carolina in Aiken and Salkehatchie.

President Obama Announces Key Administration Post (WHBLOG)

White House Blog, April 15, 2011

Today, President Barack Obama announced his intent to nominate the following individual to a key Administration post:

•William C. Ostendorff, Commissioner, Nuclear Regulatory Commission

President Obama announced his intent to nominate the following individual to a key Administration post:

William C. Ostendorff, Nominee for Commissioner, Nuclear Regulatory Commission

Bill Ostendorff was sworn in as a member of the Nuclear Regulatory Commission on April 1, 2010 for a term ending June 30, 2011. Prior to his appointment to the Nuclear Regulatory Commission, he served as Director of the Committee on Science, Engineering and Public Policy at the National Academies. He came to the National Academies after serving as Principal Deputy Administrator at the National Nuclear Security Administration from April 2007 until April 2009. From 2003-2007, he was a member of the staff of the House Armed Services Committee where he served as counsel and staff director for the Strategic Forces Subcommittee. Mr. Ostendorff was an officer in the United States Navy from 1976 until he retired in 2002 in the grade of Captain. During his naval career, he commanded an attack submarine, an attack submarine squadron and served as Director of the Division of Mathematics and Science at the United States Naval Academy. He is a member of the State Bar of Texas. Mr. Ostendorff's education includes a degree in systems engineering from the United States Naval Academy, a JD from the University of Texas and an LLM from the Georgetown University Law Center.

New Mexico Looks To Expand Nuclear-waste Business (REU)

By Eileen O'Grady
Reuters, April 15, 2011
Full-text stories from Reuters currently cannot be included in this document. You may, however, click the link above to access the story.

Population Rises Near US Nuclear Reactors (MSNBC)

By Bill Dedman
MSNBC, April 15, 2011
WATERFORD, Conn. — Who's afraid of nuclear power? Not the American people, judging by where they choose to live.
A new map of data from the 2010 US Census shows that the number of people living within the 10-mile emergency planning zones around nuclear power plants rose by 17 percent in the past decade, compared with an overall increase of less than 10 percent in the US population.
If the circles on the map are widened to a 50-mile radius (the same evacuation area that US nuclear officials recommended for Americans living near Japan's troubled Fukushima Dai-ichi reactors), they would cover one in three people in the US
That's 116 million nuclear neighbors, up from 109 million a decade earlier, according to the analysis conducted for msnbc.com by Longcreative, a data analysis and design company.
The population within 10 miles of Pennsylvania's Three Mile Island reactor grew 11 percent. At Pilgrim, outside of Boston, the increase was 41 percent. Near San Onofre on the California fault lines, 50 percent.
Among the 100 most populous cities on the new census map, 26 have a nuclear plant within 50 miles: New York, Chicago, Philadelphia (3 different plants nearby), Phoenix, San Diego, Fort Worth, Charlotte (2 plants), Detroit, Baltimore, Boston (2 plants), Washington, Virginia Beach and Norfolk, Omaha, Raleigh and Durham, Miami, Cleveland, Minneapolis and St. Paul (2 plants), New Orleans, Pittsburgh, Toledo (2 plants), Newark, Baton Rouge, and Rochester, N.Y.
To get more information: The interactive map on this story shows the populations within 5, 10, 20 and 50 miles of each nuclear power plant in the US And a ranking of nuclear plants by population is at the bottom of the text, along with a data file for readers who want to do their own analysis.
'It makes a hissing noise'
Why would the population rise sharply near nuclear power plants, even in lower-growth states outside the Sun Belt? One reason could be normal population expansion, with previously unoccupied areas being filled in. Another reason: Nuclear reactors use water for cooling, from lakes, rivers or oceans, so the reactors are typically built on waterfront property. Is the sun rising or setting over the ocean any less beautiful if you can also see a cooling tower?
On a recent spring evening, two boys were shooting hoops in the driveway of a beachfront house on Millstone Beach in Waterford, a Connecticut town on Long Island Sound midway between New York City and Boston. The neat houses look out on glorious sunrises.
And if you turn your head to the right, the orange-and-white-striped tower of the Millstone Power Station reaches high above the white sand. The estimated population within 10 miles of Millstone grew 30 percent in the past decade, to 123,482. The population within 50 miles grew to 3 million, an increase of 10 percent, much faster than the state's general growth rate of 4.9 percent.
The father of one of the boys, Paul Van der Putten, 49, bought his home in 2003 for $378,000. It has increased roughly 75 percent in value since. He said he isn't worried about the nuclear plant, which is about six-tenths of a mile away, the length of 10 football fields. It has two operating nuclear reactors as well as a third reactor, mothballed but still a storehouse for nuclear fuel rods.
"It is what it is," he said. "It makes a hissing noise sometimes at night. That rattles the windows. They let us know when they have that scheduled. They let off the steam at night because no one wants to see the plume. It's just an industrial plant."
Where are those pills?
"They're in the house somewhere. I'm really not sure where."
Most reactors have more neighbors
Journalist Andrew Long at Longcreative plotted the 65 nuclear power locations for msnbc.com on a computerized map of the 2000 and 2010 census data, calculating the population within different distances from each plant. (One of the leading nuclear power companies, General Electric, is a part owner of NBCUniversal, which co-owns msnbc.com through a joint venture with Microsoft.)
Other conclusions from the mapping of census data:

•Within 5 miles of the nation's nuclear plants, there are an estimated 916,330 residents, up 15.0 percent from a decade earlier.

•Within 10 miles, the population jumps to 4,079,007, up 16.9 percent.

•Within 20 miles, there are 18,510,584 people, up 12.3 percent.

•And within 50 miles, 116,223,077 people, up 6.5 percent.

No matter what size the circle, the pattern is consistent: Most nuclear plants have growing neighborhoods. Out of the 65 nuclear power plants in the US, 55 plants had more people living within 5 miles than a decade earlier; 54 plants had more people within 10 miles; and 56 plants had more people within 50 miles.

Growth even in slow-growth states

Looking at individual nuclear plants, these patterns jump out:

The reactors with the most neighbors within 50 miles:

•Indian Point, near Buchanan, N.Y., 41 miles upriver from the center of New York City, with 17.2 million people within 50 miles.

•San Onofre, near San Clemente, Calif., and 45 miles from San Diego, 8.5 million.

•Limerick, near Limerick, Pa., and 28 miles from Philadelphia, 8.0 million.

•Dresden, near Morris, Ill., and 43 miles from Chicago, 7.3 million.

•Peach Bottom, near Delta, Pa., and 36 miles from Baltimore, 5.5 million.

•Hope Creek and Salem, both near Hancocks Bridge, N.J., and 43 miles from Philadelphia, 5.5 million.

The nuclear plant with the fewest neighbors is Nebraska's Cooper Nuclear Station, in a rural area on the Missouri border, with only 164,000 people within 50 miles.

The view from the bay window

Next door to the Van der Putten family on Millstone Beach in Waterford, Vincent E. McCurdy has a living room full of boxes. His family bought the house in late January for $760,000, moving in just before the Japanese nuclear emergency. He and his wife have a daughter at home and a son away at college.

As they shopped for waterfront property, McCurdy said, the nuclear power plant figured into their thinking mostly in terms of whether it could be seen through the bay window. The family's view of the Sound is unobstructed, but if they stand on the patio, they can see the orange and white tower.

As they shopped for waterfront property, McCurdy said, the nuclear power plant figured into their thinking mostly in terms of whether it could be seen through the bay window. The family's view of the Sound is unobstructed, but if they stand on the patio, they can see the orange and white tower.

"The plant was definitely way down on the list of considerations."

After Fukushima, nuclear power has been more on their minds, he said, but it wouldn't change their decision to choose this location.

"It's been elevated in terms of thinking about it, but we don't really talk too much about it, because we view the overall risk to be low."

McCurdy, 54, is a senior pharmaceutical scientist for Pfizer Inc., and approaches the question with an analytical mind. While he acknowledged there are some risks, "The safety record of the nuclear industry has been pretty good overall." Millstone is not near a fault line. Long Island would buffer them against a tsunami. Hurricanes in this area are infrequent and relatively mild. And if something catastrophic were to happen, he said, a nuclear emergency can be slow to develop.

"You'd have some time to react, to get the family out of town."

Growth even outside the Sun Belt

Even nuclear plants in low-growth areas of the country showed increases in population. For example, the population in the 10-mile preparedness zone around the Salem and Hope Creek plants, near Hancocks Bridge, N.J., grew by 54 percent. The state population grew just under 5 percent in the same decade.

These plants showed the most population growth, judged in percentage terms, using a 10-mile radius: Palo Verde, near Wintersburg, Ariz.; Brunswick, near Southport, N.C.; Calvert Cliffs, near Lusby, Md.; McGuire, near Huntersville, N.C.; Turkey Point, near Homestead, Fla.; and Shearon Harris, near New Hill, N.C. Each of these showed increases of more than 60 percent in a decade, from relatively small base populations in 2000.

Any idea that most reactors are in unpopulated areas is not borne out by the data, not when a 50-mile circle is drawn. The median, or middle, nuclear plant has 1.4 million residents within 50 miles. Out of 65 plants, 42 exceed a million people within that 50-mile zone.

How close is close?

Before Fukushima, people within a mile or two already knew they lived close to nuclear power. At Millstone, the neighborhood and the plant have the same name. The back gate of the plant was usually unlocked until after the Sept. 11 terrorist attacks, Van der Putten said, and workers could walk from the plant to the neighborhood beach to have lunch.

Now, with all the talk of evacuation zones in Japan, Americans living 10 or 20 or 50 miles away may be calculating for the first time their distance from a nuclear reactor. In Japan, the evacuation zone has been expanded to 12 miles for everyone, and 12 to 19 miles for children, pregnant women and hospitalized patients.

Some critics of nuclear power have said that the standard emergency planning zone for the US should be expanded to 20 or 50 miles. The US Nuclear Regulatory Commission has said it's sticking with 10 miles, but that the zone can always be expanded in an emergency.

In Waterford, more than 100 people packed a meeting Monday evening at Town Hall to hear from officials of Dominion, the Virginia energy company that owns the Millstone nuclear plant. Though a few anti-nuclear activists were louder, a larger group of nuclear supporters shouted them down.

Dominion executives stressed differences between their plant's design and the troubled reactors in Japan, and emphasized the multiple backup systems and emergency plans. (See this PDF file for a typical set of emergency instructions for a nuclear power plant.) Among other differences, Millstone has pressurized-water reactors, not the boiling-water reactors used in Fukushima and in many US plants. Dominion's main current concern is not fear but taxation: A proposed state tax in Connecticut would hit nuclear power hardest of all. Dominion has threatened to close the plant if the $335 million tax increase is approved and it can't pass the cost on to customers.

Judging by interviews in the neighborhoods, and conversation at the Main Street Grille in the village of Niantic, which has the best view of the plant, residents are less worried by the nuclear emergency than by another emergency just up the road in Boston: Two weeks into the baseball season, the Red Sox are in last place.

More than half of Americans polled say nuclear power is safe

Gallup, the polling organization, has asked two main questions on nuclear power.

Americans are divided on the question of construction of more nuclear power plants. In late March, with Japan very much in the news, 46 percent of those surveyed told Gallup that nuclear power is necessary to help solve the nation's current energy problems, while 48 percent said the dangers of nuclear power are too great, even if it would help solve energy problems. That's very nearly the same split as 10 years earlier.

On the issue of safety, there is a clear pro-nuclear majority: In the same Gallup poll in late March, 58 percent said that nuclear power plants are safe, while only 36 percent said they are not safe, with 6 percent expressing no opinion.

Gallup's editor in chief, Frank Newport, summarized: "It may be months or years before the final impact of the Japanese disaster on American attitudes toward nuclear power can be assessed. In the short term, Americans are concerned about the dangers of a nuclear crisis in this country. But Gallup's most recent survey suggests that support for nuclear power may be more stable than some might think."

Ranking of US nuclear plants by population within 50 miles

These are the 65 commercial nuclear power plants in the United States, showing the estimated populations within 10 and 50 miles, the changes in population between 2000 and 2010, and distances to selected larger cities within 50 miles. These 65 locations have 104 operating nuclear reactors.

The plants are ranked here by population within 50 miles.

More information: This information is summarized on the accompanying map, and more details on each plant and its population changes are available in an Excel spreadsheet.

1 Indian Point, near Buchanan, N.Y., two reactors, licensed 1973/1976, 2010 population within 50 miles is 17,220,895 (increase of 5.1 percent in a decade), 2010 population within 10 miles is 272,539 (increase of 17.6 percent), cities within 50 miles include New York (41 miles to city center); Newark, N.J., (39 miles); Stamford, Conn., (24 miles); Bridgeport, Conn., (40 miles).

2 San Onofre, near San Clemente, Calif., two reactors, licensed 1982/1983, 2010 population within 50 miles is 8,460,508 (increase of 14.9 percent in a decade), 2010 population within 10 miles is 92,687 (increase of 50.0 percent), cities within 50 miles include San Diego (45 miles).

3 Limerick, near Limerick, Pa., two reactors, licensed 1985/1989, 2010 population within 50 miles is 8,027,924 (increase of 6.1 percent in a decade), 2010 population within 10 miles is 252,197 (increase of 18.7 percent), cities within 50 miles include Philadelphia (28 miles).

4 Dresden, near Morris, Ill., two reactors, licensed 1969/1971, 2010 population within 50 miles is 7,305,482 (increase of 3.5 percent in a decade), 2010 population within 10 miles is 83,049 (increase of 47.6 percent), cities within 50 miles include Chicago (43 miles).

5 Peach Bottom, near Delta, Pa., two reactors, licensed 1973/1974, 2010 population within 50 miles is 5,526,342 (increase of 10.6 percent in a decade), 2010 population within 10 miles is 46,536 (increase of 7.2 percent), cities within 50 miles include Baltimore (36 miles).

6 Hope Creek, near Hancocks Bridge, N.J, one reactor, licensed 1986, 2010 population within 50 miles is 5,523,010 (increase of 7.5 percent in a decade), 2010 population within 10 miles is 53,811 (increase of 53.3 percent), cities within 50 miles include Philadelphia (43 miles).

7 Salem, near Hancocks Bridge, N.J, two reactors, licensed 1976/1981, 2010 population within 50 miles is 5,482,329 (increase of 7.6 percent in a decade), 2010 population within 10 miles is 52,091 (increase of 54.1 percent), cities within 50 miles include Philadelphia (43 miles).

8 Braidwood, near Braceville, Ill., two reactors, licensed 1987/1988, 2010 population within 50 miles is 4,976,020 (increase of 5.3 percent in a decade), 2010 population within 10 miles is 33,910 (increase of 6.5 percent), cities within 50 miles include Joliet (20 miles).

9 Fermi, near Monroe, Mich., one reactor, licensed 1985, 2010 population within 50 miles is 4,799,526 (decrease of 3.4 percent in a decade), 2010 population within 10 miles is 92,377 (increase of 9.5 percent), cities within 50 miles include Detroit (30 miles) and Toledo, Ohio, (27 miles).

10 Pilgrim, near Plymouth, Mass., one reactor, licensed 1972, 2010 population within 50 miles is 4,737,792 (increase of 10.2 percent in a decade), 2010 population within 10 miles is 75,835 (increase of 40.5 percent), cities within 50 miles include Boston (35 miles).

11 Oyster Creek, near Forked River, N.J., one reactor, licensed 1969, 2010 population within 50 miles is 4,482,261 (increase of 10.4 percent in a decade), 2010 population within 10 miles is 133,609 (increase of 35.8 percent), cities within 50 miles include Atlantic City (30 miles), Toms River (10 miles), Lakewood (19 miles), Asbury Park (30 miles), Cherry Hill (42 miles).

12 Seabrook, near Seabrook, N.H., one reactor, licensed 1990, 2010 population within 50 miles is 4,315,571 (increase of 8.7 percent in a decade), 2010 population within 10 miles is 118,747 (increase of 10.1 percent), cities within 50 miles include Boston (40 miles).

13 Turkey Point, near Homestead, Fla., two reactors, licensed 1972/1973, 2010 population within 50 miles is 3,476,981 (increase of 15.1 percent in a decade), 2010 population within 10 miles is 161,556 (increase of 62.8 percent), cities within 50 miles include Miami (25 miles).

14 Beaver Valley, near Shippingport, Pa., two reactors, licensed 1976/1987, 2010 population within 50 miles is 3,140,766 (decrease of 3.7 percent in a decade), 2010 population within 10 miles is 114,514 (decrease of 6.6 percent), cities within 50 miles include Pittsburgh (27 miles).

15 Millstone, near Waterford, Conn., two reactors, licensed 1975/1986, 2010 population within 50 miles is 2,996,756 (increase of 9.5 percent in a decade), 2010 population within 10 miles is 123,482 (increase of 29.5 percent), cities within 50 miles include Hartford (41 miles).

16 Monticello, near Monticello, Minn., one reactor, licensed 1971, 2010 population within 50 miles is 2,977,934 (increase of 8.6 percent in a decade), 2010 population within 10 miles is 62,976 (increase of 36.5 percent), cities within 50 miles include Minneapolis (38 miles), St. Paul (45 miles) and St. Cloud (22 miles).

17 Prairie Island, near Welch, Minn., two reactors, licensed 1974, 2010 population within 50 miles is 2,945,237 (increase of 7.8 percent in a decade), 2010 population within 10 miles is 27,996 (increase of 4.6 percent), cities within 50 miles include Minneapolis (39 miles) and St. Paul (32 miles).

18 Calvert Cliffs, near Lusby, Md., two reactors, licensed 1974/1976, 2010 population within 50 miles is 2,890,702 (decrease of 2.0 percent in a decade), 2010 population within 10 miles is 48,798 (increase of 86.4 percent), cities within 50 miles include Washington, D.C., (45 miles).

19 McGuire, near Huntersville, N.C., two reactors, licensed 1981/1983, 2010 population within 50 miles is 2,850,782 (increase of 23.3 percent in a decade), 2010 population within 10 miles is 199,869 (increase of 66.8 percent), cities within 50 miles include Charlotte (17 miles).

20 Three Mile Island, near Middletown, Pa., one reactor, licensed 1974, 2010 population within 50 miles is 2,803,322 (increase of 10.3 percent in a decade), 2010 population within 10 miles is 211,261 (increase of 10.9 percent), cities within 50 miles include Harrisburg (12 miles), York (13 miles), Lancaster (24 miles).

21 Shearon Harris, near New Hill, N.C., one reactor, licensed 1987, 2010 population within 50 miles is 2,562,573 (increase of 26.0 percent in a decade), 2010 population within 10 miles is 96,401 (increase of 62.6 percent), cities within 50 miles include Raleigh (21 miles), Durham (24 miles), Fayetteville (39 miles).

22 Catawba, near York, S.C., two reactors, licensed 1985/1986, 2010 population within 50 miles is 2,559,394 (increase of 25.0 percent in a decade), 2010 population within 10 miles is 213,407 (increase of 53.3 percent), cities within 50 miles include Charlotte (17 miles).

23 Surry, near Surry, Va., two reactors, licensed 1972/1973, 2010 population within 50 miles is 2,292,642 (increase of 13.9 percent in a decade), 2010 population within 10 miles is 127,041 (increase of 21.9 percent), cities within 50 miles include Virginia Beach (47 miles), Norfolk (30 miles), Richmond (50 miles).

24 Perry, near Perry, Ohio, one reactor, licensed 1986, 2010 population within 50 miles is 2,281,531 (decrease of 3.0 percent in a decade), 2010 population within 10 miles is 83,410 (increase of 8.0 percent), cities within 50 miles include Cleveland (36 miles).

25 Palo Verde, near Wintersburg, Ariz., three reactors, licensed 1985/1986/1987, 2010 population within 50 miles is 1,990,846 (increase of 28.6 percent in a decade), 2010 population within 10 miles is 4,255 (increase of 132.9 percent), cities within 50 miles include Phoenix (47 miles).

26 Waterford, near Killona, La., one reactor, licensed 1985, 2010 population within 50 miles is 1,969,431 (decrease of 0.8 percent in a decade), 2010 population within 10 miles is 75,538 (increase of 7.4 percent), cities within 50 miles include New Orleans (33 miles).

27 North Anna, near Louisa, Va., two reactors, licensed 1978/1980, 2010 population within 50 miles is 1,912,015 (increase of 22.6 percent in a decade), 2010 population within 10 miles is 21,396 (increase of 15.7 percent), cities within 50 miles include Richmond (40 miles).

28 LaSalle, near Marseilles, Ill., two reactors, licensed 1982/1984, 2010 population within 50 miles is 1,902,775 (increase of 22.6 percent in a decade), 2010 population within 10 miles is 17,643 (increase of 7.1 percent), cities within 50 miles include Joliet (34 miles).

29 Davis-Besse, near Oak Harbor, Ohio, one reactor, licensed 1977, 2010 population within 50 miles is 1,791,856 (increase of 1.4 percent in a decade), 2010 population within 10 miles is 18,635 (increase of 14.2 percent), cities within 50 miles include Toledo (26 miles).

30 Susquehanna, near Salem Township, Pa., two reactors, licensed 1982/1984, 2010 population within 50 miles is 1,765,761 (increase of 5.5 percent in a decade), 2010 population within 10 miles is 54,686 (increase of 3.3 percent), cities within 50 miles include Wilkes-Barre (18 miles).

31 Comanche Peak, near Glen Rose, Texas, two reactors, licensed 1990/1993, 2010 population within 50 miles is 1,755,528 (increase of 22.9 percent in a decade), 2010 population within 10 miles is 30,653 (increase of 44.1 percent), cities within 50 miles include Fort Worth (41 miles).

32 Vermont Yankee, near Vernon, Vt., one reactor, licensed 1973, 2010 population within 50 miles is 1,533,472 (increase of 2.9 percent in a decade), 2010 population within 10 miles is 35,284 (increase of 1.4 percent), cities within 50 miles include Brattleboro (6 miles); Keene, N.H., (16 miles); Fitchburg, Mass., (38 miles).

33 Oconee, near Seneca, S.C., three reactors, licensed 1973/1973/1974, 2010 population within 50 miles is 1,404,690 (increase of 14.8 percent in a decade), 2010 population within 10 miles is 66,307 (increase of 11.5 percent), cities within 50 miles include Greenville (30 miles).

34 Palisades, near Covert, Mich., one reactor, licensed 1972, 2010 population within 50 miles is 1,326,618 (increase of 4.4 percent in a decade), 2010 population within 10 miles is 28,644 (decrease of 4.5 percent), cities within 50 miles include South Bend (45 miles).

35 Byron, near Byron, Ill., two reactors, licensed 1985/1987, 2010 population within 50 miles is 1,273,771 (increase of 14.5 percent in a decade), 2010 population within 10 miles is 25,679 (increase of 5.9 percent), cities within 50 miles include Rockford (17 miles).

36 Saint Lucie, near Jensen Beach, Fla., two reactors, licensed 1976/1983, 2010 population within 50 miles is 1,271,947 (increase of 37.0 percent in a decade), 2010 population within 10 miles is 206,596 (increase of 49.7 percent), cities within 50 miles include Ft. Pierce (8 miles) and West Palm Beach (42 miles).

37 Ginna, near Ontario, N.Y., one reactor, licensed 1969, 2010 population within 50 miles is 1,269,589 (increase of 2.1 percent in a decade), 2010 population within 10 miles is 66,847 (increase of 12.7 percent), cities within 50 miles include Rochester (17 miles).

38 D.C. Cook, near Bridgman, Mich., two reactors, licensed 1974/1977, 2010 population within 50 miles is 1,225,096 (increase of 2.8 percent in a decade), 2010 population within 10 miles is 54,638 (increase of 3.4 percent), cities within 50 miles include South Bend (26 miles).

39 Summer, near Jenkinsville, S.C., one reactor, licensed 1982, 2010 population within 50 miles is 1,187,553 (increase of 14.3 percent in a decade), 2010 population within 10 miles is 17,599 (increase of 26.2 percent), cities within 50 miles include Columbia (30 miles).

40 Watts Bar, near Spring City, Tenn., one reactor, licensed 1996, 2010 population within 50 miles is 1,186,648 (increase of 12.8 percent in a decade), 2010 population within 10 miles is 18,452 (increase of 4.1 percent), cities within 50 miles include Oak Ridge (37 miles).

41 Sequoyah, near Soddy-Daisy, Tenn., two reactors, licensed 1980/1981, 2010 population within 50 miles is 1,079,868 (increase of 11.1 percent in a decade), 2010 population within 10 miles is 99,664 (increase of 13.8 percent), cities within 50 miles include Chattanooga (14 miles).

42 Crystal River, near Crystal River, Fla., one reactor, licensed 1977, 2010 population within 50 miles is 1,046,741 (increase of 32.4 percent in a decade), 2010 population within 10 miles is 20,695 (increase of 50.9 percent), cities within 50 miles include Ocala, (38 miles) and Spring Hill (34 miles).

43 Browns Ferry, near Athens, Ala., three reactors, licensed 1973/1974/1976, 2010 population within 50 miles is 977,941 (increase of 11.0 percent in a decade), 2010 population within 10 miles is 39,930 (increase of 12.3 percent), cities within 50 miles include Huntsville (28 miles).

44 Fort Calhoun, near Fort Calhoun, Neb., one reactor, licensed 1973, 2010 population within 50 miles is 953,410 (increase of 11.1 percent in a decade), 2010 population within 10 miles is 20,639 (increase of 9.7 percent), cities within 50 miles include Omaha (18 miles).

45 River Bend, near St. Francisville, La., one reactor, licensed 1985, 2010 population within 50 miles is 951,103 (increase of 11.2 percent in a decade), 2010 population within 10 miles is 23,466 (increase of 11.1 percent), cities within 50 miles include Baton Rouge (25 miles).

46 FitzPatrick, near Scriba, N.Y., one reactor, licensed 1974, 2010 population within 50 miles is 909,798 (increase of 3.2 percent in a decade), 2010 population within 10 miles is 35,136 (increase of 17.0 percent), cities within 50 miles include Syracuse (36 miles).

47 Nine Mile Point, near Scriba, N.Y., two reactors, licensed 1969/1987, 2010 population within 50 miles is 909,523 (increase of 3.2 percent in a decade), 2010 population within 10 miles is 35,632 (increase of 17.0 percent), cities within 50 miles include Syracuse (36 miles).

48 Robinson, near Hartsville, S.C., one reactor, licensed 1970, 2010 population within 50 miles is 893,536 (increase of 10.3 percent in a decade), 2010 population within 10 miles is 32,675 (increase of 2.6 percent), cities within 50 miles include Columbia (49 miles).

49 Clinton, near Clinton, Ill., one reactor, licensed 1987, 2010 population within 50 miles is 813,658 (increase of 5.7 percent in a decade), 2010 population within 10 miles is 14,677 (decrease of 0.4 percent), cities within 50 miles include Springfield (51 miles) and Champaign (30 miles).

50 Point Beach, near Two Rivers, Wis., two reactors, licensed 1970/1973, 2010 population within 50 miles is 777,556 (increase of 10.0 percent in a decade), 2010 population within 10 miles is 19,975 (decrease of 6.7 percent), cities within 50 miles include Green Bay (28 miles).

51 Kewaunee, near Kewaunee, Wis., one reactor, licensed 1973, 2010 population within 50 miles is 776,954 (increase of 10.1 percent in a decade), 2010 population within 10 miles is 10,292 (decrease of 0.9 percent), cities within 50 miles include Green Bay (26 miles).

52 Vogtle, near Waynesboro, Ga., two reactors, licensed 1987/1989, 2010 population within 50 miles is 726,640 (increase of 8.8 percent in a decade), 2010 population within 10 miles is 5,845 (decrease of 16.3 percent), cities within 50 miles include Augusta (26 miles).

53 Duane Arnold, near Palo, Iowa, one reactor, licensed 1974, 2010 population within 50 miles is 658,634 (increase of 7.1 percent in a decade), 2010 population within 10 miles is 107,880 (increase of 8.2 percent), cities within 50 miles include Cedar Rapids (10 miles).

54 Quad Cities, near Cordova, Ill., two reactors, licensed 1972, 2010 population within 50 miles is 655,207 (decrease of 0.3 percent in a decade), 2010 population within 10 miles is 34,350 (decrease of 0.5 percent), cities within 50 miles include Moline (19 miles).

55 Callaway, near Fulton, Mo., one reactor, licensed 1984, 2010 population within 50 miles is 546,292 (increase of 15.0 percent in a decade), 2010 population within 10 miles is 10,092 (increase of 3.8 percent), cities within 50 miles include Fulton (11 miles), Jefferson City (26 miles), Columbia (32 miles).

56 Brunswick, near Southport, N.C., two reactors, licensed 1974/1976, 2010 population within 50 miles is 468,953 (increase of 39.6 percent in a decade), 2010 population within 10 miles is 36,413 (increase of 105.3 percent), cities within 50 miles include Wilmington (18 miles).

57 Diablo Canyon, near Avila Beach, Calif., two reactors, licensed 1984/1985, 2010 population within 50 miles is 465,521 (increase of 22.4 percent in a decade), 2010 population within 10 miles is 26,123 (increase of 50.2 percent), cities within 50 miles include San Luis Obispo (12 miles) and Paso Robles (31 miles).

58 Columbia, near Richland, Wash., one reactor, licensed 1984, 2010 population within 50 miles is 445,416 (increase of 23.4 percent in a decade), 2010 population within 10 miles is 10,055 (increase of 10.4 percent), cities within 50 miles include Richland (12 miles) and Pasco (18 miles).

59 Hatch, near Baxley, Ga., two reactors, licensed 1974/1978, 2010 population within 50 miles is 424,741 (increase of 12.0 percent in a decade), 2010 population within 10 miles is 11,061 (increase of 6.7 percent), cities within 50 miles include Vidalia (19 miles).

60 Farley, near Columbia, Ala., two reactors, licensed 1977/1981, 2010 population within 50 miles is 421,374 (increase of 6.1 percent in a decade), 2010 population within 10 miles is 11,842 (increase of 8.0 percent), cities within 50 miles include Dothan (17 miles).

61 Grand Gulf, near Port Gibson, Miss., one reactor, licensed 1984, 2010 population within 50 miles is 321,400 (decrease of 0.4 percent in a decade), 2010 population within 10 miles is 6,572 (decrease of 18.6 percent), cities within 50 miles include Jackson (54 miles).

62 Arkansas Nuclear, near London, Ark., two reactors, licensed 1974/1978, 2010 population within 50 miles is 308,219 (increase of 13.3 percent in a decade), 2010 population within 10 miles is 44,139 (increase of 17.2 percent), cities within 50 miles include Russellville (6 miles).

63 South Texas, near Bay City, Texas, two reactors, licensed 1988/1989, 2010 population within 50 miles is 254,049 (increase of 10.2 percent in a decade), 2010 population within 10 miles is 5,651 (decrease of 2.4 percent), cities within 50 miles include Lake Jackson (40 miles).

64 Wolf Creek, near Burlington, Kan., one reactor, licensed 1985, 2010 population within 50 miles is 176,656 (decrease of 1.7 percent in a decade), 2010 population within 10 miles is 5,466 (decrease of 2.8 percent), cities within 50 miles include Emporia (30 miles).

65 Cooper, near Brownville, Neb., one reactor, licensed 1974, 2010 population within 50 miles is 163,610 (decrease of 1.6 percent in a decade), 2010 population within 10 miles is 4,414 (decrease of 5.9 percent), cities within 50 miles include Nebraska City (25 miles).

About the study

Geographic information system (GIS) analysis was done by Longcreative, a data analysis and design company, for msnbc.com. Distances to cities within 50 miles were calculated by msnbc.com.

Population figures use the 2000 and 2010 US Census. The Census Bureau reports population within areas called census tracts, relatively small areas of less than 10,000 people. The mapping program drew circles around the plant at 5 miles, 10 miles, etc. (A 1-mile radius wouldn't be meaningful: Measuring from the reactor site itself, much of the land within 1 mile would either be on plant property or in the water in most cases.)

As the circle around a plant cuts through census tracts, the map assigned a share of each tract's population to the circle based on the percentage of the tract's land area that is within the circle. The analysis focused on 10 miles, the standard area in the US for preparing for nuclear emergencies, and 50 miles, because of the recommendation given to Americans in Japan after the Fukushima emergency.

The estimates for total population living with certain distances from any nuclear power plant:

•Within 5 miles, 916,330 residents, up 15.0 percent from 796,509.

•Within 10 miles, 4,079,007 residents, up 16.9 percent from 3,488,328.

•Within 20 miles, 18,510,584 residents, up 12.3 percent from 16,480,894.

•Within 50 miles, 116,223,077 residents, up 6.5 percent from 109,105,722.

Japan Crisis Raises Questions About US Spent Nuclear Fuel (CNN)

By David Fitzpatrick And Drew Griffin, CNN Special Investigations Unit

CNN, April 15, 2011

If you're one of the millions of Americans who get even a portion of your electric power from a nuclear generating plant, for more than three decades you've been paying a tax, whether you realize it or not, to fund the storage of nuclear waste from that plant in a safe place.

Collected at an estimated $750 million a year, the Nuclear Energy Institute now says this so-called "nuclear waste fund" amounts to close to $30 billion. And it is not being used to pay for the storage of a single ounce of spent nuclear fuel.

"The government has made much more of a mess than it should have been," Jay Silberg, a Washington lawyer, told CNN.

Silberg represents many of the nation's biggest nuclear power companies and for more than 20 years, he's been involved in lawsuits against the government, trying to make it pay for what he says it promised to do way back in 1982.

"That program, when it was set up, was supposed to be science-based," he says.

At one point, all of the nation's spent nuclear fuel – at least the spent fuel used for commercial power generation – was supposed to end up at a bleak spot in Nevada, about 90 miles north of Las Vegas, called Yucca Mountain.

Since the project began, the government has spent close to $11 billion in construction, engineering and scientific studies and there have been several blue ribbon commissions examining the safety of Yucca Mountain to hold all that waste.

What happened?

"Rather than let the science take its course, politics has interfered and the plug has been pulled on Yucca, at least so far," Silberg told CNN.

And by politics, he means politics at the highest level.

Almost from the start, Nevada politicians said they wanted nothing to do with the Yucca Mountain Project. But it wasn't until Barack Obama began his presidential campaign that Nevada's opposition gained serious traction.

Obama wrote to a Las Vegas newspaper, The Review-Journal, in the spring of 2007 saying he had "always" been against storing nuclear waste at Yucca Mountain.

And then after he became president, Obama killed nearly all of the essential government funds for Yucca Mountain.

And he did one more thing.

Obama appointed Gregory Jaczko as chairman of the Nuclear Regulatory Commission, the government agency with the power to regulate the nation's nuclear plants and with oversight over Yucca Mountain.

Jazcko (pronounced "Yaz-Koh") served for years as chief of staff to Senate Majority Leader Harry Reid of Nevada, who vowed never to allow Yucca Mountain to proceed.

The offices of Sen. Reid and Jaczko told CNN that the nation's spent nuclear fuel is safe right where it is, strung out across 65 storage sites nationwide.

That spent fuel ...tiny uranium pellets surrounded by steel rods coated with a zirconium alloy all packaged in a highly engineered assembly... now totals more than 70,000 tons nationwide. Two thirds of that spent fuel, according to the Nuclear Energy Institute, is now in pools under about 40 feet of water. Some anti nuclear organizations say those pools are too jammed with spent fuel rods and are vulnerable to accident or terrorist attack.

The nuclear industry says the spent fuel is safe and NRC officials say they believe the spent fuel can be reliably stored where it is for another 40 years.

CNN wanted to visit Yucca Mountain to see what's become of the project. The most recent television footage available of Yucca Mountain was taken in 2002. But officials from the Department of Energy, which oversees Yucca, declined, citing safety reasons. Some Republican members of Congress say they, too, were blocked in an attempt to visit Yucca.

At a Senate hearing this week in Washington, Sen. Lamar Alexander, R-Tennessee, pointedly told NRC Chairman Jaczko that it was "important to ask about Yucca Mountain."

"We have collected $30 billion to pay for an eventual disposal," he said. "Why not use it?"

SRS Equipment Headed To Japan (AUGC)

By Rob Pavey, Staff Writer

Augusta Chronicle, April 15, 2011

Storage tanks, pumps and monitoring equipment from Savannah River Site will be shipped from South Carolina to Japan to help in the battle to stabilize the damaged nuclear reactors at Fukushima.

Five 16,000-gallon steel tanks will be moved from Savannah River Site to Japan to help in the effort to stabilize the damaged reactors.

"This is what we can send them at this point to support their activities," said Jim Giusti, a US Department of Energy spokesman.

Equipment is also being gathered from federal nuclear sites around the country, he said. Its transfer is being expedited as a "government to government diplomatic exchange" that will convey the gear directly to the Japanese government.

The primary items from SRS, identified by its management contractor, Savannah River Nuclear Solutions, include a "radioactive liquid transport assembly," a high-tech, self-contained trailer housing a 1,000-gallon tank, pumps and a monitoring system. A smaller trailer that goes with it includes fuel tanks and a diesel generator.

Also being sent are five storage tanks, each with a 16,000-gallon capacity. They can be used to store radioactive water -- one of the primary contaminants at the Japan site. The total value of all the equipment is about $400,000.

Giusti said the 36-foot-long tanks are made of stainless or carbon steel and were formerly used to store contaminated nitric acid and other materials from the site's F Canyon chemical separations facility.

The tanks, and all other equipment being sent to Japan, are clean and free of any contamination or radioactivity.

"These tanks will be useful for anything liquid they need to treat or do anything with," Giusti said.

Workers at the site are also building wooden "cribbing" to hold the tanks on flatbed trailers.

No departure schedule has been arranged, Giusti said, and US officials are in discussions with Japan's government to determine the best means of transportation to relocate the equipment from SRS to Japan.

No SRS workers are currently scheduled to go to Japan, but site officials were working extra hours to expedite security badges for transportation workers who will help move the equipment.

Another piece of equipment from SRS -- a 190,000-pound cement pump that was in use at the construction site of the mixed oxide fuel facility -- was airlifted from Atlanta to Japan, where it arrived in Tokyo earlier this week. It remained at a facility in Chiba, Japan, on Thursday awaiting transport to the crippled Fukushima plant.

INTERNATIONAL NUCLEAR NEWS

Japan Eyes Possible Damage To Spent Nuclear Fuel (CNN)

By Matt Smith

CNN, April 15, 2011

Japanese regulators discounted concerns about damage to the still-potent spent fuel from the Fukushima Daiichi nuclear power plant's No. 4 reactor Thursday, saying high radiation levels reported earlier this week "most probably" came from outside debris.

A high reading above the pool prompted the plant's owner, the Tokyo Electric Power Company, to take a sample from the spent fuel pool on Tuesday. But the radiation levels are far lower than they would be if there were damage to the fuel rods, said Hidehiko Nishiyama, the chief spokesman for Japan's Nuclear and Industrial Safety Commission.

"We need more analysis to identify the precise status of the spent fuel in unit 4," he said.

Tokyo Electric said Thursday night that the sample was the first time they have taken a reading off one of the spent fuel pools. The water temperature in the No. 4 pool was 90 degrees Celsius, more than twice a normal reading, and more coolant water was poured into the reservoir on Wednesday.

The company said it suspects the fuel rods were damaged due to insufficient coolant at some point since the crisis began, but could not clarify the timing.

Nishiyama told reporters Thursday evening that the fuel rods have not suffered "any particular damage." Officials are still looking at the readings from that water sample before reaching a final conclusion, but said the radiation reading was "most probably due to debris" blown into the badly damaged housing around the No. 4 reactor.

The Tokyo Electric Power Company reported a cumulative radiation reading above the pool at 84 millisieverts on Tuesday, about a third of the annual allowable dose for plant workers during the emergency. Water samples from the pool showed a concentration of radioactive iodine-131, the most commonly measured reactor byproduct, at 220,000 bequerels per liter -- more than 730 times the amount considered safe for drinking water in Japan.

Outside observers have expressed concerns about the status of the spent fuel in reactors 1, 3 and 4 several times during the month-long crisis at Fukushima Daiichi, about 240 km (150 miles) north of Tokyo. Temperature sensors in those pools have been out since mid-March, and workers have been spraying water into the damaged housings of those reactors on a near-daily basis to keep them topped off.

The battle began March 11, when the tsunami that followed Japan's magnitude 9 earthquake knocked out the plant's cooling systems. Tokyo Electric estimated the height of that wall of water at 14 to 15 m (45 to 48 feet) -- a level Nishiyama said would be the new standard for barriers around Japanese nuclear power plants.

The sea wall around Fukushima Daiichi was 5 m. In the aftermath of the tsunami, the cores of three of Fukushima Daiichi's six reactors were damaged by overheating and resulting hydrogen explosions blew apart the buildings surrounding reactors 1 and 3.

The vast amount of radiation released from the plant, largely in the first two weeks of the disaster, prompted Japanese authorities to rate the crisis at the top of the international scale that measures nuclear accidents. The Level 7 designation puts Fukushima Daiichi on par with the April 1986 Chernobyl accident in the former Soviet Union, though Japanese authorities say their plant has spewed only 10 percent of the radioactivity that was emitted from Chernobyl.

Plant workers have been pouring hundreds of tons of water a day into the three reactors that were damaged in the aftermath, and at least one of the reactors, in unit 2, is believed to be leaking highly radioactive water. Radioactive contamination spread across a wide swath of land around the plant and into the adjacent Pacific Ocean, though data released by government ministries has shown a decline in radiation levels in recent weeks.

Engineers have taken steps this week toward containing the disaster, pumping radioactive water from service trenches and tunnels into a storage reservoir for No. 2 reactor's steam condensers. And they are laying the piping needed to transfer an estimated 10,000 tons into a facility designed for treating low-level radioactive waste Tokyo Electric said Thursday.

The company dumped more than 9,000 tons of less-radioactive water into the Pacific last week to make room for the more-dangerous fluid believed to be leaking from reactor No. 2 -- a move Japanese authorities described as an emergency measure, but one that enraged the country's fishermen.

The government issued expanded evacuation orders Monday for several towns outside the 30-kilometer radius that was declared a danger zone in the early days of the disaster, warning that prolonged exposure to radiation levels there could pose a long-term danger to human health. And Japanese government data this week reported finding low levels of radioactive strontium, another reactor byproduct, in two of those towns in the days after the disaster.

Strontium-90 is considered a health hazard not only because of its 29-year radioactive half-life but because a portion of it gets absorbed by bone if ingested, according to the US Environmental Protection Agency. There is no acceptable standard for strontium under Japanese regulations, but Japan's science ministry said the reported figures were not high enough to pose an immediate danger to human health.

The Japanese government has tried to limit the damage done to farmers in Fukushima and other prefectures where contamination from the plant has been found, lifting bans on farm products from surrounding areas if they pass three tests in three successive weeks.

Chief Cabinet Secretary Yukio Edano, the government's point man on the crisis, announced Thursday that kakina, a leafy green, from Tochigi Prefecture was now safe for shipment. The move follows a ban on outdoor-grown shiitake mushrooms from 16 towns and villages neighboring damaged plant to the country's banned food list Wednesday.

A Wary Drive Up To The Gate Of Fukushima (LAT)

Two journalists, their interpreter and their driver set out to see the damaged Japanese nuclear plant the world has been watching. Along the way, the radiation gauge kept ticking upward.

By John M. Glionna

Los Angeles Times, April 15, 2011

The radiation gauge beeped, signaling that isotopes were in the atmosphere.

As our SUV followed a line of electricity towers marching across deserted farmland, we made an agreement: If the dosimeter hit 15, we'd turn around. The device inched up to 12, its faint beep seeming more like a scream. Each time, edgily, we called out the number.

Thirteen.

The ventilation was off and the windows were sealed tight, even though the afternoon was warm. With our heads covered and our mouths sheathed in breathing masks, the SUV became a sauna as we bumped along roads with cracks as wide as a man's head.

The minutes ticked by.

Fourteen.

Miles past a police checkpoint, we finally saw it. In Japanese and English, a large blue sign. Fukushima, the place where no one else in the world wanted to be.

We — two journalists, an interpreter and a driver — wanted to see the villain at the center of Japan's nuclear nightmare. As we pulled up to the gate, we knew that somewhere in the near distance, scores of workers were scrambling to bring the damaged reactors under control.

But those efforts were as invisible as the nuclear threat itself.

Suddenly, as we approached the main gate, security guards were upon us, two figures who'd seemingly stepped out of "Star Wars," menacing in their dual-intake respirator masks and head-to-toe white hazmat gear.

Peering into the SUV, expressions obscured, they shook their heads as they waved us off, refusing to answer questions, repeating the dismissive circular hand motion for a U-turn.

They noted our license plate as we turned around and slowly embarked along a side road, briefly trailed by guards in another vehicle.

A hundred yards away, several mysterious towers shone white in the afternoon sunlight, hiding their secrets. It was difficult to get a bead on the place; trees seemed to have been placed strategically to prevent a full-on view of things.

To the side, we saw a sign posted by the nuclear plant's safety committee. It carried an announcement: "This month's safety slogan: Make sure to check everything and do the risk assessment. The goal is zero disasters for this year."

In the weeks since the March 11 tsunami destroyed Fukushima's emergency cooling system, people as far away as California have fretted over full nuclear meltdown at the plant 155 miles north of Tokyo. Explosions in four of Fukushima's six reactors have spewed dangerous radioactive isotopes of iodine, cesium and strontium, which can cause bone cancer and leukemia.

Most residents within 18 miles have evacuated, leaving behind a post-apocalyptic landscape and a decades-old plant that's now sick and dying.

We traveled to Fukushima with questions. What does it look like? Smell like? Would they let us inside? So far, the few pictures have come from aerial fly-bys that showed smoking reactors in a soulless industrial setting.

As we neared the coastal plant, we peered out the SUV windows, trying to create a lasting mental image of a place many say will one day be sealed off in concrete to protect against nuclear poisoning.

The best description of the scene: silence. We mostly stayed inside the vehicle, but once in a while, we opened a window, or briefly jumped out to take a picture. And we listened.

They say that following the 1986 Chernobyl disaster, the birds stopped singing. At Fukushima, we didn't hear birds, or anything else. No children shouting, no car horns honking, not even the waves on the too-distant shore. Just the wind.

Fukushima translates as "fortunate isle," and it once signified purity, used to brand fruit and vegetables. Now it carries the whiff of Armageddon.

This week, officials raised the severity rating of the nuclear crisis to a maximum level 7, a threshold reached only once before in the history of nuclear power, at the now-shuttered Chernobyl reactor.

We didn't make the decision to go to Fukushima lightly. We brought along the dosimeter, which gives an accumulated total of radioactivity exposure. The device was loaned to us by a scientist who assured us it was safe to travel near the reactor as long as there was no explosion. Otherwise, our exposure would be equivalent to what we might get on a cross-country flight. In other words, not that much — a level people experience daily. (An exam later at a nearby center confirmed it: We tested negative for radiation.)

Still, our interpreter was worried at first. A 22-year-old college student, she wants to have children one day. The driver, on the other hand, never blinked. Also 22, he had on a previous trip to the hot zone worn a shirt that read, "It is a good day to die."

In the end, we didn't merely leave the plant; we fled. On the rise of a hill, we looked back a last time at the complex, but we saw nothing except the trees that shelter it from prying eyes.

Sign Says 'Zero Disasters For This Year' : The Two-Way : NPR (NPR)

By Mark Memmott

NPR, April 15, 2011

Two American reporters, John Glionna of the Los Angeles Times and Steve Herman from Voice of America, drove into the evacuation zone around Japan's crippled Fukushima Dai-Ichi nuclear power plant on Wednesday and made it all the way to the facility's main gate.

There, Herman reports, they were told to turn around. And they had been previously ordered "not to open our vehicle windows and to report to a radiation screening center in the town of Tamura afterwards, where we should wash the truck."

As for what they saw, Herman says that "for most of the 20-kilometer journey we spotted only police, military and other official vehicles. Even those we could count on one hand. Not a single person was seen outside in Futaba and Okuma, which until March 11 [the date of the eartquake and tsunami that devastated the area] had a combined population of about 18,500. The doors of some businesses remain open through which people hastily fled when the ground shook with unprecedented fury."

And at the gate, they found what Herman says was an "extremely ironic proclamation." It was a sign, obviously put up before the March 11 disaster, that reads: "This month's safety slogan: Be sure to check everything and do a risk assessment. Zero disasters for this year."

He adds, by the way, that it's not illegal to be inside the evacuation zone — but likely will be soon as Japanese authorities move to further restrict the area. Herman also talked to CNN about the experience. While he tells the network that they brought along a radiation detector, which he says registered "a very small amount of radiation, Herman does not say whether they wore any protective gear.

Nuclear Cleanup Plans Hinge On Unknowns (NYT)

By Hiroko Tabuchi

New York Times, April 15, 2011

TOKYO — Even before the troubled Fukushima nuclear plant has been brought under control, two rival conglomerates likely to be part of an eventual cleanup are estimating that the effort could take 10 years — or 30.

The widely divergent outlooks underscore the basic uncertainties clouding any forecast for Fukushima: when cooling stems will be restored and radiation emission halted; how soon workers can access some parts of the plant; and how bad the damage to the reactors, their fuel, and nearby stored fuel turns out to be. The United States Nuclear Regulatory Commission has warned that at least one reactor's fuel may even have leaked out of the reactor pressure vessel, something that has never before happened in a nuclear accident.

A global team led by Hitachi said Thursday that it would take at least three decades to return the site to what engineers refer to as a "green field" state, meaning within legal limits of radiation for any residents. Toshiba, Japan's biggest supplier of nuclear reactors, said it could take as little as 10 years

Both companies have large nuclear-related businesses and appear to be eager to speak about endgame scenarios to a crisis that has heightened global public mistrust over nuclear power. There are also billions of dollars likely at stake in the clean-up, which could help Hitachi and Toshiba buoy their sinking bottom lines. The two said this week that annual profits would fall short of their forecasts because of the widespread disruptions in production and supply chains.

At a roundtable with reporters on Thursday, Toshiba's chief executive, Norio Sasaki, wielded an inch-thick proposal outlining the dismantlement plan submitted to the plant's operator, Tokyo Electric Power, last week. Hitachi has presented a competing plan.

The scale and complexity of the challenge is unprecedented. No nuclear reactor has ever been fully decommissioned in Japan, let alone the four certain to be dismantled at Fukushima, after being flooded with seawater to avert meltdowns, and after suffering explosions and other damage. The final fate of the two other reactors there has not been announced, but they too may need to be decommissioned.

The accident at Three Mile Island in 1979 involved just one reactor, and thought there was a partial meltdown of the nuclear fuel rods, the chamber holding them did not rupture. The cleanup there still took 14 years and cost about $1 billion. (Two reactors that continue to operate at the site are set to be decommissioned in 2014.)

Recovery from the disaster at Cherynobyl in 1986, meanwhile, is an example engineers are not eager to study. Following the multiple explosions and fire that sent huge radioactive plumes into the atmosphere, workers covered the remains of the reactor with sand, lead and eventually entombed it with concrete to halt the release of radiation. The concrete coffin still remains at Chernobyl, and the area remains uninhabitable.

For now, workers continue to try to stem leaks of highly radioactive water from the plant even as they add to the flow by continuing to pump in water — now fresh, not salts. They are also are racing to revive the contained cooling systems that circulate water and do not bleed contaminants.

But serious challenges that remain, including what Japan's nuclear regulator said Thursday were rising temperatures at one of the units , as well as a series of strong aftershocks. Later, Hidehiko Nishiyama, the deputy director-general of Japan's Nuclear and Industrial Safety Agency, said the situation at the plant remained "difficult."

Still, Toshiba's engineers expect the plant to stabilize "in several months," Mr. Sasaki said, and for full-scale cooling to resume. It would be five years before engineers would be able to open up the pressure vessels to remove the nuclear fuel, he said, and dismantling the reactors and cleaning up radiation at the plant would take at least another five years.

Toshiba's team includes engineers from Westinghouse, whose majority owner is Toshiba, and the Babcock & Wilcox Company, an energy technology and services company that handles the disposal of hazardous materials. The two companies helped shut down the damaged reactor at Three Mile Island.

A Hitachi spokesman in Tokyo, Yuichi Izumisawa, said that the 10-year scenario was overly optimistic. He said that Hitachi's engineers expect that it will take that long just to remove the nuclear fuel rods from the plant and place them in casks to transport to a safe storage facility.

Only then can dismantling the plant's structures begin, he said, followed by cleaning up remaining radiation.

Hitachi, the country's second-biggest supplier of reactors, has a team of 50 experts working on its dismantling plan. It has a joint nuclear venture with General Electric and is also working with the American nuclear operator, Exelon, and Bechtel, the engineering firm.

"You basically need to dismantle the plant from the inside, and the inside is till very radioactive," he said. "At Hitachi, we are baffled over what kind of technology would allow everything to be finished in 10 years."

Tetsuo Matsumoto, a professor in nuclear engineering at Tokyo City University, said that how long the decommissioning process would take depended heavily on the state of the nuclear fuel.

"Will it still be shaped like rods? Or will it have melted and collapsed into a big mass?" he said. "It could be 10 years or it could be 30. You just won't know until you open up the reactor."

Ken Ijichi contributed reporting.

Japan Orders Utility To Pay Evacuees (WSJ)

In Bow to Critics, Tokyo Will Also Provide Report on Dumped Water; Sea Radioactivity Levels Fall

By Mitsuru Obe And Mari Iwata

Wall Street Journal, April 15, 2011

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

Burial Of Japan Reactors Trickier Than Chernobyl: Pump Firm (REU)

By Josie Cox

Reuters, April 15, 2011

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

Tokyo Power To Compensate 50,000 Evacuees (NYT)

By Keith Bradsher

New York Times, April 15, 2011

TOKYO — The Tokyo Electric Power Company announced plans on Friday to distribute 50 billion yen, or $600 million, in initial payments to 50,000 people evacuated because of the accident at its Fukushima Daiichi nuclear power plant, as technicians continued to struggle to repair cooling and electrical systems at the damaged reactors.

Masatake Shimizu, the company's president, said that single-person households would receive about $9,000 and larger households would receive about $12,000. Only people who live in a radius of 19 miles of the damaged power plant that was initially evacuated will be eligible for the payments.

The government ordered on Monday the evacuation in the coming month of five more communities that lie farther from the stricken power plant but received higher levels of radiation than elsewhere because of wind and rain patterns. Once residents of these communities have been certified by the government as also qualifying as victims of a nuclear disaster, Tokyo Electric Power will also make the same payments to them, Mr. Shimizu said; power company officials had no immediate statistic for how many more people might qualify from these communities.

The government said that Tokyo Electric Power acted after a request from Banri Kaieda, the minister of economy, trade and industry. The utility's full liability for the nuclear accident has not yet been established and will depend heavily on whether the government characterizes the earthquake and tsunami on March 11 as an exceptional event that could not have been readily anticipated.

No decision has been made yet on possible compensation to farmers and fishermen who may have lost their livelihoods at least temporarily because of the nuclear accident.

Repair efforts continued slowly at the Fukushima Daiichi plant. An announcement late Thursday of sharply rising temperatures at the base of Reactor No. 3 had provoked brief concern, but regulators said on Friday morning that the readings appeared to have come from a malfunctioning thermometer.

In another sign of a return to normality, Tokyo Disneyland reopened with limited hours on Friday, after closing a month ago to conduct repairs and conserve electricity. Large throngs showed up outside the amusement park's gates before opening time as thousands vied to be among the first to return to the site.

Moshe Komata and Kantaro Suzuki contributed reporting.

Japan Orders Nuclear Plant Operator To Pay Compensation; Evacuees Say Amount Isn't Enough (AP)

Associated Press, April 15, 2011

Japan's government ordered the operator of a tsunami-damaged nuclear plant Friday to pay $12,000 to each household forced to evacuate because of leaking radiation, but some of the displaced slammed the handout as too little.

Tens of thousands of residents unable to return to their homes near the nuclear plant are bereft of their livelihoods and possessions, unsure of when, if ever, they will be able to return home. Some have traveled hundreds of kilometers (miles) to Tokyo Electric Power Co.'s headquarters in Tokyo to press their demands for compensation.

TEPCO will start paying compensation April 28, with families forced to evacuate getting 1 million yen (about $12,000) and individuals getting 750,000 yen (about $9,000), Trade Ministry spokesman Hiroaki Wada said.

"There are around 150 evacuation centers alone. It will take some time until everyone gets money. But we want the company to quickly do this to support people's lives," Trade Minister Banri Kaieda said at a news conference.

The arrangement is a provisional one, with more compensation expected, Wada said. Roughly 48,000 households living within about 19 miles (30 kilometers) of the crippled Fukushima Dai-ichi nuclear plant would be eligible for the payments.

"I'm not satisfied," said Kazuko Suzuki, a 49-year-old single mother of two teenagers from the town of Futuba, adjacent to the plant. She has lived at a shelter at a high school north of Tokyo for the last month.

Her family has had to buy clothes, food, shampoo and other basics because they fled the area on government orders without taking time to pack. She has lost her job as a welfare worker, and a job prospect for her 18-year-old fell through because of the effects of the disaster.

"We've had to spend money on so many extra things and we don't know how long this could go on," she said.

Akemi Osumi, a 48-year-old mother of three also from Futuba, said the money was a "small step" but that it didn't fairly compensate larger families. Her family is living at the same shelter but also must rent an apartment for her eldest son to go to a vocational school.

"One million yen doesn't go very far," she said. "I'm not convinced at just 1 million yen per family. If it was dependent on the size of the family I'd understand, but it's not."

TEPCO's president, Masataka Shimizu, formally announced the plan, saying he wanted the payments to be made "fairly and quickly."

TEPCO expects to pay 50 billion yen (about $600 million) in government-ordered compensation. But Shimizu said 2 trillion yen ($24 billion) was needed to resolve the continuing problems with the plant and to restart conventional power stations to make up for power shortages.

The company is still struggling to stabilize the nuclear plant, which saw its cooling systems fail after a magnitude 9.0 earthquake on March 11 triggered a massive tsunami that wrecked emergency backup systems as well as much of the plant's regular equipment.

Radiation leaks from the crisis have contaminated crops and left fishermen in the region unable to sell their catches, a huge blow to an area heavily dependent on fishing and farming.

The governor of Fukushima, Yuhei Sato, has vigorously criticized both TEPCO and the government for their handling of the disaster, demanding faster action.

"This is just a beginning. The accident has not ended. We will continue to ask the government and TEPCO to fully compensate evacuees."

Nearly 140,000 people are still living in shelters after losing their homes or being advised to evacuate because of concerns about radiation.

Seeking to console evacuees, Japan's emperor visited the country's disaster zone for the first time Thursday.

In Asahi, where 13 people were killed and some 3,000 homes damaged, Emperor Akihito, 77, and Empress Michiko got their first look at the devastation, somberly gazing at a plot of land where a home once stood and also commiserating with evacuees at two shelters.

The royal couple kneeled on mats to speak quietly with the survivors, who bowed in gratitude and wiped away tears. One evacuee with Down syndrome, who has trouble speaking, wrote "I will keep striving" in a small notebook that he showed to the emperor and empress. Asahi is about 55 miles (85 kilometers) east of Tokyo.

Even as the month-old emergency dragged on, radiation levels dropped enough for police sealed in white protective suits, goggles and blue gloves to begin searching for bodies amid the muddy debris inside a six-mile (10-kilometer) radius around the Fukushima Dai-ichi plant that had been off-limits.

Authorities believe up to 1,000 bodies are lodged in the debris. A police spokesman, who gave only the surname Sato, said searchers were working Friday to recover three of the 10 bodies they located on Thursday that were trapped in cars or debris.

Overall, the bodies of only about 13,500 of the more than 26,000 people believed killed in the March 11 disaster have been recovered. Many of the remaining victims are believed to have been washed out to sea.

Japan Nuclear Plant Operator Promises Compensation (AFP)

AFP, April 15, 2011

The embattled operator of Japan's crippled nuclear power plant on Friday promised an initial one million yen ($12,000) in compensation to each family living close to the facility.

"We have decided to offer necessary payment as provisional compensation so that we can provide as much support as possible," Masataka Shimizu, president of Tokyo Electric Power (TEPCO), told a news conference.

Tens of thousands of people living in a 20-kilometre (13-mile) zone around the plant were ordered to leave due to radiation fears, and people within 30 km were first told to stay indoors and later encouraged to also evacuate.

"We will pay the provisional payment to families who lived in areas where people were ordered to evacuate or stay inside their houses," Shimizu said.

Japan's economy suffered a big blow in the triple earthquake, tsunami and nuclear disaster, but the country should have no problem financing reconstruction, the central bank chief said in a speech at the Council on Foreign Relations in New York.

Bank of Japan Governor Masaaki Shirakawa conceded problems in the economic supply chain, power generation, tourism and other important sectors.

But he said the financial system could cope.

"As long as Japan continues to work tirelessly towards rebuilding it is unlikely that financing problems will arise," he said.

Shirakawa said the three-pronged disaster struck "at a time when Japan's economy was gradually returning" to strength. He said the disruption mean "it is inevitable" that production and supply will suffer.

And given the global nature of economy, closely linked countries such as China and the United States could also be affected. "The impact on supply chain could spread internationally," he said.

However, Shirakawa insisted that Japan has the resources to bounce back.

"Japanese society has shown resilience. The work of rebuilding has started to get underway gradually but steadily," he said.

"The first challenge is ensuring the necessary financing for rebuilding. In this regard, Japan has had an excess of saving over investment for a protracted period. From a macro-economic perspective, this financing will not be difficult," he said.

"Japan's capacity for foreign currency funding is extremely strong, given that the country is the biggest creditor nation in the world."

"Private financial institutions are fully able to meet an increase in financing demand for rebuilding. Meanwhile, Japanese government bonds have been issued quite smoothly," he said.

"Most private economists believe that Japan's GDP growth rate will turn positive again from the third quarter of 2011."

Power cuts are now the greatest threat to Japan's economic recovery, the Asian Development Bank's top economist said Thursday, as the pain from the disaster showed few signs of relenting.

After initial concerns that the disaster would wreck Japanese and global manufacturing supply chains, Changyong Rhee said the main fear had become a prolonged power cuts and brownouts.

Power cuts "can hurt not just the affected area, but the whole of Japan," Rhee said, pointing to disruptions that could hobble the economy for months to come.

"Initially, we thought that power supply would be normalized by the end of April; it looks like it is going to be a bit longer than that."

Power shortages have plagued the country since the quake, which caused 11 of Japan's 55 nuclear reactors to be at least temporarily closed.

The government has already imposed electricity-saving targets to reduce consumption by up to 25 percent, even as it battles to contain leaks at the ailing Fukushima plant.

More than a month after a devastating 9.0-magnitude earthquake hit the country, Rhee and other economists are still trying to understand the long-term impact on the world's third largest economy and its neighbors.

The biggest question mark might now be the fate of those 11 nuclear power plants, which account for around six percent of the country's electricity production.

Tepco Plans Initial $600 Million Payment To Evacuees Of Nuclear Disaster (BLOOM)

By Michio Nakayama And Pavel Alpeyev

Bloomberg News, April 15, 2011

Tokyo Electric Power Co. said it expects to make initial payments of about 50 billion yen ($600 million) to compensate evacuees from the area near the damaged Fukushima Dai-Ichi nuclear power plant.

The company plans to offer 1 million yen per household and 750,000 yen for single-person households within 30 kilometers of the plant, President Masataka Shimizu said at a briefing in Tokyo today. About 50,000 families who were ordered to leave their homes or to remain indoors will receive the financial aid, he said.

Tokyo Electric has tumbled more than 70 percent, the worst performer on the MSCI World (MXWO) Index, since the March 11 earthquake and tsunami knocked out cooling systems at the plant and caused the worst nuclear disaster since Chernobyl. The company, known as Tepco, may face claims of as much as 11 trillion yen, which may lead to nationalization, Bank of America Corp.'s Merrill Lynch said last month.

Chief Cabinet Secretary Yukio Edano said today the government ordered Tepco to start paying evacuees of the accident by the end of the month. The goal is to get the initial compensation payments out before Japan's Golden Week holidays, which begin April 29, Edano said.

Toshiba Rises After President Says Profit May Beat Forecast (BLOOM)

By Mariko Yasu, Maki Shiraki

Bloomberg News, April 15, 2011

Toshiba Corp. (6502), Japan's biggest maker of nuclear reactors, rose to the highest level in 10 days in Tokyo trading after President Norio Sasaki said the company may beat its profit forecast.

Net income for the year ended March 31 may exceed Toshiba's January estimate, he told reporters today in Tokyo, declining to elaborate. The stock reversed losses earlier in the day to close trading at 404 yen, a jump of 2 percent. The benchmark Nikkei 225 (NKY) Average Index gained 0.1 percent.

The March 11 earthquake and tsunami in Japan, which forced manufacturers including Toshiba to shutter factories, will have a limited impact on earnings for the fiscal year just ended, Sasaki said. The company, which helped build reactors at the Fukushima Dai-Ichi nuclear station that was damaged by the disaster, is sticking with its goal of winning 39 reactor orders by 2015, he said.

"Damages from the Fukushima disaster are probably not as bad as people had expected," said David Rubenstein, a Tokyo-based analyst at MF Global FXA Securities Ltd., who rates the stock "buy."

Toshiba said in January it expected full-year net income of 100 billion yen ($1.2 billion), compared with a loss of 19.7 billion yen a year earlier. Revenue and operating profit may fall short of Toshiba's January estimates, Sasaki said today.

Toshiba is expected to report net income of 94.2 billion yen for the year ended March 31, according to estimates compiled by Bloomberg. The company is set to announce its earnings outlook for the fiscal year 2011 on May 9.

Clients Toshiba approached haven't canceled their plans to build nuclear reactors, the president said.

"There are possibilities that regulation, or design, will change in each nation. Even if we are to secure 39 contracts, there can still be delays in groundbreaking," he said.

Toshiba may delay its target of generating 1 trillion yen in annual revenue from nuclear power plant sales by 2015, Sasaki said. The company had aimed to clear the sales target as early as 2014, he said.

"We need more time to figure out whether we can clear the target in 2015 or 2016, or it needs to be rescheduled further."

The reactor maker may find it harder to win new contracts after Japan's record earthquake and tsunami crippled the Dai-Ichi plant. Blasts and radiation leaks at the power station, located about 220 kilometers (135 miles) north of Tokyo, led to the evacuation of hundreds of thousands of inhabitants.

The 40-year-old power plant, equipped with six reactors, had its power and back-up generators knocked out by the tsunami that followed the 9-magnitude earthquake. A lack of power to cool reactors led to explosions and radiation leaks.

Rules for nuclear power stations need to be modified to require stronger protection against tsunamis, Sasaki said today.

The world's second-largest maker of flash-memory chips is facing shortages of parts that may affect earnings during the six months to Sept. 30, Sasaki said. Negotiations with alternative suppliers "have progressed significantly" and Toshiba won't likely have a big procurement problem, he said.

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Toshiba To Revise Nuclear Power Business Plan (JapanToday)

Japan Today, April 15, 2011

Toshiba Corp President Norio Sasaki said Thursday the company may be forced to revise its plan to win orders to build 39 nuclear reactors around the world by fiscal 2015 following the nuclear power plant accident in Fukushima Prefecture.

The major electronics company, the parent of leading US nuclear power company Westinghouse Electric Co, could also change its aim to book 1 trillion in sales in the nuclear power business in fiscal 2015 as the accident, triggered by a natural disaster, has had a significant impact on its core nuclear power business.

"At this point, no one has told us about dropping (plans to build new nuclear plants), but they may be delayed even if we win orders," Sasaki said, showing a view that the company may face difficulty in achieving the targeted orders.

On the sales target, Sasaki said it is now unlikely for the company to realize its earlier prospects of being able to achieve the goal ahead of schedule in fiscal 2014, adding that he will withhold saying whether it can reach the 1 trillion yen target in fiscal 2015.

But he emphasized that nuclear power will remain as "an important alternative" in seeking to resolve energy and environment issues.

Toshiba rival Hitachi Ltd has also said it plans to review its goal of winning orders for 38 nuclear power generation projects by fiscal 2030 and revise downward its goal of posting sales of 380 billion yen in fiscal 2020 in the nuclear power business.

The troubled No. 1 to 3 reactors at the Fukushima Daiichi nuclear power plant run by Tokyo Electric Power Co were manufactured by General Electric Co and Toshiba. Hitachi is a supplier of the No. 4 reactor, which was undergoing regular inspection and not operating when the massive earthquake and tsunami struck the site on March 11.

Regarding its response to the accident at the plant, Sasaki said, "Decommissioning of nuclear reactors can be done in 10 years at earliest."

He said Toshiba will work to decommission the nuclear reactors based on the experiences of US companies involved in dismantling the Three Mile Island nuclear power plant in the United States as well as using newly developed technology such as robots, according to its proposal submitted to TEPCO.

Sasaki said the impact of the disaster on its overall business performance was limited, saying its group net profit for the year ended March 31 could surpass its projection of 100 billion yen, which was already revised upward in January from an earlier forecast of 70 billion yen.

Toshiba Counts Cost Of Fukushima Disaster (FT)

By Jonathan Soble, Tokyo

Financial Times, April 14, 2011

Full-text stories from the Financial Times are available to FT subscribers by clicking the link.

Toshiba Expects Quake To Have 'Limited' Effect On Profit (WSJ)

Japanese firm expects quake's impact on earnings to be 'limited'

By Juro Osawa, Mari Iwata

Wall Street Journal, April 15, 2011

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

Nuclear Will Remain Core Business At Toshiba: President (NIKKEI)

Nikkei, April 15, 2011

TOKYO (Nikkei)--Nuclear power will continue to be an important operation, but Toshiba Corp. (6502) will also bolster fossil fuel, solar and other power generation systems, President Norio Sasaki said Thursday in an interview with The Nikkei and others.

Because the nuclear accident at the Fukushima Daiichi plant will likely prompt governments around the world to freeze or review their nuclear power projects, "there is a possibility that the goal of generating 1 trillion yen in sales from the nuclear power business in fiscal 2015 may be delayed," Sasaki said.

The nuclear power business brought Toshiba roughly 570 billion yen in sales in fiscal 2009, which ended March 2010. The 1 trillion yen target for fiscal 2015 calls for the company to secure orders for 39 reactors by that year.

"We haven't heard anything that suggests any of the projects that we are targeting will be canceled," the president said. "But construction starts for some of them will likely be delayed due to the introduction of tougher disaster-prevention and plant-design regulations."

A joint-venture nuclear power project in Texas "will not be canceled, with the process toward getting approval progressing," Sasaki said.

Tokyo Electric Power Co. (9501), which was to invest in the Texas project, looks certain to leave the plan after the Fukushima nuclear accident. But "overseas electric utilities have approached us with proposals to team up" for the project, the president continued.

Any downgrading of earnings projections for the nuclear power business "can be offset by the expansion of the digital consumer electronics business, as well as the infrastructure business stemming from reconstruction demand," Sasaki said. Toshiba also sees growth in its fossil fuel, hydro and solar power businesses.

For the year ended last month, Toshiba likely "missed its estimates of 6.6 trillion yen in sales and 250 billion yen in operating profit by small margins, but topped its 100 billion yen net profit forecast," he said.

"Full-out efforts have been made to resolve the accident at the Fukushima Daiichi nuclear plant," Sasaki said. Toshiba "will team up with US firms to provide medium- to long-term support" in such areas as planning for the decommissioning of the nuclear plant, he said.

(The Nikkei April 15 morning edition)

Toshiba CEO Plans To Overcome Supply Chain Woes In H2 (REU)

Reuters, April 15, 2011

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

Experts: Store Blood Cells From Japan Nuke Workers (AP)

Associated Press, April 15, 2011

Workers at Japan's troubled nuclear plant should store blood cells now in case they need them later as treatment for radiation overdose, some Japanese experts suggest.

Plant workers are struggling to control radiation leakage from the Fukushima Dai-ichi complex, which was severely damaged by the March 11 earthquake and tsunami. Radiation levels are dangerously high in some areas of the plant, and the experts note that the work there will take years, posing a risk of accidental exposure.

High doses of radiation can destroy the blood-making cells of the bone marrow, a potentially fatal outcome that can be treated with transplants of blood stem cells. Such transplants are standard therapy now for blood diseases like leukemia. Getting those cells from a donor takes time, and potential incompatibility between the donated cells and the recipient can lead to severe complications, the experts noted.

So they suggest that the plant's workers have their own blood stem cells banked now. That involves getting injections for several days to get stem cells from the marrow to enter the bloodstream. Then blood would be drawn from one arm, processed to extract the stem cells, and returned into the other arm. That takes several hours.

Once the stem cells were stored, any workers who later got accidentally exposed to a large radiation dose could get infusions of their own cells.

The experts, from institutions including Toranomon Hospital and the Japanese Foundation for Cancer Research in Tokyo, discuss the idea in a letter published online Thursday by the journal Lancet.

They noted that reaction to the idea has been mixed since they first raised it last month. Some medical groups have supported it, while other experts have said it would pose an undue physical and psychological burden on nuclear workers, they wrote. In any case, some transplant teams are ready to collect and store the cells, they said.

In a telephone interview with The Associated Press, a US stem cell transplant expert said the idea might have some limited use.

Dr. Nelson Chao of Duke University said the proposal would be reasonable for workers who enter high-radiation zones to clean up the nuclear complex.

But its usefulness would be limited to workers who end up getting radiation doses within a rather narrow range, he said. If they get less than that, they'll recover anyway. If they get more, they'd also sustain lethal and untreatable damage to the gut and other organs including the lung. Stem cell transplants could not help with that, he said.

Japanese Nuclear Workers' Blood Should Be Saved To Help In Exposure Cure (BLOOM)

By Kristen Hallam

Bloomberg News, April 15, 2011

Stem cells should be collected from the blood of workers at the damaged Fukushima Dai-Ichi nuclear plant in case of accidental exposure to radiation, five Japanese scientists wrote in the medical journal The Lancet.

Rapidly dividing cells such as intestinal tract and those essential for fertility are the most vulnerable to radiation, said the researchers, including Tetsuya Tanimoto of the Japanese Foundation for Cancer Research and Shuichi Taniguchi of Tokyo's Toranomon Hospital, in a letter published today by the journal. Damage to bone marrow can be remedied with cell transplants, they said.

Storing the workers' blood would make transplants easier because the body will recognize and accept its own cells. That eliminates the needs for drugs that suppress the immune system, which might make a patient vulnerable to infections, the scientists said.

"Such an approach would be the industry's best defense" in the event of a major accident, Tanimoto and colleagues said. "The most important mission is to save the nuclear workers' lives and to protect local communities."

About 107 transplant teams are standing by to handle the cells, the scientists wrote, citing a March 29 statement from the Japanese Society for Haematopoietic Cell Transplantation. More than 50 hospitals in Europe have agreed to assist if needed, Tanimoto and colleagues wrote.

The approach can only help those with damaged bone marrow, and wouldn't help radiation victims with injured gastrointestinal tracts or lungs, the scientists said.

Tokyo Electric Power Co. estimates the fight to stabilize its crippled Fukushima reactors will last through June, leaving them vulnerable to more aftershocks and radiation leaks, a person briefed on the utility's plan said. The person asked not to be identified because he isn't authorized to speak to the media.

Workers can't start the process of decommissioning the plant's four crippled reactors until temperatures and pressure have been brought down. Cleaning up the disaster, which has forced the evacuation of hundreds of thousands of people living within 20 kilometers (12 miles) of the plant, could take decades and cost more than 1 trillion yen ($12 billion).

"The danger of a future accidental radiation exposure is not passed," the Japanese researchers wrote in The Lancet.

Banking Stem Cells Could Save Japan Nuclear Workers (REU)

By Julie Steenhuysen

Reuters, April 15, 2011

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

Countries At Nuclear Safety Meeting Pledge To Learn Lessons From Japanese Nuke Crisis (AP)

By Veronika Oleksyn

Associated Press, April 15, 2011

Countries attending a nuclear safety conference pledged Thursday to act on lessons learned from the Japanese reactor crisis triggered by last month's devastating earthquake but stressed they needed more specifics to do so.

The roughly 60 countries are all party to the Convention on Nuclear Safety that came into being after the 1979 Three Mile Island and the 1985 Chornobyl nuclear accidents and commits members to submit reports on the security of their power plants. The idea is that questioning and peer pressure at gatherings every three years will keep countries on their toes. All states with operating nuclear power plants are parties to the treaty.

The countries said in a statement released at the end of a 10-day meeting at the Vienna-based International Atomic Energy Agency that they are "committed to draw and act upon the lessons of" the March 11 disaster at Japan's Dai-ichi power plant and that they will be holding a special session in August 2012 on the matter.

"The international community recognizes the significance of the Fukushima nuclear accident, which highlights the need to consider new challenges and underlines the paramount importance of safety in the use of nuclear energy," the statement said.

But a vice-president of the gathering, Bill Borchardt of the United States, said more information was needed in order to know how best to respond and proceed in the aftermath of the Fukushima accident that has raised fears over radioactive fallout and questions about the safety of nuclear power.

"There's much more to be learned before we can even understand what the full range of follow-up actions would be for both the regulators in each of the nations and for the operators of the nuclear power plants around the world," Borchardt told reporters. "Many of us are taking actions now based upon the best information we have available today but we realize that information is not complete at this time."

Details that would be important to have include specifics about the conditions inside the reactors at the Fukushima site and what caused the failure of various pieces of equipment, Borchardt said.

According to the statement, which also referenced the need for more information, Japan has committed to providing missing information "as soon as possible."

Li Ganjie of China's National Nuclear Safety Administration who presided over the meeting, said the need to boost the ability of nuclear power plants to resist natural disasters such as earthquakes attracted substantial debate during the conference, most of which was closed to the media.

"At present, natural disasters have (a) wide range of impacts upon nuclear power plants — the Fukushima accident is a typical example," Li said through a translator.

Nuclear Regulators Delay Study Of Fukushima Lessons Until 2012 (BLOOM)

By Jonathan Tirone

Bloomberg News, April 15, 2011

Nuclear powers ended a closed-door meeting by delaying for 16 months consideration of the failures that triggered the meltdown at Japan's Fukushima Dai-Ichi plant.

The 72-nation Convention on Nuclear Safety pledged to hold an extraordinary meeting in August 2012 to review the breakdown of safety systems at Fukushima, according to a seven-paragraph statement released today in Vienna.

"It is understood that the lessons-learned process cannot be completed until sufficient additional information is known and fully analyzed," according to the statement. "Japan has committed to provide this information as soon as possible."

Backup generators and cooling systems at the Fukushima Dai- Ichi station were knocked out by a 15-meter (49-foot) tsunami following a magnitude-9 earthquake on March 11, triggering the worst nuclear disaster since Chernobyl in 1986. Hydrogen explosions occurred as water in the reactors and spent-fuel ponds boiled away and radiation leaked into the air and sea.

Japan's representative to the meeting, Ichiro Ogasawara, thanked the regulators and industry participants for their "solidarity in the course of the review meeting" during "this crucial juncture in the history of the convention."

Signatories to the treaty, drafted after the 1986 Chernobyl meltdown in Ukraine, will also evaluate whether the convention does enough to promote nuclear safety when they meet next year.

"Nuclear safety is the very lifeline of nuclear power development," China's Li Ganjie, who presided at the meeting that began April 4 and ended today, said at a briefing. "It is a global issue. Members of the public have anxiety about nuclear safety issues."

Nuclear Forum Backs Safety Push After Japan Crisis (REU)

By Sylvia Westall

Reuters, April 15, 2011

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

Siemens Rethinks Nuclear Ambitions (WSJ)

By Vanessa Fuhrmans

Wall Street Journal, April 15, 2011

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

Why Anne Lauvergeon Stayed At Areva (BSWK)

Sarkozy wanted the nuclear power executive to be Finance Minister, but she felt her duty was with the company

By As Told To Diane Brady

BusinessWeek, April 15, 2011

Fukushima confirms that when it comes to safety, you can't negotiate. The nuclear industry's responsibility is to be transparent. Given the catastrophe, this requirement will grow even more.

I've always advocated the most rigorous standards and secure technology. When I became CEO of Cogema in 1999, people told me it was professional suicide to join the nuclear industry. The French mainstream believed nuclear had no future. Oil prices were low, but we still needed domestic sources of energy. I pushed for Cogema to merge with Frama-tome. My friends told me to forget about trying to bring these companies together and to worry about my own career. But I felt we could be stronger as one company. In 2001 we became Areva.

Years later, when Nicolas Sarkozy asked me to be Finance Minister, I was flattered but also very embarrassed. Mine can be a political job; we are mostly state-owned and deal with multiple levels of government. But you don't want to refuse the President. Sarkozy is a lawyer by training, and he's very charming. The discussions lasted three days, and it didn't help that the public knew he wanted me in the job. Even so, I didn't want to negotiate.

It wasn't easy saying no. Did I worry about the impact on the company? Of course. Still, I felt my value was here. I'm very attached to Areva. My term is up in June, and I would like to stay on. That's not my decision, but right now my mind is on this business every second.

I think nuclear power will continue to play an important role by reducing the dependence on imported energy, lowering carbon emissions, and ensuring security of supply. In the past, critics have said that Areva's new reactors are too expensive. But we build them to withstand the crash of a wide-body aircraft or any type of serious accident, including a core meltdown. There is a cost. We lost a major bid last year to a cheaper competitor. But I believe that low-cost reactors are not and should not be the future.

Merkel Faces Nuclear Exit Bill As German States Exert Pressure (BLOOM)

By Tony Czuczka And Nicholas Comfort

Bloomberg News, April 15, 2011

Chancellor Angela Merkel faces a bid by members of the upper house of parliament to force her to abandon nuclear power as she tries to rally German state leaders behind an overhaul of energy policy by the middle of May.

The main opposition Social Democratic Party will put a bill to the upper house in Berlin today calling for the immediate closure of eight reactors and all 17 nuclear plants to be shut within about a decade. The opposition holds a majority in the upper house, the Bundesrat, where states are represented.

The bill steps up the pressure on Merkel to speed the exit from atomic power as she works on an unprecedented shift in the energy mix driving Europe's biggest economy. She is due to hold talks on energy policy with Germany's 16 state prime ministers today after last month ordering a 90-day reassessment of nuclear power as workers fought a meltdown at Japan's Fukushima plant.

"The government has to show that they can switch the country's energy supply and there just aren't that many options," said Bernhard Jeggle, an analyst with Landesbank Baden-Wuerttemberg in Stuttgart. "They'll be placing the focus on renewable energy sources, an expansion of the electricity grid, energy savings and flexible fossil power plants."

E.ON AG (EOAN) and RWE AG (RWE), Germany's two biggest utilities that both operate nuclear plants, are among the worst performers this year on the 30-member benchmark DAX index. (DAX) E.ON dropped 0.3 percent to 22.44 euros yesterday at the close of Frankfurt trading, while RWE fell 1.1 percent to 46.66 euros.

Carbon dioxide emission permits for December rose 1 percent to 16.81 euros a metric ton on the ICE Futures Europe exchange in London as of 4:59 p.m. local time yesterday. They have risen about 17 percent this year.

Anti-nuclear activists have called a demonstration outside the Chancellery as Merkel, Economy Minister Rainer Bruederle and Environment Minister Norbert Roettgen meet with the state heads. A press conference is scheduled for 2:30 p.m. Berlin time.

The coalition plans to expand offshore wind parks and build more gas plants to plug a potential gap in power generation that would follow a retreat from nuclear, according to a government paper. Merkel's Cabinet backed plans two days ago to allow utilities to pump greenhouse gases underground via technology known as carbon capture and storage.

Merkel, whose government last year pushed through plans to prolong the running time of reactors by an average of 12 years, imposed a moratorium on the extension on March 14 and ordered the seven oldest plants idled pending industry-wide safety checks. Polls suggest the public want her to go further.

Nineteen percent of 1,000 respondents to a poll for N24 television yesterday said that nuclear plants should operate beyond 2020, while 76 percent said they should shut earlier. Of those, 31 percent wanted reactors closed down immediately.

The Social Democrats, who introduced a law to close all reactors by about 2022 when in coalition government with the anti-nuclear Greens, are urging a return to that schedule. The Bundesrat bill, submitted by six SPD-led states including Berlin and Hamburg, calls for the seven oldest plants as well as the Kruemmel reactor to remain closed. If passed, it would go to the lower house, where Merkel has a majority.

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Malfunction Forces Czech Nuclear Reactor Shut Down (AP)

Associated Press, April 14, 2011

PRAGUE (AP) – An official says a Czech nuclear power plant is shutting down one of its four reactors for the second time this month due to a malfunction that poses no safety threat.

Petr Spilka, spokesman for the Dukovany nuclear plant says the problem occurred on one of the reactor's 12 fittings that regulates the flow of water. Spilka says the hot irradiated water is not leaking but the flow is higher than usual.

He said Thursday it would take several days to fix the problem, which last occurred in the plant in 1985.

The plant had to shut down the same reactor April 1 for several days due to a pipe leaking irradiated water.

A Country Searching For Engineers To Serve Its Nuclear Needs (NYT)

By Heather Timmons

New York Times, April 15, 2011

NEW DELHI — Besides political protests, India's nuclear energy ambitions face another big roadblock, critics say: a shortfall of trained people to run, repair and regulate power plants.

If it proceeds with plans to build 44 nuclear plants over the next decade, India needs to add 10,000 to 19,000 skilled people to the nuclear industry, according to PricewaterhouseCoopers. That is about 1,000 to 1,900 people a year.

But India's top universities are graduating only about 50 nuclear specialists a year. Meanwhile, special graduate programs approved by the Department of Atomic Energy to address the shortage will add only about 100 master's-level graduates this year.

"There is a significant gap" between the manpower India's nuclear industry needs and the work force it is getting, said Kameswara Rao, the executive director of energy, utilities and mining at PricewaterhouseCoopers in India. "If this program is going to take off," he said, "you need to have engineers trained in the basics."

Worldwide, personnel shortages in the nuclear power industry and other science-related careers are a challenge, thanks to the lure of big money from finance jobs and start-ups.

The dearth is particularly severe in India.

As this still-developing nation builds seaports, roads and other big infrastructure projects, companies are paying top dollar for engineering students from the best schools. At the same time, the continued growth of the outsourcing industry is attracting good English speakers, with its possibility of international careers and competitive pay. Entrepreneurial types, meanwhile, are being drawn to emerging industries like telecommunications and retail.

Still, the challenge to building a nuclear work force is not primarily money. Starting salaries in the nuclear industry are about 30,000 rupees ($678) a month, comparable with other white-collar, entry-level jobs in India. And the positions can come with perks like subsidized housing.

The tough part seems to be persuading top students to study nuclear power in the first place — and, if they do, to keep them in India.

"We find that all the bright students who go to elite schools, after engineering they do not do science," said R. B. Grover, the director of Homi Bhabha National Institute, a special university set up by the government to train students in the industry.

The few that do are often poached immediately by nuclear programs in the rest of the world. Of the dozen graduates from Delhi University's doctorate nuclear program this year, eight got job offers from European companies, Mr. Grover said.

Homi Bhabha National Institute has 1,100 students enrolled now, mostly from smaller towns and second-tier schools, who hold bachelor degrees in engineering. The Institute provides a one-year training course in nuclear sciences, and then the students do on-the-job training and are certified by the government before they can work in a plant.

Indian nuclear experts say that number needs to jump significantly, or India will need to scale down its nuclear plans.

China Needs Nuclear Power—and Regulations (BSWK)

The Fukushima disaster is not slowing down the Chinese industry, which plans to build 10 reactors a year

By Dexter Roberts

BusinessWeek, April 15, 2011

As the Ninth China International Exhibition on Nuclear Power Industry opened in Shenzhen on Apr. 6, drawing 300 companies from around the globe, the near-meltdown at Japan's Fukushima Dai-Ichi plant was on everyone's mind. "Three Mile Island and Chernobyl shocked the world. But they didn't stop people from continuing to develop the peaceful use of nuclear power," said Zhang Huazhu, chairman of the China Nuclear Energy Assn., at the opening ceremony. "We have grounds to believe that the accident at Fukushima Dai-Ichi does not suggest any end to the nuclear renaissance. It may be a catalyst to continuing the safe development of the industry." Attending were industry leaders Areva and Hitachi, as well as mainland companies that may someday challenge them: China Guangdong Nuclear Power, China National Nuclear Power, and China Power Investment.

China still seems committed to boosting its nuclear power from 10.8 gigawatts, or 2 percent of its energy mix today, to up to 80 gigawatts and 5 percent by 2020. To get there, China has to bring 10 new reactors online every year. The accident in Japan "will not affect China's overall strategy," Zhang Guobao, the former director of China's National Energy Administration, told the audience at the Shenzhen conference.

The challenge is to develop safely. As an industry that China has targeted for heavy investment and fast growth, nuclear reactor construction not only benefits from state subsidies and low-interest loans, it also gets expedited approvals from regulators in Beijing. That has encouraged some local governments to launch projects even before getting all the approvals needed. Building a nuclear reactor creates lots of jobs and adds as much as $300 million annually to a local economy, estimates Bo Kong, a professor at Johns Hopkins University School of Advanced International Studies in Washington. "There is an inherent conflict between development and safety in China," he says, citing reactor projects in Rushan and Jiujiang as examples of cities that jumped the gun on approvals. While China's nuclear industry has had no serious accidents, Bo, a specialist in energy and resources policy, credits that to its relative youth.

China is taking steps to strengthen oversight. On Mar. 16 the government announced a freeze on approvals for new reactors as regulators carry out an examination of safety procedures. The State Oceanic Administration announced on Apr. 7 that China will limit future building on the coast. China's 13 operating reactors, as well as 28 more under construction, are near the Pacific and could be vulnerable to tsunamis.

The National Nuclear Safety Administration, a department under the Environmental Protection Ministry, will expand its staff of inspectors and other personnel from around 300 today to more than 1,000. By contrast, the US Nuclear Regulatory Commission has nearly 4,000 people overseeing 104 reactors, according to the NRC website. "Nuclear safety is back again as a global concern. We should put it at the core of things," Wang Yiren, secretary general of the mainland's second main regulatory agency, the China Atomic Energy Authority, said in Shenzhen.

Despite more than 20 years of deliberation, China still lacks a comprehensive nuclear industry law. Regulators are far weaker than the powerful National Development and Reform Commission, the body in charge of expanding nuclear energy. At least 10 government organizations have overlapping responsibilities for nuclear safety, according to Bo. Those include the Health Ministry, the Public Security Ministry, and the State-owned Assets Supervision and Administration Commission, which oversees major personnel changes in top enterprises. "If there is an accident, who is in charge?" asks Jeff Briner, PricewaterhouseCoopers's nuclear specialist.

China's three largest nuclear enterprises have joined the World Association of Nuclear Operators, the London-based group charged with improving nuclear performance and safety. And they've opened their doors to inspectors sent by the association to run reviews of China's reactors. "China companies are very, very involved," says Laurent Stricker, chairman of the association.

Stricker, however, says much of what goes on inside the regulators is opaque. Repeated phone calls requesting an interview with the National Nuclear Emergency Coordination Committee were answered with staff telling one reporter, "You have the wrong number" or "We're busy." The media department of the Environmental Protection Ministry—which oversees the nuclear safety administration—answered calls yet could not arrange an interview.

The bottom line: China will have to monitor its safety procedures closely as it builds 10 reactors a year to satisfy its hunger for affordable energy.

China May Approve Building Of Shandong Nuclear Plant, Business News Says (BLOOM)

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China may approve construction of a nuclear plant in the eastern Chinese province of Shandong's Rongcheng city in "near future", the China Business News reported, citing an unidentified person familiar with the situation.

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