



Coordination Between Natural Gas and Electricity Markets

Docket No. AD12-12-000

Northeast Region- August 20, 2012, Boston, MA

Agenda

9:00 - 9:15 Welcome and Opening Remarks

9:15 - 9:45 Regional Energy Infrastructure Presentation (FERC staff)

**9:45 – 12:00 First Roundtable Discussion:
Gas-Electric Scheduling and Market Structures/Rules**

Commenters from the Northeast expressed a wide range of opinions regarding the fuel certainty for natural gas-fired generation in the New England organized wholesale, short-term electricity markets. Some argue for more stringent fuel firmness requirements, while others favor market-oriented solutions that may serve as incentives for appropriate fuel arrangements. According to the initial findings of ISO-New England, Inc.'s (ISO-NE) 2011 Natural Gas Study,¹ the region's gas delivery system may be inadequate to fully serve regional power plant demands on a peak winter day throughout the next decade, and improved incentives to assure fuel and resource availability should be examined. More recently, on July 30, 2012, ISO-NE released a paper (available on ISO-NE's website) on *Addressing Gas Dependence* which reviews these issues and proposes solutions.

A number of Northeast region commenters also mention the challenges associated with the mismatch between gas and electric scheduling days and deadlines, and some offer potential reforms that may help address such mismatches.² Several

¹ See ISO-NE March 30, 2012 Comments, Docket No. AD12-12-000 at 2 (responding to Commissioner Moeller's February 3, 2012 Request for Comments).

² See, e.g., New England Power Generators Association, Inc. March 30, 2012 Comments, Docket No. AD12-12-000 at 4-5; National Grid USA, Inc. March 30, 2012 Comments, Docket No. AD12-12-000 at 8.

pipelines in the Northeast region offer flexible services to meet gas-fired generators' needs for additional nomination cycles, greater hourly flow variability, and short- or no-notice service, and some commenters suggest that these services could be more widely deployed to enable gas-fired generators to access gas supplies in a timely manner in response to electric dispatch orders.

Roundtable participants are encouraged to be prepared to respond to the following:

1. Describe the market rules, policies or practices in the Northeast wholesale electric and natural gas markets that you believe negatively or positively impact the procurement of gas transportation and storage capacity purchases by gas-fired generators. What market, regulatory, or other factors deter merchant gas-fired generators from procuring reliable fuel supplies, whether through natural gas transportation service, storage service, delivered bundled purchases, or other means? How might these issues be addressed?
2. What reforms to the organized wholesale electric markets' rules could ISO-NE consider as a possible means to allow a gas-fired generator to recover the costs of contracting for gas infrastructure expansion needed to serve electric markets in the region? As an alternative, are there ways that regional electric markets might fund gas infrastructure expansion outside of the wholesale market mechanisms?
3. Recognizing that some pipelines offer additional nomination opportunities beyond the current standards, to what extent do existing enhanced/tailored services of natural gas pipelines and storage providers accommodate the needs of the region's power generators to access gas supplies as needed? What additional operating flexibility would generators like to see in pipeline services to better match the day-ahead and real-time wholesale electric market needs for gas-fired generation? What financial assurances do gas pipelines and storage providers need to provide such services?
4. How does a gas-fired generator balance real-time electric market dispatch and compensation with pipeline scheduling, dispatch and balancing requirements? Is there a need for modifications to either electric market or pipeline requirements in these areas? ISO-NE has a proposal under development that would realign the bidding and commitment times in its Day-Ahead and Real-Time electricity markets to give gas-fired generators better opportunities to secure gas supplies and deliveries during the current gas market processes.³ How will this affect the ability of generation resources to better

³ http://www.iso-ne.com/committees/comm_wkgrps/mrks_comm/mrks/mtrls/2012/jul1112132012/a12a_iso_presentation_07_12_12.pdf

reflect fuel purchase costs in electric market bids? How should electric markets best take into account conditions on the natural gas system? From the electric industry's perspective, is it expected that these market scheduling changes will decrease the need for out-of-market commitments, reliability commitments, or reduce market clearing prices due to increased price certainty among competing generators? What effect, if any, would such changes have on the need for generation resources to meet ancillary services requirements?

5. How can natural gas pipelines accommodate dynamic electric scheduling? Are there discrete or systemic improvements that might be made to natural gas pipeline scheduling practices which could increase price certainty for gas-fired generators? How might the industries evaluate the relative costs, benefits and time horizons associated with incremental discrete changes in scheduling practices so that impacts across both industries can be evaluated and prioritized?

6. Should the natural gas and electric market scheduling timeline be harmonized, and if so, how?

7. Are there any short-term planning or operational reliability concerns that are the result of commitment timelines? If so, what are those concerns, and how do current commitment timelines provide timely information regarding fuel availability for gas-fired generation that allows for ISO operations to commit longer lead time resources? If not, should there be any modifications to the Day Ahead Market and Reserve Adequacy Assessment clearing timelines?

12:00 – 1:30 Break

**1:30 – 3:00 Second Roundtable Discussion:
Communications/Coordination/Information-Sharing**

The New England cold snap in 2004 highlighted gaps in communication and coordination between electric and gas entities in the Northeast region. According to comments filed in this proceeding from the region, as a result of that experience, and also in response to the regulations adopted by the Commission in Order No. 698,⁴ both

⁴ *Standards for Business Practices for Interstate Natural Gas Pipelines; Standards for Business Practices for Public Utilities*, Order No. 698, 72 *Fed. Reg.* 38757 (July 16, 2007) *FERC Stats. & Regs.* ¶ 31,251 (June 25, 2007). Order No. 698 incorporated certain NAESB gas-electric coordination business practices into the Commission's

industries worked together to improve coordination and information-sharing protocols.⁵ Commenters suggested that, given the expected increase in the use of gas to fuel electric generation in the Northeast,⁶ additional improvement is needed to address communication and coordination issues that affect both real time and near-real time operations and outage planning, as well as long term gas and electric planning and coordination.

While stating the need for greater coordination, commenters also expressed concern regarding whether certain types of communications between pipelines, RTOs/ISOs, and generators that involve sharing of non-public transmission information would be inconsistent with federal regulations, such as the FERC Standards of Conduct,⁷ or the prohibitions against undue preference in the Federal Power Act⁸ and the Natural Gas Act.⁹

Roundtable participants are encouraged to be prepared to respond to the following:

1. Several entities in the Northeast identified the need for improvements in outage notification and coordination as a priority issue, referring to both emergency and planned outages. What kind of coordination would be necessary, and what kind of information would be shared and with whom, on a routine basis and in preparation for extreme events that simultaneously and significantly affect both the gas and electric sectors? Should entities coordinate weather forecasts?
2. What is the impact of electric system outages upon the gas system, and vice versa? How could interstate gas pipelines and ISO-NE improve their coordination of planned outages? Will the Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011 impose new requirements upon inter-industry communication and coordination? If so, how are the industries planning for those new requirements?

regulations; these standards, in general, address communication processes between pipelines, power plant operators, and transmission operators.

⁵ See, e.g., ISO-NE March 30, 2012 Comments, Docket No. AD12-12-000 at 3.

⁶ *Id.* at 1; see also Connecticut Public Utilities Regulatory Authority March 30, 2012 Comments, Docket No. AD12-12-000, at 7.

⁷ 18 C.F.R. § 358

⁸ 16 U.S.C. 791 *et seq.*

⁹ 15 U.S.C. 717 *et seq.*

3. Several commenters identified the type of information that currently is available and shared between gas and electric entities. Is there additional information that needs to be shared, that currently is not being shared, and are all the relevant and necessary parties included? Are the information-sharing mechanisms appropriate to the circumstances? Are improvements needed and who should be responsible for implementing improvements?

3:00 – 3:30 Break

**3:30 – 5:00 Third Roundtable Discussion:
Reliability**

The bulk electric system is typically planned, as required by the mandatory reliability standards, to meet projected customer demands and system performance criteria, even under single element contingency conditions. Interstate natural gas pipelines are planned and expanded to meet firm gas delivery contracts between the pipelines and one or more shippers. Many commenters in the Northeast indicated they expect an increased reliance on natural gas generation in the coming years, due to economic and national policy factors. These commenters expressed concerns about the future reliability and interdependencies of the bulk electric system and the interstate natural gas pipeline system as the amount of natural gas-fired generation increases.

Roundtable participants are encouraged to be prepared to respond to the following:

1. Is there a need for a minimum level of dependability in the fuel supply for gas-fired generators? How would it be defined, who would define it, and what would be the mechanism for accomplishing this? Should this be addressed through ISO rules, NERC standards, or other mechanisms?
2. As noted above, several commenters referred to recent assessments of New England's natural gas pipeline capacity for electric generation needs.¹⁰ Are additional, coordinated studies of the natural gas and electric systems needed to analyze forecasted resource mix and/or interdependency risks from curtailments or contingencies? Can this be addressed through existing transmission planning processes or is a different process needed?

¹⁰ See, e.g., ISO-NE March 30, 2012 Comments, Docket No. AD12-12-000 at 1; Spectra Energy Transmission, LLC March 30, 2012 Comments, Docket No. AD12-12-000, Appendix D.

3. A number of commenters in other regions referred to recent functional exercises that allowed participants from the natural gas and electric industries, as well as state regulators, to assess emergency response plans and provided a forum to discuss and implement improvements.¹¹ Are sufficient emergency coordination procedures in place in New England? Are these procedures routinely tested through functional exercises or simulations? Should all regions routinely conduct similar functional exercises?

4. Since being re-instated by the Commission in 2006, how effective has ISO-NE Market Rule 1 Appendix H (Operations During Cold Weather Conditions) been at enhancing reliability?¹²

5:00 – 5:30 Closing

¹¹ *See, e.g.*, Texas Pipeline Association March 30, 2012 Comments, Docket No. AD12-12-000 at 2 (responding to Commissioner Moeller’s February 3, 2012 Request for Comments).

¹² *ISO New England Inc. and New England Power Pool Participants Committee*, 117 FERC ¶ 61,082 (2006).

Roundtable Participants:

- Jeff Bentz, Director, New England States Committee on Electricity
- Ann Berwick, Chair, Massachusetts Department of Public Utilities
- Dorothy Capra, Director of Regulatory Services, New England States Committee on Electricity (NESCOE)
- Vamsi Chadalavada, Executive Vice President and Chief Operating Officer, ISO-New England
- Robert Cooper, Director, Energy, USG Corporation (on behalf of Process Gas Consumers Group)
- James Daly, Vice President, Energy Supply, Northeast Utilities
- Dan Dolan, President, New England Power Generators Association
- James Ginnetti, Senior Vice President, External Affairs and Markets, EquiPower Resources Corp.
- Tom Gwilliam, Senior Business Analyst, Iroquois Gas Transmission System,
➤ L. P.
- Robert Hayes, VP of Physical Trading and Operations, Calpine Corporation
- Norman Holmes, Vice President, Marketing, Kinder Morgan
- Edward Kaczinski, Director of Engineering and Generation Assets, Massachusetts Municipal Wholesale Electric
- Barbara Kates-Garnick, Undersecretary for Energy, Executive Office of Energy and Environmental Affairs, Commonwealth of Massachusetts
- Mark Lauby, Vice President, North American Electric Reliability Corporation
- Elizabeth Miller, Commissioner, Vermont Department of Public Service
- Vince Morrissette, Vice President, Origination & Regulatory Affairs, Repsol Energy North America.

- Joseph Murphy, Vice President of Sales and Marketing, Distrigas of Massachusetts, LLC
- Jonathan Peress, Vice President, Conservation Law Foundation
- Richard Peters, Associate VP, Transmission, The United Illuminating Company
- John Rudiak, Director Energy Services, Connecticut Natural Gas Corporation and Southern Connecticut Gas Company (on behalf of New England Gas LDCs)
- Scot Rupff, VP, Marketing, Development & Commercial Operations, Iroquois Pipeline Operating Company
- Christine Schwab, VP Regulatory Compliance and CRO, Dominion Resources
- James A. Stanzione, Director, Federal Gas Regulatory Policy, National Grid
- Kevin Telford, Lead Trader, Exelon Corporation
- Greg Vesey, President, Chevron Natural Gas (on behalf of Natural Gas Supply Association)
- Thomas Welch, Chair, Maine Public Utilities Commission
- William T. Yardley, Group Vice President, Northeast Transmission, Spectra Energy
 - Richard Kruse, Vice President, Regulatory Affairs, Spectra Energy Transmission
 - Bill Whaley, Vice President, Gas Control and Customer Service, Spectra Energy Corporation

Anticipated Attendees
Gas-Electric Coordination Conference
August 20, 2012
Boston, MA

Erin Aliworth	Boston Globe
Daniel Allegretti	Exelon Corp.
Thresa Allen	Iberdrola Renewables
Robert Alessio	CT Natural Gas and So CT Gas
Bruce Anderson	New England Power Generators Association
David Andrejcak	Office of Electric Reliability, FERC
Elizabeth La Arangio	National Grid
Paul Armstrong	Gas Technology Institute
Mark Babula	ISO New England
Kathleen Barron	Exelon Corp.
Noel Bartlo	Sequent Energy Management
Melissa Bartos	Concentric Energy Advisors
Adam Bednarczyk	Office of Energy Market Regulation, FERC
Jeff Bentz*	NESCOE
Dennis Bergeron	Maine Public Utilities Commission
John Bergeron	Entergy
Jasmin Bertovic	TransCanada
Chair Ann Berwick*	Massachusetts Department of Public Utilities
John Bewick	Compliance Management Inc. (CMI)
Bobb Bibb	Norman Assoc.
Marcia Blomberg	ISO New England
Audun Botterud	Argonne National Laboratory
Jennifer Boucher	The Berkshire Gas Company
Peter Brandien	ISO New England
Tim Brennan	National Grid
Rod Brinkley	Vector Pipeline/Enbridge
Jeff Bruner	Iroquois Gas
Jim Buccigross	NAESB
David Burnham	Office of Electric Reliability, FERC
Chris Bursaw	Capital Power
Scott Butler	Consolidated Edison Company of NY, Inc.
Dorothy Capra*	NESCOE
James Carlton	Granite Ridge Energy, LLC
Peter Carney	NYISO
Kathleen Carrigan	Carrigan & Associates
Metin Celebi	The Brattle Group
David Cetola	Hess Corporation

Vamsi Chadalavada*	ISO New England
Pradip Chattopadhyay	New Hampshire Public Utilities Commission
Commissioner Tony Clark	FERC
Shanna Cleveland	Conservation Law Foundation
Terri Clynes	ConocoPhillips Company
Charles Cobb	Silver Lake Legal
Scott Coburn	Enavant Solutions LLC
Alexander Cochis	La Capra Associates
Mary Coleman	National Grid
Ben Collins	Northeast Utilities
Dan Congel	TC Ravenswood
Ellen Cool	Levitan & Associates, Inc.
Chad Cooper	Entergy
Robert Cooper*	USG Corporation
John Cordi	NYISO
Drew Creel	Spectra Energy
Gregory Crisp	Spectra Energy
Chloe Cromarty	J.P. Morgan Ventures Energy Corporation
Lisa Cullen	Yankee Gas
Bob Curry	CurryEnergy
Kathryn Daley	INGAA
Joe Dalton	IPR-GDF SUEZ NA
James Daly*	Northeast Utilities
Ben D'Antonio	NESCOE
Dale Davis	Williams Gas Pipeline
Marty DeBruin	Liberty Utilities Co.
Ronald DeCurzio	Massachusetts Municipal Wholesale Electric Co.
Leslie Dedrickson	Constellation
Joel DeJesus	Bruder, Gentile & Marcoux LLP
Vincent DeVito	Bowditch & Dewey, LLP
Ken Dell Orto	Competitive Power Ventures
Thomas Dender	Tennessee Gas Pipeline
Jeffery Dennis	Commissioner Norris' Office, FERC
David DesLauries	Black & Veatch Corp.
Janice Devers	Spectra Energy
Jay Dibble	Calpine
Stacy Dimou	Oxbow-Sherman
Dan Dolan*	New England Power Generators Association
David Doot	Day Pitney / NEPOOL
Mary Doyle	BG Group
Joan Dreskin	INGAA
Honorable Chris Eicher	Massachusetts House of Representatives
Joel Elkins	IPR-GDF SUEZ North America

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Mason Emmett	Office of Energy Policy and Innovation, FERC
Scott Englander	Charles River Associates
Rachel Evans	Massachusetts Department of Energy Resources
Lynn Fabrizio	New Hampshire Public Utilities Commission
Joe Fagan	Day Pitney / NEPOOL
Philip Fedora	NPCC
Brett Feldman	Constellation
Graham Fisher	ConoccoPhillips
John Flumerfelt	Calpine Corp.
Kevin Flynn	ISO New England
Peter Flynn	National Grid
Ellen Foley	ISO New England
Chris Foster	Bentek Energy
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Valerie Green	Schiff Hardin LLP
Michele Greening	PPL EnergyPlus, LLC
Lee Gresham	SAIC Energy Environment & Infrastructure
Mary Grover	Northeast Utilities/NSTAR
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Mike Hachey	TransCanada Power
Jesse Halpern	Bruder, Gentile & Marcoux LLP
James Hamski	Consultant
Ronald Hart	Dominion Resource Services, Inc.
James Harvilla	Customized Energy Solutions
James Hayes	Dominion Resources
Robert Hayes*	Calpine Corporation
Herb Healy	EnerNOC, Inc
Laura Heckman	Tennessee Gas Pipeline
Gary Helm	PJM
Raymond Hepper	ISO New England, Inc.

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Carly Hill	Natural Gas Supply Association
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Norman Holmes*	Kinder Morgan
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Samara Jaffe	National Grid
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Andrew Katz	Northeast Utilities
Elin Katz	Connecticut Office of Consumer Counsel
Robert W. Keating	Keating Strategies
John Keene	Massachusetts Department of Public Utilities
Brian Kelly	TransCanada
Craig Kieny	Vermont Electric Cooperative
Drake Kijowski	PSEG Energy Resources & Trade
Thomas Kiley	Northeast Gas Association
William Killgoar	Long Island Power Authority
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Steven Kirk	Exelon Corp.
Kevin Kohlscheen	Tenaska Marketing Ventures
Jason Koy	JP Morgan Ventures Energy Corp
Thomas Krizmanich	Sequent Energy Management
Richard Kruse*	Spectra Energy
Commissioner Cheryl LaFleur	FERC
William Lansinger	Sempra Energy
Beth LaRose	GE Energy
Mark Lauby*	NERC
William Lavarco	NextEra Energy

John Lawhorn	MISO
Stephen Leahy	Northeast Gas Association
Steve Levine	The Brattle Group
Richard Levitan	Levitan & Associates, Inc.
Matthew Litchfield	Competitive Power Ventures
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Kathleen Magruder	BP Energy Company
Kenneth Maloney	Cullen and Dykman LLP
Shiv Mani	Office of Energy Policy & Innovation, FERC
Michael Manteris	Chesapeake Energy
Laura Marino	Tri-State G&T
Sarah Martin	ISO New England
Timothy Martin	National Grid
Joane McBrien	Massachusetts Department of Energy
Joseph McClelland	Office of Electric Reliability, FERC
George McCluskey	New Hampshire Public Utilities Commission
Catherine McDonough	ISO New England
Jim McMahan	Black & Veatch
Robin Meidhof	Commissioner Clark's Office, FERC
Brian McKerlie	Spectra Energy
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John Meeske	Energy Market Decisions, Inc.
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Rob Minter	IPR – GDF SUEZ North America
Vince Morrissette*	Repsol Energy North America
John Moura	NERC
Scott Mueller	Holland & Knight
Paul Mugridge	BP Energy Company
Chris Mullen	Veolia Energy
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David O'Donnell	The New England Council

Wendy Olson	Spectra Energy
Tara Ormond	Capital Power Corporation
Al Padron	Office of Energy Market Regulation, FERC
Rich Paglia	Spectra Energy
Henry Pak	Energy Power Partners
Debra Palmer	Schiff Hardin LLP
Milton Palmer	Tennessee Gas Pipeline
Lopa Parikh	Edison Electric Institute
Carl Patka	NYISO
David Pauplis	Spectra Energy
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William Penney Jr.	Maritimes & Northeast Pipeline
Jonathan Peress*	Conservation Law Foundation
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Richard Peters*	The United Illuminating Company
Mike Petit	Irving Oil
Matthew Picardi	Shell Energy North America (US), L.P.
Fred Plett	Massachusetts Attorney General
John Poe	ExxonMobil
Kelly Porter	Connecticut DEEP
Marc Potkin	Entergy
Jay Prestia	TC Ravenswood
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Christopher Russo	Charles River Associates
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John Shue	IPR GDFSuez
Richard Siegel	Sequent Energy Mgt
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Kevin Telford*	Exelon Corporation
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Stephen Zilonis

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Spectra Energy
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Spectra Energy
NYISO
Massachusetts Department of Public Utilities
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* Roundtable Participants