

# SPARK

The on-line gateway for readers of Public Utilities Fortnightly magazine.



**PAGES WITH THE EDITOR**

## Cross-Sound Cable Puts Feds on the Spot

By BRUCE W. RADFORD

*Geography as Destiny ...*

*When engineers picked a site for the Shoreham nuke, who could have guessed that decades later, long after Shoreham was dead and buried, this choice would rule us from the grave.*

*For when developers sought a route for a new transmission line, from Connecticut to New York under Long Island Sound, they found the Shoreham site primed and ready.*

*Yet in today's world, geography is destiny. Power prices hinge on location. As does grid congestion, the evil that launched the schemes that Enron made infamous.*

*So now we learn that the Cross-Sound Cable may have been built in the wrong place ...*

Bruce W. Radford, Publisher  
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If difficult cases make bad law, then keep an eye on what the Federal Energy Regulatory Commission (FERC) does with the Cross-Sound Cable, the high-voltage, 330-megawatt, direct current (DC) merchant transmission line linking New York and Connecticut across the bottom of Long Island Sound.

And here's why. By their simple request filed on May 21, seeking no more than to energize and restart their already fully functional and proven transmission line, the owners of the CSC project, now joined by the Long Island Power Authority (LIPA), have put FERC on the spot.

Say "OK," and the Feds land themselves in a fight with the State of Connecticut. Say "no," and they undermine their own policy favoring more transmission investment.

And it doesn't make things any easier that this new addition to the grid doesn't really do much to boost reliability in Southwest Connecticut. That area marks one of the nation's worst load pockets—the one place that everyone agrees is short of transmission capacity, and where improvement would justify regulatory action.

In fact, the only way to use the CSC to help out SW Connecticut would require tandem operation of an older parallel underwater line, owned by NorthEast Utilities, but that line is out of service—more or less permanently—and in need of costly repairs.

In fact, because of the geography of the region and the layout of other existing lines, the Cross-Sound Cable seems more and more like a truly "merchant" investment. It serves the role of a private »

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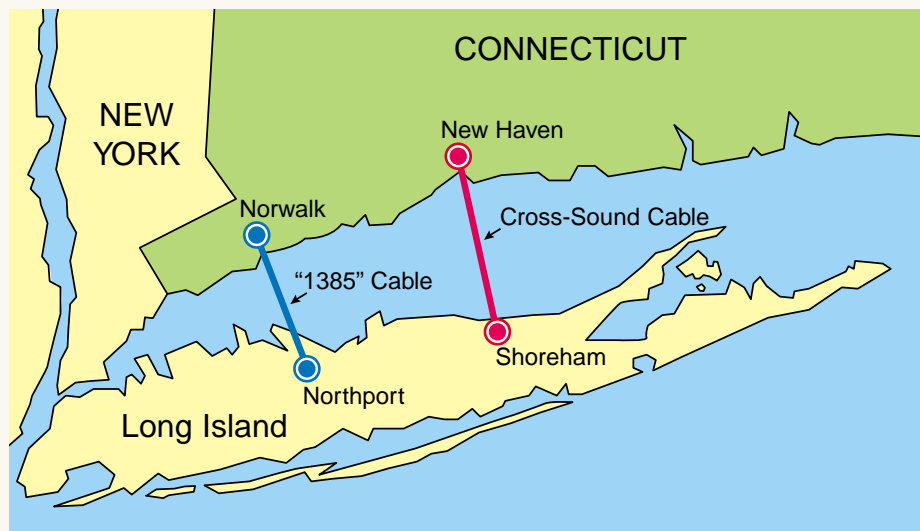


and discretionary “economic” grid addition, designed to lower the cost of power, more than an aid to reliability.

And add another awkward fact: capacity on the Cross-Sound Cable is leased entirely to LIPA. If FERC restarts the CSC entirely as a market measure—to facilitate cost-saving economic power exports to placate Long Island consumers—then LIPA will exert monopoly control over all the necessary transmission capacity, and will be the only one to schedule transactions. The New York Independent System Operator (ISO) says that it cannot allow third parties to schedule transactions over the CSC without first revamping software for its “interim scheduling procedure” and then testing the requisite modifications. But alas, the ISO says that it must wait at least a year for a testing “window” to open up, as it has already committed its engineers and resources to another project—re-writing software for its “real-time scheduling” initiative.

Thus, even a purely market use for the new cable seems open to concerns about market power. All this has allowed Connecticut Attorney General Richard Blumenthal to accuse the project owners of putting private monetary concerns ahead of the public good. The facts have made it awkward for grid operators in New England to offer absolutely unqualified support for energizing the line. And while the New York ISO and the state public service commission support a restart, one comes away with the sense that politics plays at least some role in that.

And yet if FERC should decide to grant the request, the commission’s action would simply allow the line to revert to the same level of operation



that prevailed over the past year.

For most of the past twelve months, ever since the Northeast Blackout of last summer, the line has operated under an emergency order issued August 28, 2003, by Secretary of Energy Spencer Abraham, improving grid flexibility in New York and New England. But Abraham revoked that authority last month, on May 7, after the joint Canada-US committee had issued its final report on last year’s outage. With the report having identified the causes of the blackout, the Secretary felt he could no longer justify a declaration of an emergency, and so the line went dead.

In the end, FERC’s most politically astute move might be to ride the coattails of New York Senator Hillary Clinton. On June 16, she joined with her colleague, New York Senator Charles Schumer, to intervene in the case as a formal party to ask the Commission to bring the Cross-Sound Cable up to speed. (See FERC Docket No. TX04-3, motion filed June 16, 2004.)

## Environmental Concerns

In legal terms, the Cross-Sound Cable case presents regulators with a conflict between two competing uses of the same navigation corridor to further the energy infrastructure. But at the heart of it, the problem began with oyster beds and international shipping.

To avoid disrupting shellfish habitat, the project owners laid the undersea line down the center of the deep-water shipping channel leading into the harbor at New Haven, Connecticut, a major regional port and import center for energy. (According to Blumenthal, 75 percent of New England’s fuel shipments arrive through the shipping channel and harbor.) But certain undersea rock formations made it impossible to bury the cable deep enough under the bed of the channel to accommodate dredging operations. Hence the claim by Attorney General Blumenthal that the line violates state environmental law.

Nevertheless, in a purely »

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## Hoping for a Settlement

technical sense, the line appears to be fully compliant with siting permits granted both by Connecticut and the U.S. Army Corps of Engineers. Those permits allow certain “grace” periods for the project owners to make necessary corrections, and those grace periods still have time to run. That means that if Chairman Pat Wood and his FERC should ask the question—“Does the line meet with all permit requirements?”—the answer, in a strict legal sense, would be “yes.”

Thus, for the FERC to inquire further, to ask whether that compliance satisfies the spirit of the law, is a task that would put the commission in the role of interpreter of the exact meaning of state law, a task likely best left to state courts.

Blumenthal adds that if FERC wants to take jurisdiction over the siting and permitting of transmission lines, then it should draft an environmental impact statement for the Cross-Sound Cable, which it has not done.

### Geography, Markets and Reliability

As to reliability and grid investment, a subject that clearly falls under FERC’s jurisdiction, the issue appears even more cloudy. The case raises a delicate issue. If FERC needs a legal justification for restarting the cable, is it enough simply for the line to make cheaper power available to consumers on isolated Long Island (in place of on-site diesel engines, for example)? Or, must FERC also find that the line will relieve congestion across the larger regional grid?

Long Island requires 5,008 MW of physically available generating capacity to satisfy rules imposed by the New York Independent System Operator (ISO) governing locational “ICAP” (installed generating capacity that qualifies as a network system resource). And, to that end, the CSC can provide up to 23 percent of Long Island’s required summer capability for power imports. It serves as one of only two underwater transmission cables con-

As of the morning of June 23 FERC still was hoping that the parties might be able to reach a settlement. That would keep the commission from having to make a controversial decision on the future of the Cross-Sound Cable (CSC), the 24-mile-long, DC transmission line running underwater from Connecticut to the old Shoreham nuclear plant site on Long Island.

One week earlier, on June 17, FERC chairman Pat Wood had taken the unusual step of threatening to order the line energized if the parties could not settle. He gave them a one-week deadline, saying the commission would vote on a notational basis if no agreement was forthcoming.

The dispute in fact involves two cases. Just last month, the Long Island Power Authority (LIPA) had joined with the CSC project owners to petition FERC to energize the line. (*See FERC Docket No. TX04-3, filed May 24, 2004.*) Earlier, Northeast Utilities had asked FERC to require LIPA to form a joint venture with NU to repair, refurbish and expand a different set of underwater transmission lines, the so-called “1385 cables,” which cross Long Island Sound to the west of the CSC, but which are now out of regular service. Repairing the 1385 cables would, among other things, allow the newly repaired lines to operate in tandem with an energized CSC to improve reliability and relieve congestion in Southwest Connecticut. (*See FERC Docket No. TX04-1, petition filed Feb. 26, 2004.*)

The State of Connecticut has long opposed the underwater crossing, citing environmental concerns involving shellfish beds and interference with dredging operations for the deepwater channel into New Haven harbor. Connecticut attorney general Richard Blumenthal already has threatened a lawsuit if FERC orders the line turned on. Until a month ago, the Cross-Sound Cable had been operating under an emergency federal order from Energy Secretary Abraham, issued following the August 2003 blackout. But Abraham lifted that order when the blackout investigation was complete, shutting down the CSC.

In his statement on June 17, urging the parties to settle, Pat Wood had suggested that the 1385 cables, running from Norwalk, Conn., to Northport, N.Y. could offer both sides a way out of the impasse. He conceded that repair work on those lines would likely prove expensive, but that LIPA might find it worthwhile to pay the price if it could mean re-powering the Cross-Sound Cable.

In urging a settlement, Wood’s staff had declared the only commonality between the two cases up to that point (June 17) was that “both parties oppose each other’s choice.”—L.A.B.

necting Long Island with Connecticut.

Running north from the Shoreham plant site at Brookhaven, Long Island to New Haven’s Halvarsson converter station, the CSC makes landfall in Connecticut on the upstream side of the state’s southwest load pocket, and does not add any grid capacity into that constrained area. And its DC capability means it is not synchronized with the AC grid, and cannot respond as quickly as other lines to help stabilize

voltage and frequency during an emergency. Rather, it appears better suited for importing power from the rest of New England into Long Island. Without the CSC, LIPA must make other arrangements for alternative generation on the Island, a strategy that would likely cost \$15 to \$20 million per year more than power imported across the CSC.

The other line linking the Island to Connecticut, the (*Continued on p. 10*)

## NUCLEAR SAFETY

# NRC Chairman Diaz on Homeland Security

BY LORI A. BURKHART

The third annual Homeland Security Conference held June 3 in Washington D.C., due to recent events, now is becoming the type of meeting utility company executives must attend. Among the technologies showcased are those simulating how a building would collapse depending on where a bomb is placed (allowing for reinforcement and time for evacuation), lock-down systems for manhole covers and numerous computer security systems. The bottom line is that it is just the type of conference to learn about the new security technologies, because a lot of money needs to be spent—and is being spent—to make the physical and cyber facilities related to utility infrastructure safe and secure.

Based on the scrutiny of officials after the September 11, 2001 attacks, one realizes that any utility executives in charge of the first energy facility to be attacked—and experts seem to agree the reality is not if but when—certainly would be poked and prodded not only in the court of public opinion but officially as well. So what needs to be done, and how much is enough in this uncertain age? The stakes are higher if the facility to be protected is a nuclear one. But according to the chairman of the Nuclear Regulatory Commission, Nils J. Diaz, the public should feel safe around our nation's nuclear plants.

## Defense-in-Depth

Diaz, speaking at the conference, explains the philosophy behind the NRC's method of ensuring the public's health and safety. Because the best



**“For a generation, our regulations had postulated the existence of a terrorist threat, as part of the defense-in-depth approach.”**

—Nils J. Diaz

plans can, and often do go wrong, especially where human beings are involved, the NRC accommodates that reality. The NRC calls it the “defense-

in-depth philosophy,” and says it is an action plan—an approach to ensuring protection. Diaz explains the concept is the centerpiece of the NRC's approach to ensuring public health and safety, and it goes beyond pieces of equipment. “It calls for, among other things, high quality design, fabrication, construction, inspection, and testing; plus multiple barriers to fission product release; plus redundancy and diversity in safety equipment; plus procedures and strategies; and lastly, emergency preparedness, which includes coordination with local authorities, sheltering, evacuation, and/or administration of prophylactics—for example, potassium iodide tablets,” Diaz says. This approach addresses the expected as well as the unexpected, and it actually accommodates the possibility of failures. Diaz adds that the NRC's defense-in-depth has recently been strengthened by incorporating the dynamics of risk-informed and performance-based decision making.

## Emergency Preparedness

While the events of 9/11 brought to this country a new recognition of the importance of physical security and emergency preparedness in 21st century America, the NRC and the nuclear industry gained such awareness decades ago. Diaz explains that is why the NRC and the nuclear industry are “ahead of the curve.” Diaz stresses that, “For a generation, our regulations had postulated the existence of a terrorist threat, as part of the defense-in-depth approach.” The good news is that means the drastic changes in security seen in the airline industry, for example, were not required for nuclear plants, because the nuclear industry already had put those types of structures in place. But the NRC, along with the rest of the nation, did face new realities, and significant enhancements were made for nuclear plant protection after 9/11. Diaz notes that security orders were issued on February »



25, 2002, that tightened existing policies and procedures in the light of the most current information, but it was not a wholesale revamping of the NRC's regulatory structure. Diaz maintains that the NRC continues to make improvements. "We were among the best prepared then; we still are among the best prepared now," Diaz contends.

But the NRC did learn from the terrorist attacks. Diaz explains that the post-9/11 review of security issues highlighted how tightly interconnected are reactor safety, security and emergency preparedness. "Many of the same issues are involved in avoiding and mitigating reactor accidents as in preventing and mitigating acts of terrorism," he says. And while the initiating events may differ, defense-in-depth applies in very similar ways to both situations.

Of course, since 9/11, the U.S. government, state and local authorities, and many elements of the private sector have responded in a manner that

increases our nation's security. Diaz tells how the NRC has worked closely with the Homeland Security Council, the Department of Homeland Security, NORTHCOM, the FBI and other agencies to enhance the nation's overall detection, prevention, mitigation and response capabilities. Diaz explains how federal action at the airports and on airliners reduced the likelihood of terrorists using commercial aircraft against nuclear facilities or any other targets. "It is clear that we have made significant progress in the past year toward achieving an integrated response program for the defense of nuclear facilities," Diaz says. He adds that the NRC has required enhanced security measures for the defense of nuclear power reactors. These include multiple, but strongly interdependent elements, all directed to the fundamental goal of how best to protect people, with the appropriate resources placed at the right places. These elements are:

- Enhanced access controls to prevent unauthorized entry of persons and materials to nuclear facilities;
- Enhanced work and training requirements for security personnel to increase their capability to detect and respond to threats;
- Enhanced Force-on-Force security exercises at nuclear power plants;
- Revised Design Basis Threat (addressing vehicle bomb threats, land-based and water-based assaults) and associated defensive capabilities;
- Enhanced mitigation procedures and strategies based on the established concept of Severe Accident Management Guidelines and using the results of extensive vulnerability studies; and
- Enhanced emergency preparedness.

Diaz explains how the NRC has conducted extensive analyses of >>

the potential vulnerability of nuclear power plants to aircraft attacks. "While these analyses are classified, the studies confirm that the likelihood of damaging the reactor core and releasing radioactivity that could affect public health and safety is low," he stresses. "The fact is that nuclear reactor design requirements call for structures to withstand severe external events (hurricanes, tornadoes, and floods), and for safety systems to include redundant emergency core cooling, redundant and diverse heat removal, fire protection features, and station blackout capabilities, and provide built-in means of dealing with attempted terrorist attacks," Diaz says. In fact, existing emergency operating procedures and enhanced severe accident management guidelines are well suited for mitigating the effects of accidents or intentional attacks on nuclear power plants. Diaz explains that all nuclear power plants have been required to enhance the integration of safety, security, and emergency preparedness. Diaz believes that because of these enhancements, the potential radiological consequences to the public of an aircraft attack are low.

But what if the worst does happen and an aircraft is directed at a nuclear plant? Diaz maintains that the studies confirm that even in the unlikely event of a radiological release due to terrorist use of a large aircraft, NRC's emergency planning basis remains valid. Defense-in-depth provides the time needed to use the right protective strategies. "The people of our country will have the protection they need and deserve," he says. "The Nuclear Regulatory Commission is joined by other Federal agencies, led by DHS, and by state and local authorities in assuring that our people will be protected," Diaz firmly believes.

Because of the delays in readying Yucca Mountain in Nevada for spent nuclear fuel storage, the question always arises of the safety of such fuel stored on site at existing nuclear plants.

## Spent Nuclear Fuel Safety

The U.S. General Accounting Office issued a report, "*Spent Nuclear Fuel—Options Exist to Further Enhance Security*," which cites studies by the Department of Energy and the Nuclear Regulatory Commission indicating a low likelihood of widespread harm to human health from terrorist attacks or severe accidents involving spent fuel, either in transit or dry or wet storage. When the report was released, there were more than 50,000 tons of commercial spent fuel stored at 72 sites at nuclear plants in 33 states, with most stored in pools of water to keep the fuel cool, but some sites keep older, cooler fuel in dry storage units in concrete bunkers. The report notes that spent fuel is a heavy, ceramic material that is neither explosive nor volatile and resists easy dispersal. Also, tests on shipping containers and dry storage containers have shown that, while they can be penetrated under terrorist and severe accident scenarios, their construction allows little release of spent fuel, with little harm to human health, the report finds. And while release of a large quantity of radioactive material from a wet storage pool is theoretically possible, such a release would require an extremely unlikely chain of events, for example coolant would have to be drained from pools and fuel left uncovered for a sustained period.

A large concern is that DOE estimates that 175 shipments per year over 24 years will be required to move the inventory of spent fuel to Yucca Mountain in Nevada for storage. The reports says DOE could enhance security by minimizing the overall number of shipments and picking up fuel in an order that would reduce risk, such as moving older, less dangerous fuel first. But it warns DOE's ability to choose such options may be limited by contracts with fuel owners, requiring DOE to pick up fuel based on dates the owners removed the fuel from the nuclear power reactors. Taken literally, the report finds, it would require DOE to pick up small amounts of spent fuel at reactor sites scattered across the nation. Adhering to the shipping queue for the 12 largest nuclear power utilities would result in about 576 shipments. In contrast, revising the contracts to allow DOE to pick up larger quantities of fuel at each site could eliminate 300 of the shipments. The order in which spent fuel is shipped could affect safety and security because certain fuel poses more risks based on its age and location. Shipping the oldest fuel first could enhance security in transit because the fuel is radiologically less dangerous. (GAO-03-426, July 2003). ■

But Diaz says not to worry. "The analyses, conclusions, and insights that I just presented for nuclear power plants also apply to spent fuel pools, since they are also well engineered and protected structures, and are amenable to simple and effective mitigate actions, if needed," he explained. Diaz stresses that for a dry spent fuel storage cask, it is highly unlikely that an aircraft impact on a cask would cause a significant release of radioactive material. He adds that results to date show that a large commercial aircraft crashing into a transportation cask would not result in a release of radioactive material.

Diaz stresses that defense-in-depth works for nuclear facilities. He refers to it as a case study in total preparedness planning. "In summary, I believe that the NRC and the industry have done their jobs well, planning for success in safety and security but are prepared to deal with the expected as well as the unexpected," he says. According to Diaz, "the NRC, other government organizations, and the licensees have taken action to protect the people of our nation." ■

*Lori A. Burkhart is legal editor at Public Utilities Fortnightly magazine.*

## SCIENCE &amp; TECHNOLOGY

# California's Plea: Save Our Water!

BY LORI A. BURKHART

**F**acing a pressing set of circumstances because of weather, climate and population growth, the Western U.S. needs help in producing electricity while addressing water conservation issues. That prompted a division of the Electric Power Research Institute (EPRI) on May 21 to release a request for proposals (RFP) to solicit projects addressing water conservation in the generation of electricity. That EPRI division, the Electricity Innovation Institute (E2I), aims to stimulate innovation in strategic electricity technologies through public/private partnerships.

The RFP is funded by the California Energy Commission's Public Interest Energy Research-Environmental Area. The program will establish a multi-year research program addressing water use for power production in California, with application anticipated to similar situations across the nation. According to project manager Kent Zammit, EPRI began the collaborative program with the California Energy Commission in 2001 to investigate ways to reduce dependence on high-quality surface and ground water sources for power generation.

California represents a microcosm of the future of the U.S., as California's population is expected to increase from more than 34 million people today to over 49 million by 2025. The California Department of Water Resources (DWR) anticipates a water shortfall of as much as 2.4 million acre-feet annually by 2020, which represents the amount of water required to supply 4.8 million households.



The problem is, according to E2I, that thermoelectric plants use water, and in California, a significant portion of that water is fresh, often potable water. That use of water, especially fresh, drinkable water, for power plant cooling has been challenged, especially in the West, where water is in short supply. E2I stresses that as California's population grows, power plant operators will be fighting with other water-consuming sectors for diminished supplies.

Indeed, that scenario already is reality in Wyoming, where operators of the Laramie River Project, a 1,650-MW coal-fired plant that is part of the Missouri Basin Power Project, are negotiating with local farmers to use their irri-

gation water for plant operations. Due to drought conditions, the plant is the first in the state to have trouble finding water for the cooling process. The reservoir the generating plant draws water from—the Grayrocks Reservoir—now holds only 38,000 acre-feet of water, which is 37 percent of capacity. Meanwhile, the Laramie plant alone needs 19,000 acre-feet of water a year for cooling.

A similar strain on water resources could come soon to California. Because the majority of California's generation comes from combined-cycle, natural gas-fired plants, such generation consumes 235,000 acre-feet of the state's water supply per year, with most of that water being used for wet cooling technologies at power plants. For example, E2I says that on average, a 500-MW combined-cycle power plant using wet cooling technology requires three million gallons of water per day for cooling. But that water from one plant could satisfy the daily water demands of more than 13,100 people.

E2I explains that wet cooling systems for steam condensation are the least expensive and one of the most efficient means of power-plant cooling, and results in the lowest production costs and the highest plant output. And while the major use of water in a power plant is for steam condenser cooling—a wet cooling technology—other uses include air quality control, gas turbine performance enhancement, auxiliary cooling and in-plant cleaning.

Zammit notes some of the projects already done in collaboration with the California Energy Commission include a survey of advanced cooling technologies, with cost and operation and maintenance impacts as applied to California's power development. Also, a survey was taken of degraded water sources, typical water quality of each, and how they might be applied to wet, recirculated cooling systems. Recommended water quality parameters for cooling towers were updated to >>

reflect advances in water treatment, use of degraded water sources and higher cycles of concentration. Research was done on formation and fate of Tri-halomethane compounds when chlorinating degraded water sources high in organics, such as treated effluent. Also, development and pilot testing of spray enhancement systems to address efficiency and capacity losses associated with operation of air-cooled condensers on the hottest days was done.

In summary, EPRI says the urgency for the programs are driven by the recognition that need for adequate and economical electric power conflicts with the need to conserve and allocate scarce water supplies.

Zammit explains that based on the work already done, the program expects to encourage new ideas and research in advanced cooling through the RFP. The program is envisioned to be a multi-year, multi-million dollar program that will fund the next generation of water conservation concepts and technologies.

The objectives of the new program are to:

- Define the effect of water consumption in power generation plants on plant performance, capacity and electricity cost;
- Identify opportunities for minimization of water use;
- Identify state-of-practice operating parameters for degraded water resources to encourage its use;
- Identify state-of-practice design and operating experience for zero liquid discharge systems and practices;
- Research the development or improvement of advanced devices and processes that will maintain or improve plant performance and cost while reducing water requirements;
- Demonstrated effectiveness of advanced approaches; and
- Encourage commercialization and use of preferred technologies. ■

## FINANCIAL MARKETS

# The Problem with Regulated Utilities

By Lori A. Burkhart

**R**egulated utilities are underperforming in the equity markets, and ratings agency Standard and Poor's (S&P) has under weighed them for several months. Listen to Craig Shere, gas utilities and multi-utilities equity analyst at S&P explain why, and what the future holds.

He says that regulated utilities are experiencing slower than average growth in the now-expanding U.S. economy. For example, S&P sees earnings growth in the S&P 500 and 1500, but regulated utilities are not matching that growth. But Shere says it is not surprising given that utilities historically have lower growth than the broader markets, have higher dividend payout ratios and don't reinvest as much money into their businesses.

Second, utilities tend to be more yield oriented. This is historically true, Shere notes, but adds it is even truer today because of dividend tax cuts.

"The dividend tax cuts effectively put more yield in investor's pockets, and they tend to look at these investments increasingly on a yield-oriented, bond-like basis," he says. That is especially true if there is very little earnings growth.

According to a study by S&P, utilities were one of the worst performing industries immediately following federal reserve rate hikes. "We really don't think this is place that investors should be focusing their attention on," he argues.

Another problem for regulated utilities has to do with rising costs in general. Shere specifically points to higher labor and insurance costs, but notes the importance of looking at the rising expenses in light of revenue growth. Electric and gas utilities are mature industries and only grow with population growth, which is perhaps two to three percent a year. So the two to three percent revenue growth is balanced against for example, increasing health costs for retirees and pension expenses for the aging utility workforce.

Shere explains that utility pensions tend to be invested more in fixed-income products—such as bonds—than similar investment by companies with a younger workforce. If the pension funds don't perform in line with actuarial assumptions, it creates drag from the pension. Shere says that is compounded by drag from health-care expenses, from expenses related to Sarbanes-Oxley compliance, and added security expenses from the September 11 terrorist attacks. "So with all these expenses, and only two to three percent EPS growth, you can imagine why we »



may have flat earnings," he concludes.

High natural gas prices also must be factored into the equation. Of course regulated utilities don't make or lose money on the price of commodities in the traditional rate-making environment. But there is danger of high bad debt expense. "If people don't pay their bills, utilities do take it on the chin and shareholders do suffer," Shere explains. He also points to the rare situations where utility commissions actually disallow the costs that were expected to be passed through to ratepayers. Shere notes the importance of making "sure the ratepayer pays what the utility commission says they should and you have to make sure the commission lets you pass through the costs no matter the gyrations of the expenses for the ratepayer."

Another problem for the regulated utility is that the only resolution is found in utility rate cases by raising the costs that ratepayers have to pay for distribution charges to their homes and businesses. "We aren't really that confident that utilities can do that across the board," Shere contends. He points to still low interest rates despite a recent uptick. The interest rates still are lower than they were years ago when most of these utilities had their return on equity set by the state commissions. He asks that if interest rates are lower, why would one assume cost of capital is higher? Or that the utility even should earn the same cost of capital as when it was originally set? He adds that the dividend tax cut arguably reduces the cost of capital for equity.

So he foresees the state commissions asking, "why should we maintain or increase your rate of return by giving you an increase in rates you charge ratepayers?" Added into the mix is that everyone is paying more in monthly bills because of higher fuel costs, plus the utility commissions are not immune from political considerations. "For all these reasons we really are saying that the regulated utility operations are not

the place to be right now in the market," Shere concludes.

## The Good News

The good news is that there are very few companies that are truly one hundred percent regulated. The utility universe is a continuum with companies that are more regulated amongst the diversified multi-utilities, and companies that are more like energy merchants, Shere explains. And in this continuum some companies not only are involved in a range of different types of investments, but also have different amounts of revenues, earnings, assets and capital expenditures relating to unregulated operations. And it may not be consistent from year to year. For example, companies that own oil and gas exploration and production (E&P) operations can make a lot more money some years on those operations than in other years.

For unregulated utility investments, Shere says most "deworsifications" have been money losers. A few examples include heating and air conditioning, wholesale power, trading and marketing, construction, home security systems, competitive retail supply, used car auctions and banks.

The only unregulated investments that have offered relatively consistent, positive returns across multiple utilities and energy merchants has been E&P—simply taking gas and oil out of the ground, stresses Shere. He explains there are two types of E&P investors, the more regulated natural gas utilities with E&P operations and the energy merchants. He adds that the gas utilities with E&P can generate as much as 60 to 70 percent or more of their earnings in E&P during strong commodity cycles. These companies tend to be more mid-cap and generally hedge their energy production due to their size and credit rating issues, Shere says. "Because they are not larger companies they cannot take the risk of all of the cash flows," he adds. "The energy mer-

chants have used E&P as a life raft during their difficulties over the two or three years, to keep them afloat through partial divestitures and to drive future earnings recovery," he maintains.

## Energy Merchants

Shere makes some interesting predictions concerning energy merchants. He notes that when the market was booming from 1998 to early 2001, many pundits said that merchants, which were a relatively new phenomenon in terms of deregulated natural gas and power, were not a cyclical industry. "People were saying during the boom that this was a part of total U.S. consumption of gas and electricity, and even if the total market for consumption was growing at two and three percent, the unregulated portion was growing from seven to ten to eleven, fourteen percent and more," he says. Many thought energy merchant dealings were not cyclical and they would keep building plants. "They were wrong, and I was wrong," he laments.

Now that the energy merchant sector has been depressed for the last two or three years, predictions are that it will never upturn again. "And I don't buy that," Shere says. "It is a cyclical industry—we were wrong because there was never a downturn in the wholesale power market before, because it really didn't exist before," he explains. "Now we see no power plants being built for the most part in comparison to history after this summer," he notes, but "we see an expanding economy, we hear companies talking about widening spark spreads." He predicts that over the next four to six years, there will be a recovery in wholesale power margins, plus a return of margins for higher credit-rated companies in the trading and marketing arena. "So this isn't a permanently down and out industry," he says. "We do believe that positive margin cycles will return." ■

**CROSS-SOUND CABLE***(Continued from p. 3)*

so-called "1385" cable, operated by Northeast Utilities (NU), and located to the East, closer to New York City, might actually help the SW Connecticut load pocket, if operated in tandem with the CSC. That is, by moving power in a semi-circular loop, LIPA could import generation from Connecticut, across the CSC, and then move it East through Long Island and then back across the Sound via the 1385 line, and from there into the SW Connecticut load pocket. However, the 1385 cable is unavailable for that purpose, and in need of repair. It is so unreliable (it has suffered injury from dragging ship anchors) that regional grid operators have taken it out of service, and left it available only for grid emergencies (as a first-contingency backup for certain other 345-kW submarine lines—the "Y49" and "Y50" lines).

Seeing an opportunity, Northeast Utilities has suggested to FERC that the future of CSC and its 1385 cable are inexorably linked. It has asked FERC in essence to treat the two lines as one infrastructure project and to encourage LIPA to joint a joint venture project to rebuild the 1385 cable. *(See FERC Docket No. TX04-1, filed March 1, 2004.)*

LIPA and the Cross-Sound owners take offense at that idea, however. They urge FERC to reject any idea of forcing linkage between the two projects.

**Damning With Faint Praise**

So where does this leave Pat Wood and the FERC, as they face opposition from environmentalists in Connecticut?

- Do they play activist, forcing LIPA and the CSC owners to combine forces in a joint effort to boost infrastructure for SW Connecticut and the greater good of the grid?
- Do they interfere in the market, energizing CSC to aid LIPA ratepayers, even though third-party market players would be shut out from scheduling power

on the line. (And at the expense, perhaps, of mobile generators, who might otherwise score big in locating new gen-sets on Long Island to take advantage of this summer's peak prices?)

- Do they sign a truce with Connecticut, bowing to the state's environmental claims in the name of federal-state judicial comity?

The New York Public Service Commission argues that energizing the line would reap a host of benefits: (1) eliminate a market seam between New York and New England, (2) enhance trading between the two regions, (3) provide voltage support and reactive power, (4) help LIPA avoid using less-efficient generation, and (5) minimize the chances of forced load-shedding or even blackouts on Long Island this summer. It refers to Connecticut's environmental concerns as a "parochial interest."

The New York ISO also favors a restart, though it takes pains to correct statements in the application that it cites as errors. Thus, it emphasizes that it "does not agree" that its present scheduling procedures can fully accommodate third-party use of the cable.

Also, the ISO disagrees with certain contentions concerning use of the out-of-service 1385 cable. The ISO asserts that under certain system conditions, scheduling flows of the 1385 cable can decrease the overall capability of the interface between New York and New England. (Nevertheless, LIPA and other market participants are permitted to schedule economic transactions at a virtual "proxy" bus that represents the actual total AC interace transfer capability between New York and New England.)

In any event, the comments from New York tend to re-enforce the notion that a joint venture project to repair the troubled 1385 cable is probably necessary if CSC project owners should seek to use their DC line to help out SW Connecticut. »

## Next Month's FORTNIGHTLY

*Fortnightly magazine in July takes on some varied and difficult subjects. From the legal implications and obligations resulting from blackouts, to figuring out how much to spend on transmission investment, to deciding out what is an acceptable level of risk to transmission operators, the issue is chock full of must-read articles.*

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- ▶ **Utility Valuation**
- ▶ **New Battles Over ROE**

## SPARK

And New England would seem to have no argument with that. In comments filed at FERC, the NE ISO also favors a restart, but qualifies its words carefully:

“While we support operation of the Cross Sound Cable, it is important to understand the specific reasons ...

“ISO-NE’s support ... is not related to the reliability challenges we face in Southwest Connecticut ...

“The Cross-Sound Cable has no bearing on the electric reliability situation in Southwest Connecticut. It is simply not in the right location ... [O]ur understanding is that Long Island is in a deficit situation in terms of power generation, and it is therefore difficult to foresee a situation in which Long Island could become a meaningful exporter to Connecticut ...

“There may be, however, emergency

situations in which either New York or New England would benefit.”

Such words could make it difficult for FERC to find the necessary jurisdiction to warrant a fight with the Connecticut environmentalists.

Maybe that’s why Hillary decided to step in and join the fight. ■

*Bruce W. Radford is editor-in-chief of Public Utilities Fortnightly magazine.*

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