



ISO New England Outlook

A wholesale electricity
industry update

May 2009

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Smart Grid Is About Consumers

Experts at ISO-NE Forum Discuss Views, Goals

Efforts to develop the smart grid need to focus on the customer, according to regulators and representatives of utilities and leading technology companies from New England, New York, Washington, D.C., and Ontario who participated in ISO New England's Smart Grid Forum on May 20 in Westborough, MA.

More than 200 stakeholders attended the forum held as part of the ISO's regional system planning process, providing opportunities to discuss smart grid viewpoints and developments with the ISO's senior management and members of its board of directors. • *Continued on page 5*



*FERC Commissioner
Sudeen Kelly*

What's Your Outlook?

New Brunswick and Maine Energy Officials Define and Discuss the Northeast Energy Corridor

This spring, Governor John Baldacci of Maine and New Brunswick Premier Shawn Graham announced the exploration of a Northeast energy corridor that would connect Canada and Northern Maine, providing a link to the renewable-hungry energy markets in southern New England. A first phase of the project would potentially include more than 1,000 megawatts (MW) of electrical transmission capacity starting at Saint John. While the emphasis is on providing a means to ship large quantities of Maine's and New Brunswick's burgeoning renewable and other low-carbon-emitting energy resources to southern New England, ultimately, other types of energy products would follow the same corridor, allowing the exchange of electricity, natural gas, and petroleum between the regions.

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Outage Coordination Saves \$72.5M in 2008

Reliability Was Maintained While Congestion Was Reduced

As a former control room operator, Lee Blaede understands how the physical electric grid actually works. And as a former administrator in the Day-Ahead and Real-Time Energy Markets department, he also understands how the markets work. With the advantage of that experience, Blaede helped launch the short-term economic evaluation process last year in ISO New England's Outage Coordination department.

Through both the long- and short-term economic evaluation processes, ISO New England gauges the probable economic effects of proposed repair or maintenance outages on transmission lines and at power plants. By rescheduling 11 outages in 2008 to minimize congestion costs, ISO New England's Outage Coordination department estimates that New England consumers saved more than \$72.5 million last year.

• *Continued on page 8*



FERC Order 719: ISO-NE's Response

From President and CEO Gordon van Welie ●●●

Late last year, the Federal Energy Regulatory Commission (FERC) issued [Order 719](#), Wholesale Competition in Regions with Organized Electric Markets. Order 719

makes reforms to improve the operation of organized wholesale electricity markets in the areas of demand response, long-term power contracting, market monitoring policies, and RTO responsiveness to customers and other stakeholders. In late April, ISO New England and the New England Power Pool (NEPOOL) filed a joint response to the Order.

Because the ISO and NEPOOL work continuously to improve the efficient operation of New England's markets, as well as the region's stakeholder processes, a number of the reforms sought by FERC were already in place or underway in New England. The various stakeholder processes conducted prior to the joint filing reviewed areas where the ISO was already compliant, and recommended changes to the ISO Tariff and other governing documents to ensure compliance with all areas highlighted in the Order.

At its core, our filing builds on the experience we've gained over the past decade as an ISO and later as an RTO in all areas and, in particular, in the area of RTO responsiveness to customers and stakeholders. Although in this article I focus only on two new responsiveness features—creation of the Consumer Liaison Group and development of the ISO New England Mission Statement—I strongly recommend that readers of *Outlook* review the [joint filing](#) in its entirety to more fully understand what the Order sought to reform and how New England will comply with this FERC directive.

Here in New England, an RTO Responsiveness Working Group was established to review all aspects of ISO New England's responsiveness to its customers and stakeholders. A steering committee was established so that views of the ISO, NEPOOL, the New England Conference of Public Utilities Commissioners (NECPUC), and consumer interests would be represented during the meetings. They included NEPOOL's Vice Chair, Brian Forshaw of the Connecticut Municipal Electric Energy Cooperative; Vermont Public Service Board Commissioner John Burke, representing NECPUC;

Kevin Conroy from the Office of the Massachusetts Attorney General, representing consumer interests; and ISO New England's Vice President of External Affairs and Communications, Anne George.

The Working Group met eight times, developed dozens of documents posted on the ISO Website, and had widespread, robust discussions on improvements to the responsiveness process, including enhancements to assure consumers' views were understood by the RTO, as well as the Mission Statement.

Various end users, their advocacy organizations, and the state consumer advocates agreed to form an organization of consumers and their representatives called the Consumer Liaison Group. Going forward, the ISO has committed to work with this group through an established point-of-contact in our External Affairs department. The ISO also has committed to meet regularly with them to provide information concerning wholesale marketplace or power grid developments of potential interest to consumers.

Another requirement of Order 719 was that each RTO should post its mission statement. This was by far the most heavily discussed matter of the Responsiveness Working Group. Ultimately, changes were proposed to ISO New England's "objectives," which were then recast as ISO New England's mission statement. In the new language, ISO New England commits to strive to be cost-effective and to provide information that will allow all stakeholders to evaluate the implications of the ISO's major activities. The mission statement was approved by the NEPOOL Participants Committee during an early April vote. Pending FERC approval, these changes will be made to all governing documents in which the objectives reside, including the ISO Tariff, the two versions of the Market Participant Service Agreement, the Second Restated NEPOOL Agreement, and the Participants Agreement.

As we have witnessed over the years, the process for reaching consensus may be difficult, complex, exhaustive, and, at times exhausting, but the bottom line is that we all want to improve our regional electricity industry regardless of sector or affiliation. And in the end, it's just as simple as that. ●●●

ISO-NE Sets 2009 Agenda

Lays Out Priorities and Details Key Software Updates for the Year

In the next twelve to eighteen months, ISO New England will work through a variety of projects with the goal of improving and updating the analysis, procedures, tools, and rules relied upon to keep the power system reliable and the markets competitive.

ISO New England's Chief Operating Officer Vamsi Chadalavada recently provided stakeholders with an update on the voluminous list of system planning, wholesale market, and capital project priorities. Among them are three key initiatives relating to the wholesale markets.

Review of Price-Response Program

New England is an industry leader in the area of demand resources, with demand response, energy efficiency, and distributed generation soon to account for about 10% of the region's resource base.

Looking ahead, two programs designed to encourage price-responsive demand—the Real-Time Price Response Program and the Day-Ahead Load Response Program—are set to expire in 2010. The ISO began work with stakeholders in 2008 to consider how to continue encouraging price-responsive demand in New England, be it through these programs or some other approach.

Stakeholders generally agree on the importance of encouraging price-responsive demand. Nonetheless, there are some areas of disagreement regarding the public policies to advance its growth. Particularly, how should demand resources be compensated and how can compensation for actual load response be assured? The ISO filed a report on these discussions with the FERC on March 27.

The ISO and stakeholders intend to continue this dialogue and file an updated report with the FERC no later than July 31, detailing areas of consensus and where additional guidance is needed. Any rule changes resulting from this discussion will be presented to stakeholders and filed with the FERC in the fourth quarter of 2009.

Standard Market Design

As ISO New England looks ahead to 2009's wholesale market project work, the ISO is also looking back to work completed in 2003 with the launch of Standard Market Design (SMD).

In 2008, the SMD system underwent some streamlining upgrades to align it more closely with the platform on which the Energy Management System is based. In addition, control room interfaces were redesigned to ensure compliance with the North American Reliability Corporation's Critical Infrastructure Protection standards.

This six-year-old market platform will continue to undergo a series of upgrades this year to update the software and technologies on which it is based. In the end, the upgrades will improve the platform for the pricing and dispatch software, evolve the user interface to end reliance on obsolete technologies, and enhance market system and database performance. In addition, new tools will be implemented to improve our operators' ability to run the system efficiently.

Looking into 2010, the last of the SMD series of upgrades will be completed, including moving the Market User Interface onto a Java framework.

FCM Projects and Third Auction

With the first two Forward Capacity Market (FCM) auctions successfully completed, work is already underway on a number of initiatives to enhance the marketplace even further. Market rule changes filed with FERC December 1, 2008, detail a number of these improvements.

The filing lays out specific rules to incorporate bilateral contracts into the FCM market. The market changes are also intended to achieve optimal design for reconfiguration auctions. These auctions account for changes in system needs and resource availability in the years following the primary auction. They also allow market participants to trade capacity supply obligations. Pending approval from FERC, the ISO will implement these rules, as well as develop the software and internal processes to support the changes, in 2009.

A series of other software improvements are also planned for the year ahead. Among them, the FCM tracking and Financial Assurance Management systems will undergo design and development.

The tracking system will act as a hub for the capacity market, keeping account of resource qualification and management. The data collected by the tracking system will carry over to primary and reconfiguration auctions, as well as bilateral contracts to ensure resource owners have fulfilled participation requirements. Additional financial assurance functionality is also under development that will help to monitor compliance with the ISO's monetary requirements for participants doing business in the wholesale market.

ISO New England's Internal Market Monitoring Unit is expected to issue a progress report on FCM in the second quarter of 2009, which will include recommendations on new market refinements. ISO management and stakeholders will consider those proposals and provide their own insights and responses in the fourth quarter of this year. Any market rule changes resulting from this discussion would be provided to FERC in early 2010. ●●●





*Bob Ethier, Vice President
of Market Development*

Merits of Wholesale Competition

ISO-NE's Vice President of Market Development Explains Why New England's Markets Use Uniform Clearing Pricing

New England's move to competitive wholesale markets for electricity a decade ago provided a much-needed jump start for the region's energy industry. The combination of competition, regional cooperation, and comprehensive planning led to a more reliable power system and an improved method for pricing electricity.

Still, wholesale markets are not

without their critics. Some organizations, agencies, and individuals continue to call for changes to today's competitive market. Their proposals for change vary greatly. A recent example comes from the [American Public Power Association](#) (APPA) which, among other things, suggests increasing the availability of long-term power supply contracts needed to finance new electricity generation facilities. These proposals often prompt rebuttals among entities supporting wholesale competition, such as the [COMPETE Coalition's](#) and the [Electric Power Supply Association's](#) responses to APPA's suggested RTO market reforms.

This discussion has reignited an examination of the merits of the Uniform Clearing Price (UCP) market design model—like the one used here in New England—versus a “pay-as-bid” market structure.

ISO New England's work is based on the philosophy that competitive, efficient, transparent markets are the best mechanism for providing electricity at a reasonable cost and least risk to consumers over the long term.

New England's Markets Work and Deliver Benefits

Today's competitive electricity marketplace is based on a proven model used for trading various commodities. Many commodity markets operate with a UCP structure. Corn, soybeans, oil, and gold are all traded with a UCP because, like electricity, one unit of a product is like another, regardless of how it is produced.

New England's UCP auction values all electrons the same. This provides an opportunity for existing generators to recover capital costs and creates strong incentives for investment in new, low-cost resources if no market or non-market impediments exist. Importantly, electricity providers are incented to be available and offer the lowest possible price to help ensure they are selected to run and be paid.

A decade in, these markets have renewed the energy industry, with new development and innovation bringing important

advances in New England and beyond. New England enjoys numerous benefits as a result of opening its electricity markets to competition—namely emissions reductions, improved power plant reliability and efficiency, the development of new infrastructure, and better planning and preparation for the future. It's unlikely any other market design could have better achieved the benefits and major infrastructure improvements that have already been realized in New England.

ISO New England is well-positioned to create even greater gains for consumers as the system evolves by maintaining a reliable and efficient electricity system, achieving greater efficiencies to reduce costs, and responding to future market and technology challenges.●●●

Ready for the Peak, Heat

The region is in good shape to meet peak demand for electricity this summer, according to ISO New England [forecasts](#).

“Supplies are ample, and our portfolio of demand-side resources has grown significantly over the last few years. The economic slowdown, together with improving energy efficiency, is expected to keep peak demand in check,” said Vamsi Chadalavada, chief operating officer of ISO New England.

This summer, peak electricity demand could reach 27,875 MW under normal weather conditions—110 MW higher than the 2008 weather-adjusted peak. New England power plants will be able to supply about 31,225 MW of electricity, and demand-response resources (load management and on-site generators) can be called on to reduce more than 1,900 MW of consumption if supplies start to get tight. The region's energy-efficiency programs are also helping to reduce demand, with about 500 MW participating by this summer.

During a heat wave on August 2, 2006, the region's all-time peak demand record was set at 28,130 MW. That record would have soared even higher without the approximately 500 MW of demand-response resources that reduced energy consumption when called on to do so by ISO New England.●●●

Smart Grid Day...Continued from page 1

Clear Need; Inspiring Challenges

Opening the event, Vamsi Chadalavada, ISO New England's senior vice president and chief operating officer, cited potential benefits driving momentum toward a smart grid, including improving the efficiency of the electric system; integrating demand resources (DR), renewable resources, energy storage and other technologies into the grid; and allowing retail customers to actively participate in the wholesale electricity markets.

He noted, however, that developing a smart grid will increase the complexity of system operations. Today, the ISO's system operators communicate with about 300 traditional resources, but in a few years the ISO could be communicating with about 3,000 resources. This puts a high priority on the need for national standards for communications, interoperability, and cyber security.

John Norden, the ISO's manager of renewable resource integration, added that DR and renewables are rapidly becoming mainstream. DR will soon make up about 10% of the capacity in New England, and large amounts of wind projects are expected to come on line in the coming years. Just as swiftly, the ISO must determine how to properly integrate these resources into grid operations (read the related interview with John Norden, plus the CEO column on the ISO's smart grid developments in the [January issue](#) of *ISO New England Outlook*).

Regulators' Perspectives

In her keynote address, FERC Commissioner Suede Kelly described developing a smart grid as a challenge that involves redesigning a large system of complex subsystems to make the electric grid more reliable and to achieve new policy goals.

Kelly, who co-chairs the FERC-NARUC (National Association of Utility Regulatory Commissioners) Smart Grid Collaborative, said federal and state officials must partner together to achieve the benefits of a smart grid. Kelly said government can provide customers with access to information, develop standards, provide investment incentives, and impose mandates. Kelly said mandates that drive demand for technology are often more effective than mandates for specific technologies. She highlighted the need for smart-grid pilot programs.

State regulators and consumer advocates from New England and New York expressed similar sentiments and support for smart grid investments and also raised concerns about costs of these investments if ratepayer funds are to be used.

David O'Brien, commissioner of the Vermont Department of Public Service, suggested the electric industry put in consumers' hands the same tools and technologies that have revolutionized the communications industry.

Information, Technology, and Savings

Similarly, utility company representatives defined the key ingredients of a smart grid as providing customers with real-time information based on wholesale electricity prices, changing customer behavior in ways that reduce peak demand for electricity, and improving the reliability of the electric grid.

Utilities are leveraging existing infrastructure to achieve smart grid benefits, and several are conducting pilot programs.

- National Grid and Northeast Utilities are conducting pilots in several states to see how customers respond to different pricing structures.
- Most of Bangor Hydro-Electric Company's customers are able to view real-time information about their electricity consumption online and the company plans to offer different pricing structures in the future.
- Vermont Electric Power Company is partnering with state agencies to achieve Vermont's vision for using broadband technology to achieve the benefits of smart grid.
- NSTAR is testing communications over the Internet using existing electric meters.
- Hydro One in Ontario is migrating customers to smart meters and, by 2011, all customers are expected to be on time-of-use (TOU) rates as part of the government's push toward green energy.
- United Illuminating is building on 50 years of experience with TOU rates to provide customers' information to help them control their consumption and costs.

FERC is accepting comments through June 2 on its proposed smart grid policy, which focuses on areas that also are priorities for the ISO—the development of standards to achieve interoperability of smart grid devices and systems. ([Docket No. PL09-4-000](#)).

According to research by Ahmad Faruqi, Ph.D., a principal at The Brattle Group in San Francisco, CA, big savings are possible. By 2050, smart grid investments in Advanced Metering Infrastructure (AMI), DR, energy efficiency, and distributed energy resources could provide \$227 billion in customer benefits nationwide. He said that AMI is the IT backbone of the smart grid, making it possible to provide clear price signals to customers. Faruqi added that some technologies will take time to achieve large-scale penetration, especially plug-in hybrid electric vehicles (PHEVs). He estimates that PHEVs would push smart grid benefits to more than \$560 billion.

View the [presentations](#) from the Smart Grid Forum, plus read ISO New England's [white paper](#) on the smart grid and the ISO's [Regional Electricity Outlook](#), which further defines some of the smart grid opportunities and challenges. ●●●

What's Your Outlook?...Continued from page 1

The corridor proposal is an outgrowth of a collaborative accord between Maine and New Brunswick established in 2007 to explore how Maine and Canada might cooperate in the energy arena. During this first phase of the proposal, which is expected to last the duration of this year, the two regions are analyzing the many organizational, technical, financial, and environmental factors that would impact the feasibility of the project, including where the corridor would be located and how much of the southern New England market could be served.

ISO New England Outlook spoke with Jack Keir, New Brunswick's Minister of Energy, and John Kerry, Director of Maine's Office of Energy Independence and Security, to discuss the benefits of a new electricity transmission corridor and how it fits into energy goals for Maine, New England, and Eastern Canada.

Jack Keir, Ministry of Energy, New Brunswick, Canada

What types of energy resources are most abundant in the province of New Brunswick?

New Brunswick has significant resource potential for natural gas, wind, hydro, and tidal power. We are also considering developing nuclear power. We already have the most diverse resource mix in all of Canada, and we have even more diverse natural resource potential. In addition, New Brunswick has willing and supportive communities. Our government believes strongly in community involvement. We actively engage New Brunswickers on the economic, environmental, and security benefits of developing our rich energy resources, and have found the public to be very supportive of our energy vision.



What value will the proposed corridor bring to residents of New Brunswick? To New England?

We sit on top of a very large market for energy—the New England states. We see a tremendous opportunity to develop renewable energy not only for domestic use but also for export to the international northeast market to help support our New Brunswick economy. Building the corridor and developing our generation sector would create jobs for New Brunswick's residents and stimulate our economy. And the clean energy resources we develop for market will also be of great environmental benefit to our own communities.

For New England, the corridor would help ensure a reliable supply of clean, competitive, cost-effective electricity to the lower states.

Why do you think Maine would want to build a corridor with New Brunswick and not just develop transmission from Maine's resources?

Maine has ample wind resources it can develop. But because wind is an intermittent resource, other resources are required to balance it out. The resources supplied by New Brunswick would provide that balance. It's a win-win situation.

Does Canada have similar energy goals as the U.S.?

In Canada, each province is responsible for energy policy and direction. In New Brunswick, we had a goal of attaining 10% of our electricity from renewable resources by 2017. However, when our current government took office in October 2006, we moved that goal up to 2010. We understand the importance of clean, emission-free resources—and we consider nuclear a part of that category as well. We already have 300 MW of wind online. This includes the 96 MW Kent Hills wind farm, the largest in Atlantic Canada, plus three others under development. We are also looking to put out a proposal request [RFP] for another 100 MW very soon. We're also taking a look at older, polluting plants and will either slow their production or displace them with new resources.

How does New Brunswick view the U.S.'s recent push for renewable energy?

I think it's the same around the world: it's time we address this. Of course, it was easier to justify the expense when oil was \$140 per barrel and renewables such as wind worked from a business case. Now that oil is \$40 per barrel, it's harder to sell the need for the investment. However, everyone on both sides of the border realizes we need to green up and provide renewable, low-emission energy for the sake of our environment, economy, and energy independence.

In general, what is your view of New Brunswick's energy future?

I'm optimistic—I've lived here my whole life. I see opportunities to grow the economy and to look after the environment—to take advantage of opportunities and help our neighboring region. I always say that there is a border between us and the U.S., but we have relatives on both sides and we shop and vacation on both sides. The border is an artificial one when it comes to the energy sector.

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What's Your Outlook?...Continued from previous page

John Kerry, Director of Maine's Office of Energy Independence and Security

What value will the proposed corridor bring to Maine residents?

Overall, it will provide economic, environmental, and security benefits for the ratepayers and taxpayers in Maine. Building the corridor will stimulate billions of dollars of private investment in developing Maine's renewable energy resources—primarily on- and offshore wind—which will create jobs. The increase in low-cost, diverse supply from both Maine and New Brunswick will exert a downward pressure on electricity prices. And the expansion of renewables in the resource mix will help us meet our environmental goals and break our dependence on fossil fuels.

What value will the corridor bring to the rest of New England?

From a regional perspective, it will enable the New England region to diversify its fuel mix, providing security and reliability benefits to the ISO New England grid. It also will bring affordable, clean energy to the wider New England market, enabling the other five states to meet their environmental regulations and help reduce costs for consumers.

How does the corridor proposal complement the blueprint the New England governors are preparing for developing renewable energy in the region?

The blueprint ISO New England is helping the states to develop will identify options for renewable-resource and associated transmission expansion in the region. The corridor will integrate into this vision well, since its objective is to encourage the development and delivery of clean, low-cost electricity to where demand is highest. Governor Baldacci supports the regional planning process for developing transmission, and we feel the corridor will prove to be a vital component of the regional plan.

What is Maine's view of energy legislation being considered in Washington to promote renewable energy resources?

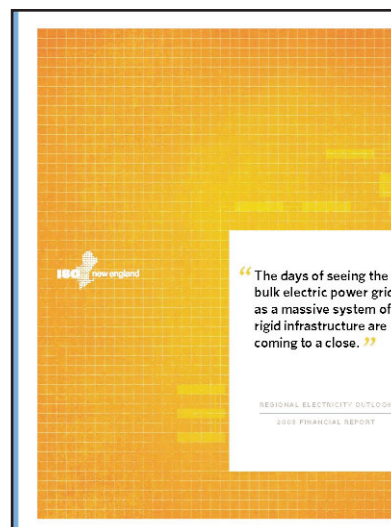
We're encouraged that the administration is making renewable resources a priority, and we're confident our policies will coincide well with what they propose. From a public policy perspective, Maine has been in the forefront of encouraging the development of renewable resources such as wind. That said, we hope the administration will be thoughtful and deliberate in the presentation of its policies. We don't want to see the federal government imposing financial obligations on the states but rather respect our right to conduct our own planning and implementation.

In general, what is your view of Maine's energy future?

I'm positive about Maine's energy future. Our state is highly engaged in developing integrated energy, environmental, and economic policies.



The governor and legislators are working collaboratively and are in agreement on the direction the state is taking. We'd like to see the private sector make the investment in the power system so that the most efficient solutions are developed through the competitive marketplace with support and guidance through government policy. We believe that through this type of public-private partnership we can achieve a secure, clean, more reliable energy portfolio for Maine that creates jobs and lowers costs to ratepayers. ●●●



Hot Off the Presses

ISO New England's *Regional Electricity Outlook and 2008 Financial Report* is now available online and in print.

The document describes how the ISO and regional stakeholders are adapting, planning for, and taking action to transform our electric power system in order to meet reliability, environmental, technological, and cost expectations.

View the [digital version](#). Or to get a hard copy, send a request to info@iso-ne.com. ●●●

Outage Coordination...Continued from page 1

Outage coordination has existed since the New England Power Pool was created in 1971, according to Peter D. Harris, Manager of the Outage Coordination group. “For more than 30 years, we’ve been doing reliability studies of outage requests to ensure that each outage, and the combination of all outages at any given moment, does not compromise power system reliability,” said Harris.

In 2005, when ISO New England became a Regional Transmission Organization and gained broader authority over the operation of the region’s transmission system, ISO New England and the region’s transmission owners (TOs) developed a more robust process for scheduling and coordinating transmission outages and expanded the outage coordination role beyond its focus on reliability to include economic evaluations. The group first implemented long-term economic evaluations in 2005, then added short-term evaluations in 2008. The results have shown steady improvement every year, minimizing the costs to market participants and, ultimately, consumers.

Long-term outages are those requested between 12 months and 21 days before the requested start date for the project. ISO New England encourages applications to be submitted at least 90 days in advance and builds some incentives into the process, including the possibility of higher priority. Outage requests submitted 20 days or less before the start date are considered short-term outages.

“An outage can be as simple as one piece of equipment out of service, to multiple breakers, transmission lines and buses. It can be for an hour, a day, a week, or months,” Harris noted.

To determine if rescheduling an outage could reduce congestion, ISO New England reviews the network topology, load forecasts, and historical bidding patterns to estimate an outage’s likely impact on the Day-Ahead Energy Market.

“Any condition that requires must-run generation or restriction of generation may have a financial impact,” Harris said. “We work with the TOs to reconfigure the outage when significant savings can be realized for the marketplace.”

All this is done with sophisticated software programs that forecast wholesale prices at the 900 pricing nodes on the New England grid, model how electricity will travel around the grid when a path is constrained or blocked by an outage, and estimate the costs of the congestion that can result from those constraints.

Blaede, Lead Economic Analyst, works with three computer screens showing forecasted wholesale prices, a model of the grid, and the outage scheduling program. First, he enters the data that simulate expected conditions at the time of the scheduled outage, including the outage itself. He runs a simulation of the Day-Ahead Energy Market for that day to forecast the impact the outage will have on wholesale prices. Then, he puts the equipment back into service in the simulation, and runs the market simulation again to see what the difference is in the prices.

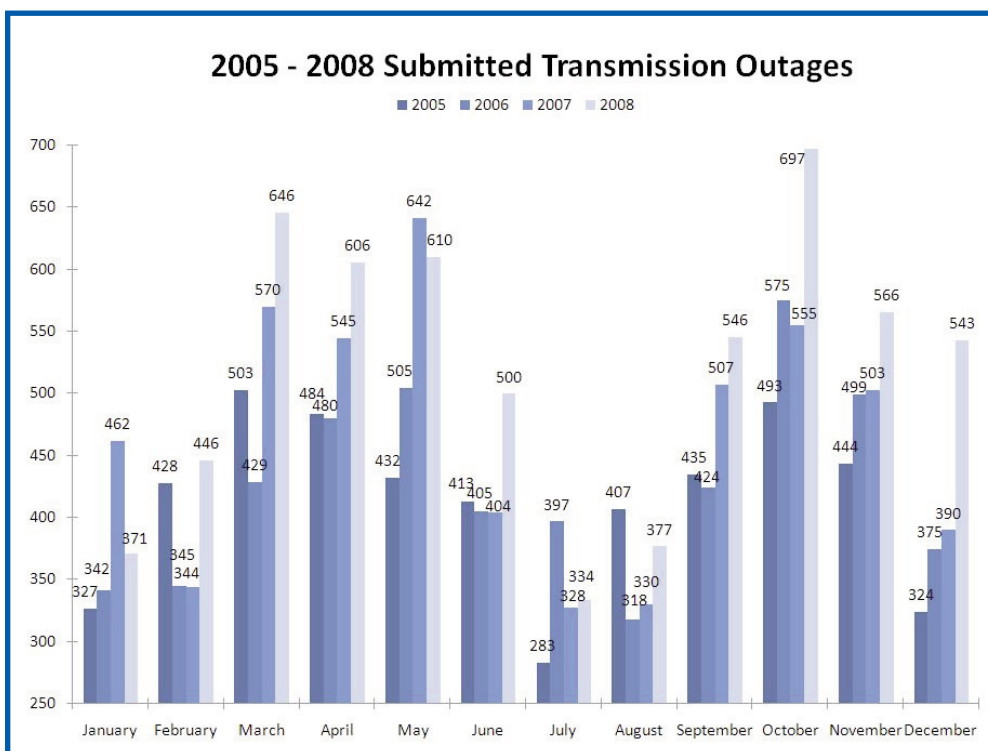
Blaede executes this process for any outage likely to raise wholesale costs. When savings over a predetermined threshold—\$200,000 a week—can be demonstrated by scheduling an outage at a different time, the department goes into action to ratchet those wholesale costs back down. The transmission owners “do everything they can to move an outage.

But sometimes an outage can’t be rescheduled,” Blaede noted.

His checklist contains about 30 steps he must take for every analysis. Blaede noted that it takes at least two hours, but usually more, just to “set up the case” by putting in the correct data. Running the market simulations—there must be at least two, one with the outage and one without—takes about 45 minutes each. On average, evaluating one short-term outage can take an entire day, he said.

John Simonelli, Director of Operations Support Services, said that reliability comes first. “There are times when, despite the economics, the work has to be done now,” he said. “It doesn’t happen very often, but economics is not the sole driver.”

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Outage Coordination... *Continued from previous page*

Outage Coordination Economic Analysis Tool

Members of the department are currently evaluating a new outage coordination economic analysis software program that is expected to reduce both the time to set up a simulation and the time needed to run it. If the software performs as hoped, it could come online by the end of this year. “It will still take time to set it up, but we’ll be able to evaluate many more outages instead of picking and choosing based on our experience and historical impacts,” Blaede said. The software will also take a broad look at all outage requests and identify those that need more in-depth analysis, Harris said.

Harris, Blaede, and other members of the Outage Coordination department have been on the road meeting with project managers at the region’s transmission companies. ISO New England representatives describe how project managers’ outages can impact the markets, and explain the benefits of giving ISO New England advance notice of a scheduled outage.

New England’s transmission owners have been very supportive of efforts to minimize the impact of outages on the energy markets, Harris said. The Transmission Operating Agreement requires the ISO to provide information to the owners “to enable them to make informed decisions,” Harris said.

Simonelli credited the outreach by Harris and his group for the department’s achievements, including more outages processed, greater savings from rescheduled outages, and fewer unplanned outages.

Outage Scheduler Project

Harris said goals for 2009 include further improving both the scheduling and economic analysis processes. In 2008, the department implemented a new software tool (the Control Room Operations Window, or CROW) to better manage transmission outages. This year, the second phase of that outage scheduler project will focus on managing generation outages and consolidating transmission and generation outage scheduling into a single database.

“In the past, a lot of this was manually intensive—send a fax, call on the phone—to get the information,” Simonelli said. With the new tool, more processes will be automated, including how project managers report outages.

How to integrate outage coordination and the Forward Capacity Market’s monthly auctions, where the monthly delists of generation will figure maintaining reliability, is another challenge to be addressed this year. The first monthly auction, scheduled for June 2010, will require a reliability assessment 60 days in advance, Simonelli said.

Looking beyond New England, Harris is working with other ISOs and RTOs from across North America in a collaborative group that is learning from best practices for outage coordination. To that end, ISO New England last year hosted a workshop with representatives from as far away as the Bonneville Power Administration, Alberta, Ontario, and ERCOT.

ISO New England is the independent, not-for-profit corporation responsible for reliably operating New England’s 32,000 megawatt bulk electric power generation and transmission system, by overseeing and ensuring the fair administration of the region’s \$12 billion wholesale electricity markets, and by managing comprehensive regional electric power planning.



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Accomplishments in 2008

- The outage coordination group processed 6,165 outages, which is 9.5% more than were handled in 2007, and 23% more than those handled in 2005, the first year.
- The \$72.5 million in congestion costs avoided by rescheduling outages in 2008 compares to 11 rescheduled outages in 2007 that saved \$18 million.
- 38% of transmission outages were requested through the long-term process, which is up 8 percentage points over 2007 and 22 percentage points over 2006.
- Unplanned outages represented 13% of all outages in 2008, a 1% improvement over 2007.
- Of the notices issued to cancel outages, 60% were issued before noon on the day before the outage was scheduled, allowing them to be factored into Day-Ahead Energy Market calculations. That’s a 1 percentage point improvement over 2007 and 3 percentage points better than in 2006.
- Long-term transmission outage reports are now updated every 24 hours, rather than monthly. ●●●

