

THE ENERGY DAILY

Business and Policy Coverage of the Power, Natural Gas, Oil, Nuclear and Renewables Industries

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GenOn Closing Key Coal Plant For U.S. Capital City

BY GEORGE LOBSENZ

In an announcement that may end a years-long debate over a facility previously seen as critical to electricity reliability in the nation's capital, GenOn said Tuesday it would shut down its coal-fired Potomac River power plant in Alexandria, Va., despite past orders by federal officials that the plant remain open to ensure adequate power supplies for Washington, D.C.

The action by GenOn, a merchant generator formed last year by the merger of Mirant and RRI Energy, has long been sought by Alexandria officials, who consider the 482 megawatt power plant a blight on their city's otherwise attractive waterfront. They have been talking with the plant operator for years about redevelopment of the site.

For its part, GenOn has operated the aging plant at only 20 percent of capacity in recent years and has long wanted to close it to avoid the need to install millions of dollars of emissions control equipment at the heavily pol-

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NTSB Rips Regulators, Industry On Old Pipes In San Bruno Report

BY CHAD WOODWORTH

After a nearly year-long probe into one of the worst U.S. natural gas pipeline accidents in years, the National Transportation Safety Board Tuesday approved a final report that harshly criticized Pacific Gas & Electric Co. for massive equipment and emergency response failures in the September 2010 explosion on its line that killed eight in San Bruno, Calif., and said federal and state regulators shared substantial blame for lax oversight of the company and granting safety exemptions for old pipelines built before 1970.

"Our investigation revealed that for years, PG&E exploited weaknesses in a lax system of oversight," Deborah Hersman, chairman of the National Transportation Safety Board (NTSB), said in a statement.

"We also identified regulators that placed a blind trust in the companies that they were charged with overseeing to the detriment of public safety."

The NTSB report also said Pacific Gas & Electric Co. (PG&E)

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Oklahoma Power Agency Fined For 'Serious' Reliability Violations

Citing "serious deficiencies" in how the state agency

BY JEFF BEATTIE

had been running its power grid, the Federal Energy Regulatory Commission and North American Electric Reliability Corp. fined the Grand River Dam Authority \$350,000 Monday for 53 infractions in recent years of federal grid reliability rules, including failing to plan for emergency conditions and failing to tell the reliability authorities about "ongoing and sustained" outages of communications devices used to track system reliability.

As part of a settlement with the

FERC, the Grand River Dam Authority (GRDA) also agreed to carry out a \$2 million mitigation and compliance plan to fix any continuing reliability problems and prevent any future ones.

The settlement wraps up a non-public investigation that began in March 2009, and which found an unusual number of infractions of mandatory grid reliability rules that have been enforced since 2007 by the North American Electric Reliability Corp. (NERC), the federally

designated watchdog for the nation's power grid. The investigation was conducted jointly by

NERC and FERC, which has authority to review all NERC penalties.

The GRDA fine, which will be paid equally to NERC and the federal treasury, is one of the larger fines NERC has issued and is *(Continued on p. 2)*

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Power Agency Fined For Reliability Violations... (Continued from p. 1)

particularly large for a smaller entity like GRDA, which operates three dams and two fossil plants in Oklahoma and sells wholesale power across a 24-county service area.

In one of the broader rule infractions, GRDA “did not perform or make use of operational planning studies necessary and sufficient to assess its local day-ahead and current system conditions and to prepare for responding to emergency conditions,” said FERC in Monday’s order approving the settlement.

While it is required to conduct its own system planning, GRDA instead relied entirely on daily planning for the entire Southwest done by the Southwest Power Pool (SPP) reliability coordinator, according to the order.

SPP is the grid operator for nine states located mostly north or east of Texas.

FERC said relying on SPP’s region-wide plans was a problem because the model used by the SPP reliability coordinator did not reflect protection deficiencies on GRDA’s transmission system that GRDA knew about, such “as long-enduring outages of a substantial number of protection system communication devices,” also known as carriers.

Carrier outages can disable high-speed relaying and make it more difficult to rapidly clear faults on the transmission system, according to FERC’s order.

Moreover, GRDA system operators did not even make full use of the insufficient region-wide planning studies and acknowledged “they did not regularly review SPP’s daily assessment,” leaving them with huge gaps in information needed to ensure reliable grid operation, FERC said.

“Without the benefit of effective operational planning studies, GRDA operated in an unknown state, unprepared to avoid exceeding system operating limits, instability, cascading outages or uncontrolled separation as a result of severe single or multiple contingencies,” says the order.

FERC acknowledged that GRDA has begun to build its internal capacity to conduct the needed operational and planning studies, and completed an important first phase in March.

But the agency said that more than two years after the joint FERC-NERC investigation began, GRDA is still operating with a “continued absence of effective operational studies, [and thus] is not adequately prepared to mitigate conditions in which equipment exceeds its system operat-

ing limits.”

GRDA officials did not immediately return a phone call seeking comment Tuesday.

NERC has issued several hundred reliability-related fines, with only a handful larger than \$350,000. The largest by far was the \$25 million penalty assessed against Florida Power & Light Co. for reliability rule lapses that contributed to a February 2008 blackout that knocked out power across 22 transmission lines in Florida and nearly 1 million homes and businesses for several hours.

In July, NERC hit the Western Electricity Reliability Coordinating Council (WECC) with a \$350,000 penalty over a series of missteps and rule violations by WECC’s predecessor in 2008 that regulators said put the reliability of the entire Western Interconnection “at risk.”

In calculating the \$350,000 fine for GRDA, FERC said it and NERC considered steps GRDA has taken to fix its reliability problems as well as the gravity of the infractions, which FERC described as “serious deficiencies undermining reliable operation of the GRDA’s portion of the bulk power system.”

Moreover, FERC pointed out that GRDA’s failure to fix its carrier outages could have created significant problems outside of the GRDA service area as well.

GRDA’s failure to notify the SPP reliability coordinator “of its ongoing and substantial carrier outages...could have potentially affected reliable operation of the bulk power system in the Southwest Power Pool footprint in the event of faults originating in/on GRDA’s system,” said FERC.

Beyond such systemic problems, GRDA violated multiple reliability rules in handling several specific incidents, according to Monday’s order. FERC and NERC cited the state agency, for instance, for failing to notify NERC of a significant September 2008 reliability problem in which a fault at a transformer “prompted over 30 protection system operations and the temporary isolation of a substation.”

In other news related to grid reliability, FERC, using its statutory power to review NERC fines, announced Monday that it will review a \$19,500 fine that NERC has proposed for the Southwestern Power Administration related to four reliability rule violations. FERC has opted not to review the vast majority of NERC reliability fines, and did not explain why it has chosen to examine the penalty proposed for Southwestern.

CORRECTION: *The Energy Daily* reported incorrectly Tuesday that the Nuclear Regulatory Commission would meet today to get a proposal from its staff about which of the recommendations made by the NRC’s Fukushima review task force should be acted on by the commission “without unnecessary delay.” In fact, the NRC staff will meet today with industry stakeholders and the public to outline its initial views on whether several of the task force recommendations should be implemented without unnecessary delay. The commission gave its staff until September 9 to make its recommendations on near-term Fukushima actions.

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Response To Fukushima

Fukushima Accident Raises Questions About NRC 'Risk-Informed' Regulation

BY JEFF BEATTIE

While the Nuclear Regulatory Commission is moving promptly on its near-term response to the accident at the Fukushima Daiichi nuclear plant, the agency faces a long and difficult debate to decide what to do about the most far-reaching and controversial conclusion of the NRC staff task force that looked into the disaster—that NRC may have gone too far toward “risk-informed” regulation and away from its traditional emphasis on defense-in-depth at nuclear plants.

In the wake of the surprising earthquake that affected 13 East and Midwest nuclear plants August 23, the commission staff is set to meet today with industry stakeholders and the public to lay out its initial thoughts on which safety recommendations made by its Fukushima task force should be implemented by the NRC “without unnecessary delay.” The staff is due to report to the commission by September 9 on recommendations for near-term actions.

The commissioners also ordered its staff to provide a recommendation by October 3 on “implementation priorities” for 11 of the 12 recommendations set forth in the Fukushima task force’s July report, which proposed changes both broad and specific to NRC regulations in light of lessons learned from the Japanese nuclear safety crisis.

Among other specific proposals, the report says NRC should consider requiring new types of gas vents at certain reactors and that plant operators should be directed to re-evaluate and upgrade plant protections from flooding.

And in one prescient recommendation given last week’s earthquake that rattled the East Coast, the task force also recommends that NRC require plant operators to periodically re-evaluate their assumptions about seismic risks and their plants’ abilities to withstand the risk.

However, in contrast to the relatively quick action on those 11 recommenda-

tions, the NRC gave staff 18 months to wrestle with a twelfth—and perhaps the most substantial—task force recommendation: That NRC consider re-vamping its regulatory approach to put greater emphasis on a “defense-in-depth” regulatory model, which relies on multiple layers of protective systems.

The task force report suggested NRC may have become too heavily focused on a “risk-informed” regulatory approach—in which safety rules are calibrated according to the agency’s assessment of the likelihood of various accident scenarios.

The report suggests NRC strengthen its primary plant inspection program, known as the reactor oversight process (ROP), “by focusing more attention on defense-in-depth requirements consistent with the recommended defense-in-depth framework.”

Apparently acknowledging the sweeping nature of that recommendation,

NRC told staff August 19 to analyze that recommendation “independent of any activities associated with the review of other task force recommendations,” and to present NRC with a proposal on how to deal with that recommendation within 18 months. That recommendation on the balance between risk-informed and defense-in-depth regulatory approaches has, by far, generated the most push-back from industry officials and some of NRC’s commissioners, with critics of the task force saying that such a sweeping recommendation is unwarranted and that NRC’s use of the risk-informed approach has been a success.

“While I support thoughtful consideration of any potential safety enhancements in a systematic and holistic manner, I do not believe that our existing regulatory framework is broken,” said Commissioner William Ostendorff in his formal July 27 comments on how NRC should proceed on the task force recommendations.

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Westinghouse Provides Crucial Eye In The Sky In Fukushima Recovery Effort

BY MARSHA WHITE

Through its work on tough nuclear decommissioning projects around the world—including the Three Mile Island and Maine Yankee nuclear plants in the U.S. and the Springfields uranium enrichment facility in the UK—Westinghouse has gained extensive experience in the deployment of advanced cleanup, decontamination and nuclear safety technologies. But when Westinghouse brought its expertise to bear to help stabilize the damaged reactors at Japan’s Fukushima Daiichi plant earlier this year, Westinghouse officials recognized early on the need for innovation to tackle particularly difficult aspects of the urgent project.

Westinghouse project manager David Rasmussen, based in Japan, had an idea about using unmanned surveillance craft to survey the Fukushima Daiichi site, which he mentioned to Jack Allen, president of Westinghouse in Asia.

The team did some research, then contacted Honeywell about using their T-Hawk Micro Air Vehicle (MAV) to get up-close video

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Response To Fukushima

Fukushima Accident Raises Questions... (Continued from p. 3)

Under NRC's unusual voting process, commissioners first provide formal views on issues before them for consideration, and NRC staff then review those comments to find common ground to undergird a commission directive setting a particular course of action.

Through that process, the commission has been able to reach significant consensus on the more specific safety recommendations made by the Fukushima task force.

But the written and spoken comments of the commissioners—and their comments at several recent public meetings on Fukushima issues—show deep divisions on the far-reaching question raised by the Fukushima task force about changes in NRC's regulatory approach in recent years.

NRC Commissioner Kristine Svinicki, for one, has indicated that she does not agree with the notion that NRC has moved too far in the direction of risk-informed regulation.

In a July 19 public meeting, Svinicki said that portion of the report could be read “almost as a repudiation of the multi-decadal pursuit of risk-informed regulation in this agency.

“Did you intend to just say that has been misguided for the last two decades?” Svinicki asked members of the task force at the public meeting.

Industry officials have been even less pleased with the task force's suggestion that NRC's ROP has become too focused on a risk-informed approach.

“That the ROP undervalues defense in depth to me was an indefensible statement,” said Nuclear Energy Institute (NEI) Senior Vice President and Chief Nuclear Officer Tony Pietrangelo in a phone call with reporters shortly after the task force recommendations were released.

But many antinuclear groups applaud the task force recommendation to consider re-emphasizing defense-in-depth, and have been critical of NRC's implementation of risk-informed regulation on the grounds that it leads to consistent loosening of agency rules.

For his part, NRC Chairman Gregory Jaczko said “I believe we should always strive for improving the efficiency of NRC programs and strengthening the regulatory oversight of licensees by focusing more attention on defense-in-depth requirements.

“This issue will, however, require extensive discussions about implementation,” Jaczko said in his August 9 comments on how the NRC should proceed on the recommendations by its Fukushima task force.

“Changes to our inspection program ultimately relate to resource considerations that must be carefully planned.”

Overall, NRC's commissioners have described the Fukushima recommendations, and the agency's handling of them, as vital to the agency's work going forward.

“This is perhaps one of the most important votes I will cast as a commissioner,” Ostendorff said in his lengthy formal comments on the issue.

Commissioner William Magwood in his comments focused in part on a task force recommendation that NRC formalize “explicit” new “extended design-basis” requirements, meaning that NRC should establish new requirements for low-probability, high-consequence events that are now subject to a mixture of commission rules and voluntary industry initiatives.

“In many ways, these recommendations break new ground that could have very far-reaching consequences,” Magwood said in his July 19 comments.

On that recommendation, Commissioner George Apostolakis, an expert on probabilistic risk assessment, has said the Japanese earthquake and ensuing nuclear crisis was far more predictable than has been portrayed, and thus that it makes sense to re-consider the range of threats that U.S. plants should be required to protect against.

“The [Japanese] accident was not of extremely low probability, i.e., it was not unthinkable,” said Apostolakis in his July 29 comments. “This observation suggests that we should be mind-

ful of striking a proper balance between confirming the correctness of the design basis and expanding the design basis of U.S. plants.”

And Jaczko underlined the real-world impact of the commission's action on the Fukushima recommendations.

“Over the years I have cast many votes on issues that had many impacts—some minor, some major—on the course of nuclear regulation,” he said in his formal comments.

“The votes the commission will cast on the task force report's recommendations will have impacts for a very different reason. In this case, the commission is reacting to a real accident at a plant with a design similar to designs licensed and built in the United States.”

While there has been friction at the agency over the task force's questions about risk-informed regulation, some areas of consensus have also emerged among the commissioners on some of the more discrete recommendations.

At a hearing held last month by the Senate Environment and Public Works Committee, a majority of NRC commissioners expressed support for six specific recommendations that could be enacted relatively quickly.

The proposals were put forth by Ostendorff in his July 27 comments on the Fukushima recommendations, some of which he embraced and others where he suggested some alterations.

Ostendorff largely endorsed task force recommendations that NRC require plant operators “re-evaluate” protections against floods and earthquakes and that NRC review key venting capabilities for reactors of the type that exploded at the Fukushima Daiichi plant due to hydrogen buildup.

Ostendorff also recommends that NRC begin a rulemaking towards strengthening requirements on the amount of backup power plant operators must have on hand in case off-site power is lost, and that plant operators review the adequacy of equipment to protect against accidents affecting more than one reactor at single site.



Response To Fukushima

Westinghouse Provides Crucial Eye In The Sky... (Continued from p. 3)

and photos inside the Fukushima Daiichi nuclear facility needed for decision support in the initial days following the earthquake and tsunami.

Westinghouse purchased four of the T-Hawks, according to Bruce Monty, Westinghouse's director of strategy and growth for engineering services; hired three trained pilots from Honeywell to operate the unmanned vehicles, which weigh just 17 pounds and measure 14 inches in diameter; and directed the operations.

The first mission, according to the Westinghouse project lead Scott Bump, was to conduct "structural and radiological surveillance of reactor buildings one through four and the surrounding areas."

Because of its size, the T-Hawk MAV can be flown into tight spaces where humans and other aircraft cannot go. It features hover and stare capability that enables the pilots to hold it in one place and zoom in on features inside the damaged reactors while the T-Hawk sends live video and still images back to operators.

Bump, manager of global fuel services and reactor technology at Westinghouse, was anxious to help with the recovery efforts in Japan and with the T-Hawk mission, and offered his assistance soon after the earthquake and tsunami occurred.

Although the T-Hawk pilots are also used to working in high-risk environments, details of the T-Hawk assignment were kept quiet initially so families would not worry about the safety of their loved ones participating in that first mission. The T-Hawk is currently deployed in war zones in Iraq and Afghanistan for route clearance, infantry assault and explosive ordnance disposal missions, according to a Honeywell press release. But assistance with disaster recovery was a new role investigated by Westinghouse, with input from Texas A&M University professor Dr. Robin Murphy, an expert in the use of unmanned vehicles for search and rescue operations.

Personnel safety was also on the minds of Ira Seybold, radiation safety officer for Westinghouse research and technology operations, and Dan Baker, the Westinghouse radiation safety lead for the project, both of whom followed Bump to Japan some days after his arrival.

Seybold, who was brought on as manager of dosimetry (i.e., measurement of personnel radiation doses) at Three Mile Island, first made a preliminary visit to the Fukushima plant to assess the radiological conditions. His expertise is in understanding the difference between how radiological controls work in defined spaces versus undefined spaces, as in the case of an accident.

Upon arrival in Japan, Seybold saw pictures of the damage before going to the site so he was prepared for the degree of damage there. He was some-



what surprised, however, by the damage to large sections of the reinforced concrete around the plant from the hydrogen explosions.

After assessment of the radiological conditions, Seybold met with Bump, the pilots and Baker to discuss radiation safety precautions for the mission. The pilots, Bump and Baker, all wore full-body radiation protective gear, gloves and personal respirators, as their mission took them within 300 feet of the reactor buildings. The T-Hawks put into service were adapted to carry radiation sensors.

Seybold explained: "While Fukushima is not an ideal situation, I observed that conditions were being addressed in an orderly manner and exposures were being controlled there. During the time I was there they [the Japanese] did everything I expected them to do to protect us and still allow work to be done."

Boundaries had been set up, restricting access to the site, with a soccer facility converted into a sort of command center to review clearances for those with permission to move into the restricted areas. Seybold said that there were about 1,000 people there when the group arrived, including military personnel and government regulators.

"Toshiba and TEPCO were extremely supportive of the T-Hawk missions. The Japanese people are extremely appreciative of all our efforts as well," said Bump. He added that he is "optimistic" that the Japanese people will recover "because they are capable of so much."

As far as the longer-term cleanup and decontamination of the Fukushima Daiichi site, which he thinks will occur in phases, Bump said that the "orderliness of the Japanese people and the culture will support much of whatever plan is put into place."

"This was a massive national crisis but it also has international implications," said Bump.

We could learn a lot from the Japanese on how to respond to the immediate needs of the local communities in large-scale disasters, he thinks. The Japanese have a "deliberative bottoms-up approach," says Bump.

There will also be technical lessons learned. These could result in, and in some cases already are resulting in, upgrades to procedural changes and modifications to existing plant designs, changes in how we deal with spent fuel in fuel pools including long-term storage solutions and redundancy on core cooling.

As far as the T-Hawk missions, Bump said that TEPCO and Toshiba have been "extremely supportive," and collaborative efforts among various parties seeking to assist the Japanese, of which this mission is an example, have gone "quite well."

—*Marsha White is a writer in Westinghouse's technical communications department.*



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NTSB Rips Regulators, Industry On Old Pipes... (Continued from p. 1)

compounded the carnage and damage caused by the blast by failing to shut off the flow of gas to the ruptured line for 95 minutes, and did not have an adequate emergency response plan that would have improved the company's reaction time to the explosion.

And NTSB investigators found that PG&E records on the faulty pipeline were completely inaccurate. They said the records that the utility initially provided to the NTSB indicated that the ruptured section of pipe was a 30-inch seamless pipe when, in fact, no manufacturer produced seamless pipe at the time the pipe was installed in 1956.

Further, the investigators said the pipe did not conform to any regulations or best practices in place at the time. The NTSB said the rupture occurred where several small sections of pipe—called “pups”—were welded together to navigate a slope as the pipeline traveled downhill, an arrangement that NTSB staff called “unusual.” The welds adjoining the pups to the rest of the system were found to be inadequate and resulted in the explosion.

And the NTSB slammed the gas pipeline industry for failure to develop adequate tools to inspect older lines such as the failed San Bruno pipe. More specifically, the board said PG&E's line could not be thoroughly inspected by so-called “pigs”—electronic sensors so-named because they often “squeal” when dragged through pipe—due to the way the pipes are welded to one another.

Board members lambasted the pipeline industry for its slow development of pigs capable of navigating the older pipes. The board recommended that the Transportation Department step up its involvement with industry in order to bring the new tools to market.

Currently, pipelines built before 1970—which amount to about 50 percent of the American system—are exempted by federal pipeline regulators from certain safety requirements and inspections. The board commented at length about the “irony” that older pipelines that have endured more operational stress and were built with lesser materials and technology are allowed to avoid federal oversight.

“We have to take a hard line,” Hersman said in calling for a federal crackdown on such “grandfathered” older pipes. “Despite [industry] assurances that it will get done and that they want to [improve safety of older pipelines], it won't get done.

“Regulators have to start to regulate again and protect the public interest.”

The San Bruno pipeline explosion is the third failure in PG&E's distribution system since 1981. The board refused to accept that the most recent event represented an anomaly, instead calling into question the current lack of regulations on pre-1970 pipelines.

“This event reflects a troubling trend. We are seeing diminished oversight when we need it most,” said NTSB Vice Chairman Christopher Hart. “This is a wakeup call.”

NTSB staff and board members came down hard on PG&E for its lax implementation of so-called integrity management (IM) principles, which are supposed to guide a company in constantly verifying the integrity of its gas distribution system, especially in heavily populated areas.

The board said PG&E failed to develop an adequate crisis response plan, saying that when the pipeline exploded, there was no clearly defined chain of command to get crucial information to decision makers. Two off-duty mechanics stopped the flow of gas into the damaged pipeline 95 minutes after the initial explo-

sion, according to Hersman.

The board also highlighted PG&E's failure to conduct a mandatory drug and alcohol test of employees working during the explosion as evidence that the company failed to recognize its responsibilities after an accident. PG&E did order the test six hours after the explosion, but failed to complete it before the eight hour limit expired. Employees in the company's control center were also not tested.

In regard to the cause of the San Bruno accident, the NTSB firmly rejected the notion supported by the Interstate Natural Gas Association of America (INGAA), the trade association for interstate gas pipeline operators, that the replacement of a nearby sewer in 2008 compromised the PG&E pipe, saying that the sewer beneath the pipeline was removed by hand and the system was properly protected during the replacement.

In June, a panel formed by the California Public Utilities Commission (CPUC) to investigate the San Bruno blast agreed with INGAA's May assessment that the sewer replacement project may have triggered the accident.

“Both INGAA and [the CPUC panel's] analysis support the theory there was an external force that triggered the manufacturing defect to propagate, causing the pipe to fail; the force that most likely put the increased stress on the longitudinal seam was the force from a 2008 sewer replacement project undertaken by the city of San Bruno that utilized pipe-bursting technology,” the panel said in its report to the CPUC.

“Both the panel and INGAA believe third-party activity [close to the pipe]...could have played a key role in transforming a ‘stable’ threat to an ‘unstable’ threat, thus triggering the incident.”

But the investigation by the NTSB concluded that they could find no possible scenario in which the sewer replacement would have compromised the pipeline. The NTSB said the pipe-bursting technology mentioned by the CPUC panel and the INGAA report was not used in proximity to PG&E line and that the pipeline failed in a spot at least 10 feet away from the sewer replacement project.

Don Santa, president and chief executive officer of INGAA, said in a statement his industry was taking action to address safety issues raised by the San Bruno accident. He said his group would respond specifically to the NTSB findings today.

PG&E president Chris Johns said in a statement on the NTSB findings: “We fully embrace the recommendations of the NTSB and will incorporate them into our plans. Although we still have much to learn and do, we have already taken many immediate and long-term steps to promote safety.”

The NTSB in its report made a total of 29 safety recommendations to PG&E, CPUC, INGAA, the Transportation Department, the American Gas Association, the American Petroleum Institute, the Gas Technology Institute, the International Association of Fire Chiefs, the International Association of Firefighters, and the National Volunteer Fire Council.

According to the NTSB, the line segment ruptured during the course of work PG&E was doing on the uninterruptible power supply (UPS) system at a terminal 40 miles from the accident site.

The resultant rupture released approximately 47.6 million cubic feet of natural gas into the environment, causing a massive explosion that created a crater some 72 feet long by 26 feet wide, NTSB investigators said.

The released gas ignited sometime after the rupture, killing eight people, destroying 38 homes and damaging 70 others.

Interior Approves Power Line for California Solar Farm

Interior Secretary Ken Salazar last week approved a short transmission line on public land that will connect the 250-megawatt Imperial Solar Energy Center West photovoltaic facility in Imperial County to California's grid.

Salazar's August 25 final approval for the 230-kilovolt, 5-mile line follows a favorable environmental impact statement for the project issued on July 28.

The line will run in an existing federal right-of-way and connect on privately owned farmland with the Im-

perial solar plant, a project of Tenaska Energy subsidiary CSOLAR Development LLC.

Because the solar plant needs access to public land for the power line, Interior was required under federal law to consider the environmental effects of not just the power line but also the generating plant even though it is located on private land, the agency said in a press release announcing the approval.

To offset the impacts of the solar plant construction, Interior said it is

requiring CSOLAR Development to acquire more than 100 acres of suitable wildlife habitat, among other steps.

Interior said Salazar has approved three other major solar projects on federal land in California since the beginning of July. Interior said those three projects, plus Imperial Solar West, will create more than 2,215 construction jobs and provide a combined 1,350 MW of generating capacity.

CSOLAR is developing a second PV plant in Imperial County, called Imperial Solar Energy Center South that would have a capacity of up to 200 MW. About 130 MW of that plant's output has been sold under a 25-year contract to San Diego Gas & Electric.

GenOn Closing Key Coal Plant For U.S. Capital City... (Cont'd from p. 1)

luting plant.

Mirant, the previous operator of the plant, initially sought to shut down the plant in August 2005 after tests by Virginia air regulators revealed that the plant's emissions contributed significantly to local violations of national ambient air quality standards for sulfur dioxide, nitrogen oxides and particulate matter.

However, that shutdown effort was countermanded by unusual orders from the Energy Department and Federal Energy Regulatory Commission that said Mirant had to keep the plant open because of major weaknesses in the transmission grid serving the District of Columbia. The federal officials said that if the two major power lines serving the District at that time were to fail simultaneously, the Potomac River station would be needed to keep the lights on in the nation's capital.

However, in its January 2006 order requiring Mirant to keep the plant open, FERC also directed PJM Interconnection LLC, the Mid-Atlantic grid operator, and Pepco, the electric utility for the District, to develop plans to strengthen the transmission grid so that the Potomac River plant was no longer critical to reliability for Pepco customers. Pepco at the time said implementing a transmission reinforcement construction plan to resolve the reliability problems would take 18 to 24 months to complete.

GenOn's new effort to shut the plant will trigger a review—initially by PJM—as to whether the transmission grid has been strengthened enough in recent years to allow closure of the facility without posing any unacceptable risks to Washington, D.C.'s power supply.

In fact, PJM already is conducting a review of those issues in response to a recent request by the District of Columbia's Public Service Commission. A PJM spokesman said Tuesday the results of that review should be known by September or October.

PJM's assessment could be subject to review by the North American Electric Reliability Corp., the nation's grid watchdog, and possibly FERC as well.

However, Misty Allen, a spokeswoman for GenOn, said the company did not need to apply for any specific regulatory

approvals and simply planned to file a notice with PJM alerting the grid operator that it was closing the facility.

She said if PJM raised any reliability concerns, discussions might be needed about the grid operator designating the Potomac River Plant as a "reliability must run" facility, which would entitle the company to payments for keeping the plant open.

That is a key difference from the last attempt to close the plant, which occurred before the Mid-Atlantic wholesale power market was substantially deregulated.

GenOn's agreement with Alexandria to close the 62-year-old plant was hailed by city officials and the American Clean Skies Foundation (ACSF), a nonprofit group backed by natural gas producers that recently unveiled a \$450 million plan for transforming the plant's waterfront site into an environmentally friendly, mixed-used community known as Potomac River Green.

ACSF in July released a report done for it by the Analysis Group, a consulting group, that concluded that adequate improvements to the D.C. power grid had been made to allow the plant to be shut down without threatening the reliability of the area's electricity supply. The report said its conclusion was "consistent" with 2008 findings by PJM and Pepco, and that the plant was increasingly not utilized, saying it provided only 5 percent of total generation in Pepco's section of the PJM grid in 2010.

When federal officials intervened in 2005 to prevent closure of the plant, the facility was one of only three sources of electricity that served the central business district of Washington as well as many federal agencies. The other sources of electricity were two high-voltage transmission lines that deliver electricity from other plants throughout PJM.

Federal officials at that time said if the Mirant plant were not operational, an outage of the high-voltage transmission lines could cause a blackout in the central District of Columbia area lasting hours or even days. They also said that the potential for an outage of the transmission lines was not theoretical, noting that an incident temporarily knocked out one of the power lines serving the city on the night of Dec. 15, 2005.