

PSEG Outlook:
2008 N.J. International Association
of Business Communicators
"Best in Show" Award Winner

pseg outlook



SEPTEMBER 2009

A monthly publication for People providing Safe, reliable, Economic and Green energy, like ... Kreamy King, technical analyst, Salem regulatory assurance department.

The Alaskan Iceman

BY PAUL LIEF ROSENGREN AND ZACH NARRETT

To understand PSEG's position on an issue being debated in D.C., it is helpful to first read the tale of the Alaskan Iceman.

Once upon a time, a businessman and his wife were sipping ice-cooled drinks at a resort in Alaska. "Alaskan ice is clearly the best," she remarked at one point. "It is a shame that this pure, clean ice cannot be enjoyed by all Americans." Her comment sparked an idea in her husband's mind: Why not export Alaskan ice? Making ice in Alaska is cheap. Simply let water sit outside and, in 10 seconds ... voilà, ice! Or, the ice simply can be cut from glaciers.

He set about building a business and soon was known as the Iceman. But a problem arose: As cheap as it was to make ice, getting it to his target markets of Florida, California and New Jersey was expensive. When he added the cost of transporting the ice, he simply could not compete with ice made locally.

So the Iceman went to his congressman, who came up with "The Alaska Ice for Everyone" bill. Under this bill, new superhighways (paid for by all U.S. taxpayers) would be built from Alaska to the major ice markets, and the Iceman would receive free refrigerated trucks to transport the ice. These, too, would be paid for by taxpayers.

The Iceman started promoting the bill nationwide.

But an economist, Professor Wisewoman from a prominent New Jersey college, pointed out that the Iceman's plan was seriously flawed. Ice from Alaska was much more expensive than local ice when the transportation costs were included. "Ice from Alaska is nice, but it should be priced accurately so consumers can make a fair decision based on all-in costs," she remarked. She also pointed out that the bill would hurt New Jersey's ice industry and that other Alaskan industries – such as North Slope oil and oil by-products – would gain a significant advantage by being able to use the new free highways or tuck their barrels into unused space on ice trucks.

If the bill passed, places such as New Jersey would pay more for ice, lose local jobs, and suffer unexpected consequences (whatever would be displaced by cheap North Slope oil and oil by-products). With the facts out, the bill went nowhere.

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INSIDE OUTLOOK



FOR PSE&G, RELIABILITY

is an investment. p. 3.



PSEG NUCLEAR

fills tall order for equipment reliability. p. 4.



JOHN DANIEL

toes the (underground) line. p. 5.

Capacity markets ensure reliability

BY MIKE JENNINGS

Reliability drives PSEG Power's two primary revenue streams – energy and capacity. Energy is the sale of the electricity produced by Power's plants and accounts for 70 percent of its profits. Capacity payments account for 20 percent of Power's margin and are received in exchange for commitments to make its plants available to run when needed. During 2008, PSEG received approximately \$860 million in capacity payments.

Much as electrons are the commodity provided in the energy market, reliability is the capacity market's commodity. Grid operators, such as PJM, conduct auctions to secure enough capacity to ensure system reliability at the lowest cost. Energy providers, such as Power, offer a specific amount of capacity from a particular unit at a certain price.

PJM, which manages the grid for 13 states, including New Jersey, introduced its forward capacity auction – the Reliability Pricing Model (RPM) – in 2007. The RPM auction is used to

See CAPACITY, Page 6



The Sewaren generating station marked 60 years of service last November.

SAFETY WATCH

2008 YTD	2009 YTD	CHANGE	
JULY	JULY		
OSHA Recordable Injuries	103	96	▼
<small>(OSHA total cases include OSHA Hearing Loss Cases)</small>			
OSHA Recordable Rate	1.59	1.50	▼
<small>(OSHA Rate includes Hearing Loss Cases)</small>			
OSHA Days Away From Work Rate	6.37	18.31	▲
<small>(Lost Time Days Severity Rate)</small>			
Motor Vehicle Collisions	155	150	▼
<small>(MVC includes Commuting Collisions)</small>			



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FORWARD-LOOKING STATEMENT

The statements contained in this communication about our and our subsidiaries' future performance, including, without limitation, future revenues, earnings, strategies, prospects and all other statements that are not purely historical, are forward-looking statements for purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. Although we believe that our expectations are based on reasonable assumptions, we can give no assurance they will be achieved. There are a number of risks and uncertainties that could cause actual results to differ materially from the forward-looking statements made herein. A discussion of some of these risks and uncertainties is contained in our Annual Report on Form 10-K and subsequent reports on Form 10-Q and Form

8-K filed with the Securities and Exchange Commission (SEC). These documents address in further detail our business, industry issues and other factors that could cause actual results to differ materially from those indicated in this communication. In addition, any forward-looking statements included herein represent our estimates only as of today and should not be relied upon as representing our estimates as of any subsequent date. While we may elect to update forward-looking statements from time to time, we specifically disclaim any obligation to do so, even if our estimates change, unless otherwise required by applicable securities laws.



PHOTO: MARK LOVRETTIN

Reliability is about shareholder value, too

BY CAROLINE DORSA
PSEG EXECUTIVE VICE PRESIDENT AND CHIEF FINANCIAL OFFICER

Since becoming CFO in April, after six years on our board of directors, I am pleased to say that my appreciation for this great company, its proud culture and values, and – above all – its terrific people, has grown even stronger.

Reliability – the focus of this issue of *PSEG Outlook* – is a hallmark of PSEG that makes us proud because it reflects our employees' dedication. We all understand that reliability matters for our customers, and we work hard to be there for them. As a result, we win awards as the nation's most reliable electric utility, we respond to 99.9 percent of gas leak calls within an hour, and we achieve superb power plant operations, as at our nuclear stations.

A high standard of reliability underpins our company's fine reputation built over 100 years. But it can't be emphasized enough that reliability also entails keeping PSEG in sound financial shape and meeting our commitment to shareholders, as well as customers and employees.

Our shareholders matter. They are the owners of the company. We not only have important obligations to them, but must be mindful that they can take their hard-earned money elsewhere – potentially to the detriment of the company's financial position.

Typically, we've rewarded shareholders in two ways over the years: with dividends and with improvement in the value of our stock. Our current record of paying dividends for 103 consecutive years is one of the best demonstrations of reliability in corporate America.

But there's no resting on past performance. Shareholders always want to know what we will do for them tomorrow. We are going to continue working hard to create value for our shareholders.

Ultimately, our ability to pay dividends and support our stock comes down to what we earn going forward – and confidence among investors that we will deliver as promised.

What does this mean for us in today's demanding environment?

First, during an economic downturn, shareholder support counts more than ever. Thus, there is no contradiction between our policy of paying dividends to shareholders and working hard to reduce costs. Paying a reliable dividend enables us to return value to shareholders, supporting our

stock price and sending a strong signal about our ability to generate cash flow and to invest in the future growth of the business. If we spend too much, we have less to invest in the future.

Second, we need to show that we can manage the business within the constraints of the unfolding business environment – not as things were a year ago when energy prices were much higher. This requires that we re-double our efforts to reduce costs and economize everywhere we can to control our fate to the fullest extent possible.

But it doesn't mean forgoing opportunities to grow the business where that makes sense. We are doing this at the

“Our ability to pay dividends and support our stock comes down to what we earn going forward – and confidence among investors that we will deliver as promised.”

utility with initiatives such as our stimulus and solar programs, where prompt cost recovery is provided, and at PSEG Power with our plans for some new peaking units.

Third, and most important, is our employees' continued focus on operational excellence. It is the key to a continuing stream of strong, reliable cash flows – and the foundation for a bright future.

One final point: We cannot afford to let the difficult economy cloud our vision. If we work together to turn our challenges into opportunities, we have the power to come out ahead as a leader for People providing Safe, reliable, Economic and Green energy.

Caroline Dorsa

For PSE&G, reliability is an investment

BY DEANN MUZIKAR

PSE&G has been named the most reliable electric utility in the mid-Atlantic region for seven consecutive years, as well as the most reliable electric utility in the nation three times. Being a recognized leader in reliability doesn't happen by chance. It's the result of PSE&G's ongoing commitment to investing in its transmission and distribution systems.

"Investing in our transmission and distribution infrastructure is essential if we are to continue to provide safe, reliable, economic and green electric service to our customers," said John Latka, vice president-electric operations. "It also benefits the company because we earn a return on transmission investments."

In 2009, PSE&G will place in service \$263 million of transmission assets, including Regional Transmission Reliability Projects (RTEP). It also will invest in ongoing distribution replacements and reinforcements.

500kV transmission projects Susquehanna-Roseland power line

PSE&G achieved two significant regulatory milestones in the Susquehanna-Roseland power line project. The line, which is needed to maintain electric system reliability and prevent future blackouts/brownouts, is a \$750 million investment, with an estimated return of 11.6 percent.

Last June, the Highlands Council approved PSE&G's Highlands Comprehensive Mitigation Plan and the Board of Public Utilities (BPU) concluded the public hearing phase of its review of PSE&G's application to build the line. Final BPU approval is expected by the end of this year.

In the meantime, PSE&G is finalizing construction details and design work to determine the location of the new structures and temporary access roads and undergoing environmental reviews by government agencies. The project is on track to meet the 2012 in-service date.

New Freedom

PSE&G has completed the final phase of the 500kV loop in to New Freedom Switching Station. This \$27 million project will help maintain reliability, prevent system overloads, and provide additional flexibility for operations.

As part of the project, the Hope Creek-New Freedom and Salem-East Windsor 500kV circuits were looped into and out of the New Freedom Switching Station. The project also included two new 500kV circuit breakers and disconnects, the replacement of six 230kV circuit breakers and disconnects, and the installation of 14 monopoles and relaying with 40 miles of fiber-optic cable.

69kV enhancement and summer-critical projects

Locally, PSE&G is enhancing its existing 69,000-volt (69kV) electric system to improve reliability. The work, which primarily is being done by the Mobile Construction Workforce, entails replacing poles, installing new wires, and upgrading substations in targeted areas in central and southern New Jersey. Work completed includes the expansion of the South

Waterfront Switching Station and Hawthorne Substation, the Bridgewater-Lake Nelson-Rutgers-Franklin 69kV loop, and the new Franklin Substation. Work also is under way on other 69kV projects to be completed this year.

230kV enhancement

PSE&G is enhancing its 230kV transmission system to prevent circuit overloads, increase capacity, and improve reliability. One example is the Branchburg-Flagtown transmission line in Somerset County. This new 230kV, 4.5-mile circuit was constructed to alleviate overloaded circuits in the area. The Branchburg-Flagtown line is the first 230kV line constructed by delivery projects and construction. It was put in service in May 2009.

Other 230kV projects include replacing/upgrading equipment at the Metuchen and Roseland Switching Stations, including a new capacitor bank at the latter.



From left: Linemen Scott McLain, Tony Russo and Shane Greening from the Mobile Construction Workforce-North Zone prepare for the installation of a new 69kV circuit in Hillsborough, N.J.

Transmission Lifecycle Program

PSE&G is investing \$45 million to replace 230 pieces of aging transmission equipment at nearly 30 stations. This equipment includes circuit breakers, switcher relays, wave traps, and closed-circuit televisions.

Distribution projects

PSE&G also makes ongoing investments in its electric and gas distribution systems. These include Smart Grid and Advanced Loop Scheme (ALS) technology, Green Circuits, and upgrading gas metering and regulating stations. In addition, PSE&G has identified six of its poorest performing 13kV circuits for remediation and installed a new state-of-the-art network monitoring system at Newark Airport, which provides real-time status and locates underground cable faults.

By continuously improving its transmission and distribution systems, PSE&G can continue to be synonymous with *reliability leadership*. ◉

We've Got
Mail



> *With all of the cost-cutting measures being implemented throughout PSEG, how is the company going to maintain its current level of reliability, for which it has been nationally recognized for the past several years?*

— a PSEG employee

< While we continue to focus on expense cutting, we still are making capital investments that drive our reliability. For example, our CapEx investment will grow to \$1.65 billion in 2012 from a baseline of \$572 million in 2006. These investments continue to improve the reliability that our customers have come to expect. In fact, we just received the most recent benchmark survey from the Edison Electric Institute (EEI), and PSE&G is the only utility in the country performing in the top quartile for each of the three reliability performance metrics. That's a distinction that makes us proud.

— Ralph LaRossa, president and chief operating officer, PSE&G

PSEG Outlook welcomes your correspondence.

Please e-mail the publication's editor at melissa.ficuciello@pseg.com, or send your letter to Melissa Ficuciello, Editor, *PSEG Outlook*, 80 Park Plaza, P-3B, Newark, N.J. 07102. All correspondence should include the writer's full name, address and daytime telephone number. Anonymous letters may be submitted, but will inhibit the editor's ability to contact the author with questions, should a reply be necessary. Correspondence may be edited for purposes of clarity and space.

The PSEG Vision

Being a recognized leader for:

PPeople providing
SSafe, reliable
EEconomic and
GGreen

Energy

Gas reliability: protecting life, property and the distribution system



PHOTO: MARK LOVRETN

Gas Systems Operations Center (GSOC) employees Jim Westervelt (standing) and Jim Sverapa monitor and control the delivery of natural gas to the distribution system, anticipating the load to ensure that pressure is sufficient to meet demand.

There's a motto that guides gas delivery's approach to reliability: Protect life, property and the distribution system. An essential part of this commitment is a well-thought-out construction program to replace and upgrade aging mains and services that bring natural gas to 1.7 million customers. Tony Fuhrman, asset strategy leader, says, "Our program is based on vigilant monitoring and analysis of break and leak history, along with computer models to evaluate and prioritize specific segments of the system to be replaced to minimize risks from future breakage and gas leaks."

In 2008, more than \$163 million was spent replacing and upgrading gas facilities. In 2009 and 2010, about \$465 million will be invested. In addition to planned replacements and upgrades, the New Jersey Economic Stimulus Program will provide for the accelerated replacement of 180 miles of bare steel and cast iron mains and associated bare steel services.

A key measure of distribution system performance is the number of gas leaks reported per mile of mains and services. The target is to achieve top quartile in industry benchmark performance. PSE&G's results have improved annually since 2000 and have been at or near top quartile performance since 2003, even with a main system that is 32 percent cast iron and unprotected steel.

"Everyone involved in keeping our system safe and reliable does an outstanding job," said Jorge Cardenas, vice president-gas delivery. "In February, we met the demands of a new peak system delivery day with a total throughout of more than 2.5 million dekatherms, without any operating issues. Liquefied natural gas and propane plants were online for part of the peak day period, and appliance services and distribution employees responded to numerous emergency and no-heat calls safely and without incident."

— Judy Ohl

When reliable information counts

If there is an outage in PSE&G's service territory, the company's regional public affairs (RPA) team is on the phone and out in the field 24/7 providing local, elected officials with timely estimated restoration times and a report on what's happening in the field.

Officials, in turn, have the information they need to respond. For example, if service is not expected to return for a while, officials may open a high school for

use as a cooling center, keep the public pools open for an extended period of time, or require shift changes for local police.

"Being there in times of crisis is critical," said Art Guida, director-regional public affairs. "When officials have their questions answered in a timely, accurate way, they can do their jobs better for the communities they serve and PSE&G's reputation is enhanced."

RPA communicates with local officials and business leaders not only during outages, but each day on a host of corporate priorities – such as the Susquehanna-Roseland transmission project or the company's green initiatives.

"No day is the same for us," said Guida. "On any given day, an RPA employee may begin working to support a school board meeting about solar initiatives, but then a mayor calls with a question about low wires, or a state senator calls about a constituent shut-off and, at the same time, a councilman calls with questions about the neighborhood impact of a transmission project."

No matter what the issue, being a reliable, accessible and helpful resource makes a difference.

— Beth Gill



PHOTO: PHIL JEFFERSON

Art Guida (center), director-regional public affairs, tours the Salem nuclear facility with (l-r) Jon Livingston, H Jacobs Engineering Group; Gerry Keenan, N.J. Alliance for Action; Richard Cleveland, Amper Politziner and Mattia, LLP; and Jennifer Hearon, N.J. SEED.

PSEG Nuclear fills tanks for energy

Every company that operates a nuclear power plant has a common goal: to ensure that its systems, structures and components. This includes monitoring the integrity of primary equipment (active components).

BY KAREN MILLER

Equipment reliability for a nuclear power plant is essential to producing electricity. Maintaining plant equipment in good and ready condition ensures units can run without interruption, helping PSEG Nuclear to meet its business objectives: equipment reliability excellence and running the business.

"Our commitment to safe and reliable operation is directly related to the material condition of Salem and Hope Creek," said Tom Joyce, president and chief nuclear officer. "Over the life of the plants, the equipment wears so that we can repair or replace it before it becomes a challenge. Building additional measures into our processes – such as root cause analyses, benchmarking, reviewing industry operating practices and implementing corrective actions – ensures that we have an integrity management program for managing plant material condition."

Each plant system contains equipment that is monitored by a team of individuals – a complement of several disciplines. Although the engineering department is the sponsor of equipment reliability, all departments are integral to its health.

Planned maintenance of equipment is scheduled when the units are online or during a refueling outage. Salem and Hope Creek undergo a scheduled refueling outage every 18 months. To maximize the production of electricity, maintenance is planned to minimize equipment outages that affect production. During refueling outages, maintenance is performed on equipment that is not routinely accessible when the plant is online during production.

Joyce says that seasonal readiness also is a key factor in preparing the units for the summer and winter months. "It's much like the maintenance we perform on our vehicles during the summer and winter months to ensure that they work when we need them," he said.

A uniform process of equipment reliability is performed under the guidance of several procedures and is used among all PSEG Nuclear plants. Failures causing plant events or lost generation are not tolerated and actions to prevent recurrence are taken in a timely manner. Equipment must perform reliably through the operating cycle, and standby safety equipment must operate properly upon demand. Applicable in-house and industry lessons learned are incorporated into the equipment reliability process to improve adequacy and efficiency.

Nuclear all order equipment reliability

power plant has an integrated plan for managing the condition of plant life-cycle management plan centers on a wide range of activities that system materials (passive components) and maintaining the condition

During refueling outages, maintenance is performed on equipment that is not routinely accessible when the plant is online. Hope Creek's condenser bay, shown here, is one area that undergoes maintenance during an outage.

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Maintaining and improving industry equipment performance is an ongoing endeavor. Each nuclear power plant's performance is monitored for its equipment health. The common indicator used is the Equipment Reliability Index (ERI) – a tool that was developed specifically to measure equipment program health. The ERI looks at the entire equipment program – the overall health, performance, failures and stability. Salem and Hope Creek are in the industry top 10 percentile.

“All of this focus is necessary for the prevention of equipment failures and to ensure long-term equipment reliability,” said Joyce. “Every day the units are running is a day of generation, which equates to revenue for the company.”

Equipment reliability is a tall order – but one that is necessary for the health of the plant equipment, the safety of employees, and the trust of PSEG's stakeholders.



PHOTOS: PHIL JEFFERSON

Salem's feedwater heater is another area of the nuclear plant on which maintenance can only be performed during an outage.

John Daniel toes the (underground) line

BY MELISSA FICUCIELLO



PHOTO: MARK LOVRETTIN

JOHN DANIEL
DIVISION MECHANIC-CONSTRUCTION UNDERGROUND
PALISADES DIVISION - SECAUCUS

The world is John Daniel's oyster ... or so it seems. With less than a year under his belt at PSEG, Daniel, division mechanic-construction underground, Secaucus, was promoted last month from division mechanic assistant and given an opportunity to go to school to train for the next phase of his job.

Celebrating his first anniversary with PSEG on Sept. 15, Daniel is learning something new on the job daily. Late in August, he began a two-year apprenticeship at Edison Training Center, after which he will become a division mechanic. “Until now, my job has been to be a good helper to the division mechanic,” Daniel said. “My goal is to assist him the best way I can so that the job gets done safely – always the number-one priority – and as quickly as possible. That makes the division mechanic happy. I hope that someone does that for me when I'm in that job.”

Daniel says that while he is excited to start the training program, he is in a better position to start the program now, having been an assistant for a year. “Spending a year as a helper is beneficial because you already have seen firsthand what these jobs are like. That will make what we learn in school easier to understand because we've already experienced it – or assisted with it – on the job.”

Paul Rauch, senior distribution supervisor-Palisades division, says Daniel has gained the respect of his supervisors, as well as his peers, during the past year. “John has shown dedication to his position – either while assisting crews during storms or underground cable failures,” Rauch said. “I look forward to his progression in the division mechanic position and becoming an efficient contributor to the department.”

Off the job, Daniel and his wife, Nicole, are looking forward to buying their first home and are enjoying house hunting together. Daniel also spends time fishing – both ocean and freshwater.

When asked how he successfully combines work and family, Daniel says it's sometimes a challenge because his wife, who is in sales, works nights, while he works during the day. But he finds that his wife's schedule allows him the flexibility to work overtime, when necessary ... and, on those occasions, they arrive home at around the same time to catch up after the workday is over.

Daniel considers landing his job with PSEG as one of his most important accomplishments. “I sought employment here because I sometimes experienced slow times with little work at my old job, and I figured that, here, the work would be more constant and that, in the long run, my job would be more secure at a company like this,” he said.

After working for seven years as an industrial electrician for another company, it took Daniel about a year-and-a-half to search the “careers” section of the PSEG Web site, apply for a couple of different positions, and then finally secure the one that was best for him. “I considered two positions in the overhead department before accepting the job with the underground group,” Daniel said, adding that making safety a priority, having patience and hands-on experience, as well as being a quick learner all play a role in being successful on the job. “One of the most obvious differences between this job and my last is the way in which we work. While the work itself is similar, the way we work here is different. We work much more safely on the job here.”

Daniel says that PSEG is on the right track to becoming an employer of choice. “The pay and benefits are competitive, there are opportunities for advancement, and the people I work with make every day easier by teaching you what they know.”

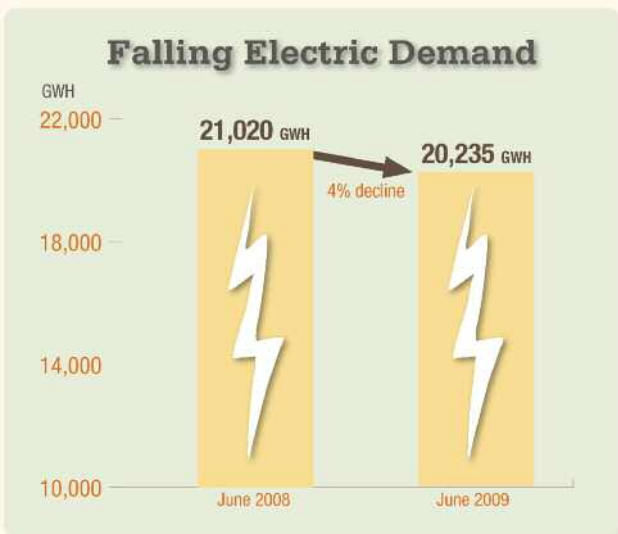
Editor's Note: In 2009, the People First column is spotlighting employees who are celebrating one year with PSEG during the month they are featured. If you know someone who should be featured, please e-mail melissa.ficuciello@pseg.com.

Addressing PSEG's economic challenges

Plain and simple ... profits are being squeezed at PSEG, and it's critical for all employees to understand why – especially as a number of additional cost-cutting initiatives are being considered to help meet these challenges. Energy prices are down dramatically from one year ago. Electric demand is down due to economic pressures and cooler-than-normal summer months. Finally, pension expenses for 2009 are drastically higher as well.

If you think 2009 has been difficult, 2010 and 2011 are expected to be even more challenging, based on current projections.

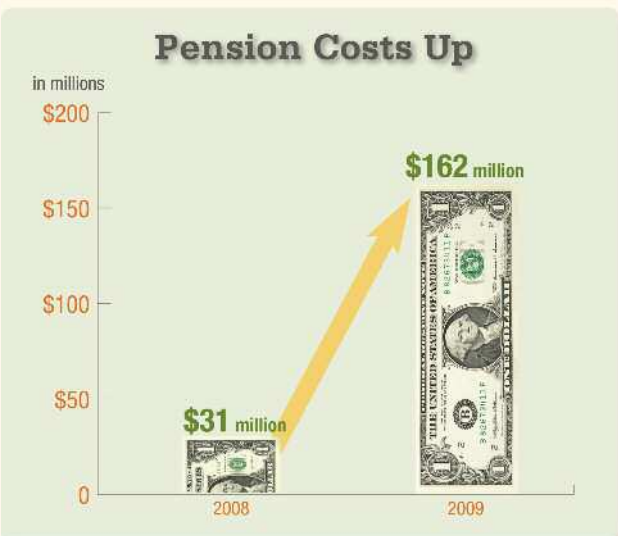
Below are graphic representations of PSEG's economic challenges:



Demand for both gas and electricity has dropped significantly. Electric sales for PSEG have fallen 4 percent between June 2008 and June 2009. Gas also saw a decline of about 2.5 percent during the same timeframe.



Electric prices are down dramatically from a year ago. Although PSEG has locked in prices for 2009, falling prices can potentially affect earnings in 2010 and 2011. Lower sales, cheaper energy prices, and a struggling economy are making it harder to meet the company's earnings target. Chart represents average on-peak locational marginal pricing per MWH for PSEG zone in PJM.



The downturn in the stock market has had a deep impact on the value of PSEG's pension. In turn, the company has seen a significant increase in pension expenses in 2009.

Iceman *Continued from page 1*

In real life, we are not debating ice, but whether the federal government should provide free transmission for renewable energy developed largely in places such as the Midwest plains and Western deserts – far from where people live. The proponents are arguing that taxpayers should pay for a national build-out of the transmission system. As in the Iceman's story, this would hide the true all-in cost of Midwest wind or desert solar and undermine New Jersey's renewable projects. PSEG believes that while wind energy from the Midwest is a terrific resource, it needs to be priced to include the cost of transporting it.

Wind also does not blow all the time, so there would be excess capacity in the new built-out transmission system. Coal plants in the Midwest would be able to take advantage of the subsidized transmission system to export more electricity to markets in the east and the west. The net effect might even increase carbon emissions, especially in the absence of a national mandatory carbon cap.

Supporters of this proposal claim it will allow wind to expand and gain access to markets on both coasts. But the wind being produced in the Midwest already is being used there. It is displacing the coal plants that have had to back down their production. This proposal also would allow the coal plants to find new markets for their displaced capacity without having to pay the transportation costs to these markets.

Let's be clear. PSEG supports transmission upgrades when they are determined to be needed to ensure reliability – and the costs are paid for in a fair manner.

PSEG Chairman Ralph Izzo and PSEG's federal affairs group have been working to get these facts out through testimony, one-on-one discussions with lawmakers, and interactions with the press. It remains to be seen whether the facts will help to provide a happy ending to this real-life story. ◉

Capacity *Continued from page 1*

contract capacity three years in advance of delivery. (The Independent System Operator for New England conducts a similar auction. New York's Independent System Operator administers a monthly capacity auction. And there is no capacity market in Texas.)

The auctions have proven to be a success – an economical means of meeting future demand and reliability requirements, says PSEG Power President Bill Levis. "The auctions have created a healthier investment climate and shown impressive results in attracting new resources and retaining existing resources, which is improving reliability," Levis said.

The continued operation of Sewaren generating station illustrates how the RPM benefits consumers. Before the RPM was implemented, Power intended to close Sewaren in 2008. The RPM has allowed Sewaren to remain economically viable while helping to ensure system reliability at a low cost. Sewaren has succeeded in the RPM auction, because its bids have been lower than the costs of building new plants and has provided consumers with a very cost-effective capacity resource. Newly constructed units would replace existing plants, such as Sewaren, if they could provide capacity less expensively.

The same holds true for Hudson. "Power is investing nearly \$1 billion in Hudson generating station to make the plant cleaner and more efficient," Levis said. "Without the RPM program, we likely would have shut Hudson down, which would have removed a large unit from the congested New Jersey region that is of considerable importance to reliability."

The RPM provides generators with powerful incentives to improve the capacity and reliability of their plants. Since the RPM began, 27,640 MWs of additional capacity has been made available to PJM. Improved performance from existing units accounted for more than 4,200 MW of that total,

with another 4,200 MWs from units that were slated for retirement but that have been kept in service.

Reliability is central to the RPM and a two-way street with PJM, Levis said. PJM considers reliability when calculating a unit's capacity value. For example, PJM reduces a plant's capacity payments based on the number of hours it has been offline for unplanned outages and operated at less than full capacity.

"The capacity market demands operational excellence," Levis said. "Since 2004, our nuclear



PSEG is investing \$1 billion in Hudson generating station (shown here) to make it more reliable and place it among the nation's cleanest coal plants.

plants have reduced production time lost to unplanned outages by 91 percent. We need to maintain that unwavering commitment to excellence. For every percent we lose in our forced outage rate, we lose more than \$1 million in capacity payments. That is in addition to the revenue lost in the energy market."

Capacity commitments are binding. Shortages have to be covered by purchasing the capacity through secondary markets – which may be costly. In addition, providers face penalties if a unit's capacity test indicates that it cannot deliver all the MWs promised in its bid and the unit's capacity rating can be downgraded, which would reduce future capacity payments. ◉

Behind the Numbers

MATERIAL AVAILABILITY CRITICAL TO GETTING THE JOB DONE

BY ROBEN RASHEED-HERNANDEZ

You've decided to tackle a paint job on a Friday evening, only to realize you're missing your favorite brush. Frustration sets in because the missing paintbrush means another trip across town and, undoubtedly, a delay in a job that will now stretch into precious weekend hours.



PHOTO: MARK LOVRETTIN

Scott Landrieu, material control-logistics manager, stands in PSEG nuclear's storeroom, which now has a 98 percent material availability index, thanks to implemented process improvements.

Multiply that frustration ten-fold, knowing that for every day PSEG's nuclear plant does not operate, the company loses about one million dollars, and you'll understand the importance of material availability.

At PSEG Nuclear, outages are scheduled every 18 months for Salem and Hope Creek, and planned maintenance is performed around the clock. During an outage, all jobs are tracked to make certain that they are progressing as scheduled, down to the minute. Ensuring that each job is pre-staged (including parts), performed safely, and crisply executed is the key to returning the units back online.

In 2006, the availability rate for materials at PSEG Nuclear was at 92 percent and a red flag was raised when plant managers could not return the units back online due to missing parts. Without the needed parts, the units would not be able to operate at top performance or would result in a delay in returning to operation. Plant managers realized that something had to be done to correct the process.

The implementation of the Material Availability Index, a balanced scorecard measure, has helped to improve the material management process by doing things differently – focusing on work plans and the necessary equipment that ensures the plant's operation after an outage.

A team, known as the "hit team," was formed to review and scrutinize every work plan to remove items that weren't relevant or didn't work, and adding components that may have been overlooked. The team also reviewed the plans and determined if they met budgetary guidelines.

"The more disciplined process has helped to ensure that required parts are available to meet the work plan," said Scott Landrieu, material control-logistics manager. "Engaged team participation throughout the site allows us to support the plant's high reliability while avoiding costly over-purchasing."

Supply chain procurement started working more closely with the vendors – a step not done before the balanced scorecard. Frequent and early communication, which included conference calls, worked to ensure the delivery of contracted goods and materials on promised dates. The added discipline helped strengthen the process and improve communication with all involved parties.

Nuclear's planners, inventory control, purchasing, schedulers, and engineers also worked as a team to ensure that plans were adequate and met the requirements of the plant. From the process, the team was able to gather data that would help make better planning decisions.

Today, the Material Availability Index for PSEG Nuclear is at a satisfactory rate of 98 percent. This achievement is the direct result of recognizing a problem and teaming up to find a solution that promotes continuous improvement, while decreasing excessive trips across town.

FYI: SERVICE AWARDS, RETIREMENTS, IN MEMORIAM



SERVICE AWARDS

40 YEARS

Dennis R. Dunn, Metropolitan division - Clifton
 Gary A. Gorman, Southern division - Lawrenceville
 Charles F. Larcheveque, Hackensack CSC
 Patrick G. Naples, CPPC - South Plainfield
 Carmen I. Rodriguez, cust. serv. billing - Cranford
 Arthur Smith, Jr., overhead planning - Hadley Road
 Linda C. Sypherd, corporate benefits - Moorestown

35 YEARS

Peter E. Bailey, Audubon gas
 William E. Frese, law - G.O.
 Jeanna Y. Lee, billing - Cranford
 Asha Moody, customer ops. - Springfield
 Edilberto Ruiz, CCC - Cranford

30 YEARS

Leonard E. Babula, Burlington generating station
 Layne M. Barat, Sewaren generating station
 Philip P. Bassi, Palisades division - Secaucus
 Dorothy E. Close, Burlington gas
 Anthony Elia, Summit gas
 Kenneth A. Fahnestock, Burlington gas
 Donald A. Fodor, Linden generating station
 Russell J. Furnari, EH&S strategy and policy - G.O.
 Edward C. Godlewski, transmission plng. and reliability - G.O.
 Dorothy J. Henderson, Central division - Somerset
 Karen D. Hubbard, payroll services - G.O.
 Frank P. Hunter, Edison training center
 Ulysses G. Jenkins, Burlington gas
 Richard M. Jones, Burlington generating station
 Edward J. Keating, Jr., PSEG Nuclear
 August J. Kohnow, Jr., Burlington generating station

Mark W. Mackintosh, Central division - Somerset
 Eileen Marcus, delivery environ. Compliance - Clifton
 Maxine Marshall, business ops. & HR - G.O.
 Patrick M. Masucci, gas asset management - G.O.
 Michael T. Mulkeen, Clifton gas
 Michael J. Randazzo, Plainfield gas
 John C. Regep, Central gas plant
 Thomas J. Romanowicz, Metropolitan division - Irvington
 Charles A. Rusin, Jr., fleet maintenance - Edison
 Anthony V. Russo, Hadley Road
 Robert M. Ryan, Sewaren generating station
 Jeffrey D. Shipman, Metropolitan division - Clifton
 Charles W. Schweder, Trenton gas
 George J. Stubblebine, SMD - Hadley Road
 Wayne K. Wittman, emergent technology - G.O.
 Robert G. Wolfenden, Jr., Metropolitan division - Irvington

25 YEARS

Robert D. Binz, PSEG Nuclear
 William D. Bryan, Mercer generating station
 Robert B. Butler, Audubon gas
 Robert Choloski, Summit gas
 Kevin D. Doherty, cust. serv., inquiry - Cranford
 Richard J. Fant, Metropolitan division - Clifton
 Mark P. Gal, CMS
 Anthony R. Griffith, PSEG Nuclear
 James B. Jackson, Sr., PSEG Nuclear
 Laura A. Jopling, customer ops. - G.O.
 Robert Karstetter, Jr., PSEG Nuclear
 Stephen M. Komonieski, Jersey City gas
 Christopher Latham, Palisades division - Secaucus
 Joseph Leone, Essex generating station
 Richard B. Lockwood, PSEG Nuclear
 James P. McDonnell, Newark service ops. - Harrison

James B. Mollineaux, Southern division - Moorestown
 Gary W. Mulligan, Mercer generating station
 Joseph P. Nerz, PSEG Nuclear
 Nhan V. Nguyen, PSEG Nuclear
 Glenn R. Opperman, Sr., Burlington gas
 Michael E. Prendergast, utility electric sales - G.O.
 Mark D. Samuels, PSEG Nuclear
 Vincent Scatuccio, Jr., IT - G.O.
 Gary M. Stith, PSEG Nuclear
 Kenneth R. Stockton, Hadley Road
 Paul R. Texidor, Jersey City gas
 Michele A. Torrence, Summit gas
 Fernando C. Vitorino, Central maintenance shop
 Peter N. Waanders, Palisades division - Secaucus

RETIREMENTS

Olan Abrams, Central maintenance shop
 Ken Allen, PSEG Power - Texas
 George Bailey, transmission planning - G.O.
 Robert Becker, Newark CSC
 Ralph DiBiase, business development - G.O.
 Warren B. Downie, PSEG Nuclear
 Charles J. Dunn, business development - Springfield
 Ronald Flowers, PSEG Nuclear
 Bret M. Gilbert, Southern division - Moorestown
 Thomas Hughes, Hackensack CSC
 William Lee, Mercer generating station
 Richard Marchitto, Harmon Cove D.O.
 Isaul Roldan, New Brunswick gas
 Paul Shults, supply chain - Somerset
 John R. Smith, corporate responsibility - G.O.
 Zenon A. Telatycki, Sewaren generating station
 Darlene Vandevrede, cust serv., billing - Cranford
 Alvin Williams, Jersey City gas

IN MEMORIAM

Rita E. Braddick (active), PSEG Nuclear
 Eleanor S. Brookes
 James Coneys
 Michael Czar
 Donald Daley
 Henry Fistel
 Lloyd L. Gensel
 Vincent L. Jelleme
 James R. Kadlac
 Thomas J. Kelleher
 Harold W. Mangels
 Harry E. Nussbaum
 Eugene W. Pfaff
 Raymond Roble
 Alvin Rosenthal
 Warren Sidney
 Robert K. Thorpe
 Helene M. Totter
 Edwin E. Veitenheimer
 George Weckesser
 Victor C. Whitaker
 Leonard R. Young

Texas: Challenges to reliability of wind

BY PAUL LIEF ROSENGREN

Texas has a unique energy system. It is the only state that has its own system operator, the Electric Reliability Council of Texas (ERCOT). Texas also is ahead of the curve in installing wind energy and learning about its operational characteristics. In 2008, nearly 3,000 MW of wind power was installed in Texas, bringing the total wind capacity installed to 8,000 MW. (That is about the capacity equivalent of six to seven nuclear units – though nuclear plants run at much higher capacity rates).

Wind-based generation comes with its own set of challenges. The wind blows when it will – not at the direction of the market or a system operator. It often is strongest at times when it is not needed – at night, for example. While wind generators cannot rely on Mother Nature, they benefit from production tax credits, which they get when wind power is produced and sold. This has led to the unusual situation of wind generators sometimes bidding negative prices for electric sales; they actually will pay someone to take their electricity. (Of course, the price is less than the value of the production tax credit, so the wind generator still is making money.)

This dynamic adds to the gap between peak and off-peak energy prices. It is one reason that Energy Storage and Power (ES&P) has identified Texas as having potential for a compressed energy storage facility (which could buy electricity at night, store it as compressed air, and release it during the day at higher prices).

Intermittency also is an issue with wind power. Wind turbines can be generating a large quantity of electricity one minute and nothing the next, if the wind stops. Earlier this year, ERCOT had to increase the amount of traditional generation that is on spinning reserves (in effect, the plant receives payments for being available to quickly produce electricity, if needed). During that time, PSEG's Texas plants ran less than they would have otherwise, but have received unplanned revenues for spinning reserves. The Texas market has since changed again, and PSEG Texas is now running plants more to provide energy and less simply to supply spinning reserves.

As wind power grows, energy storage with the ability for quick release will become much more important to maintaining grid reliability – presenting another opportunity for ES&P.

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Comments on this column are welcome. Please send your feedback and ideas to paul.rosengren@pseg.com.

Letter of the Month



June 30, 2009

Mr. John Latka
Vice President-Electric Delivery
PSE&G
80 Park Plaza
Newark, N.J. 07102

Dear John,

On Friday, June 25, in the early evening, our neighborhood experienced a power outage as a result of a sudden, severe thunderstorm. Telephone calls were placed to PSE&G's call center to report the problem. We were told that someone would be there as soon as possible to assess the problem and make necessary repairs.

The situation was particularly stressful to several senior citizens and, particularly, to our neighbors across the street, who were hosting family and friends (many of whom were from out-of-state) at a pre-nuptial party for their son and his future bride, whose wedding was the next day. Everyone was outside at dusk, waiting for the PSE&G truck to arrive.

Once it did, the lone lineman, Tom VanShaik out of the Carteret sub-station, checked the poles and equipment servicing us and located the blown fuse on the corner of New Dover Rd. and Fairview Ave. He made the repairs promptly and efficiently and reassured everyone that all should now be OK, which it was.

Our sincere thanks to PSE&G – and Tom – for a job well done.

Sincerely,

Mrs. Gert Zdanowski
PSEG retiree, June 2006
Colonia, N.J.



PSEG troubleshooter Tom VanShaik acted quickly when responding to a power outage, leaving residents of the affected neighborhood at ease and ready to return to their evening festivities.



NOTABLE "Quote"

"The interaction of solar generation and smart grid technology will enable PSE&G to enhance the reliability of its delivery of electricity to customers."

- Shihab Kuran, president and CEO of Petra Solar, discussing PSE&G's Solar 4 All program

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