ENERKNOL RESEARCH

North America
Fossil Fuels | Natural Gas

FERC Natural Gas Market Reforms Aim to Address Winter Reliability Concerns

FERC Notice of Proposed Rulemaking Addresses Natural Gas Supply and Transportation Procurement Schedules to Better Align with Electricity Markets

September 15, 2014

Policy Brief

Author

Erin Carson
Senior Policy Analyst

Eric Davis
Research Manager

Contact

(212) 537.4797
info@enerknol.com

Key Takeaways:

- The Northeast is likely to see continued natural gas market volatility during cold-weather events
- Both the natural gas and electric industries support a change in the intraday scheduling cycles and day-ahead nomination cycles to better align the market to the morning electric demand ramp
- FERC is scheduled to file consensus-based standards on the scheduling timeline by September 29, 2014

Entities Mentioned:

- Federal Energy Regulatory Commission
- ISO-New England
- New York Independent System Operator
- North American Electric Reliability Corporation
- North American Energy Standards Board

Related Research

[Oil and Gas Production on Federal Lands Slowed by Permitting Challenges]

[FERC Order 764 and the Integration of Renewable Generation]

Proposed Market Reforms Address Increased Reliance on Gas-Fired Generation

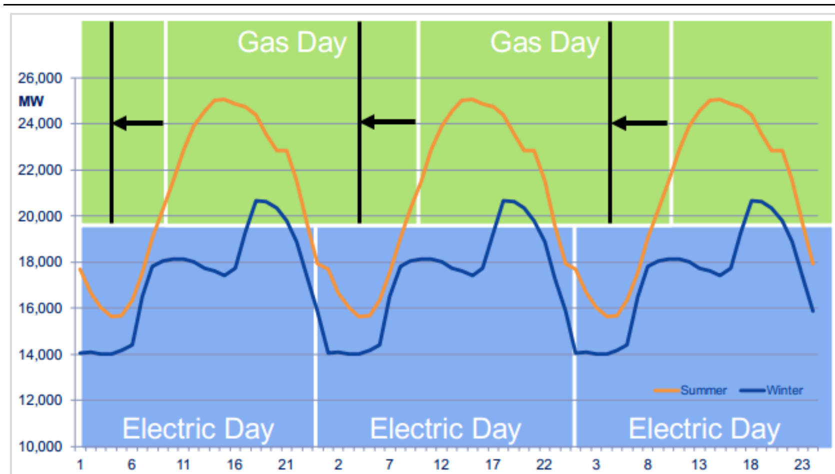
The FERC NOPR addresses electric and gas market timing issues

The Federal Energy Regulatory Commission's (FERC) June Gas-Electric Coordination report highlighted industry responses to FERC's March 20 Notice of Proposed Rulemaking (NOPR), which aims to revise several natural gas transportation and electricity market coordination procedures (Docket No. RM14-2-000). The NOPR is in response to mismatched wholesale electricity and natural gas transportation market operating days – 12:00 a.m. to 12:00 a.m., and 9:00 a.m. to 9:00 a.m. Central Clock Time (CCT), respectively (Figure 1) – and day-ahead and intraday scheduling inefficiencies.

The NOPR proposes to:

- Move the Gas Day start time from 9:00 a.m. to 4:00 a.m. CCT
- Move the first day-ahead gas nomination (Timely Nomination Cycle) deadline for pipeline scheduling from 11:30 a.m. to 1:00 p.m. CCT
- Change the current intraday gas nomination timeline from two cycles to four cycles

Figure 1 – Typical Electric Load Patterns, Current Gas Day vs. Electric Day Timing, and Proposed Gas Day Adjustment



Source: NERC, FERC

Following the NOPR, the North American Energy Standards Board (NAESB) set up multiple meetings under the Gas Electric Harmonization (GEH) Forum platform. In general, the gas industry favored a Gas Day start time of 9:00 a.m. CCT and the electric industry supported a Gas Day start time of 4:00 a.m. CCT. Despite not reaching consensus on the Gas Day start time shift, interested parties did come to consensus on modifying the day-ahead and intraday nomination schedules. The group agreed with the NOPR-proposed day-ahead schedule adjustment. However, they disagreed with the NOPR-proposed four intraday nomination cycles in favor of a three intraday nomination cycle format.

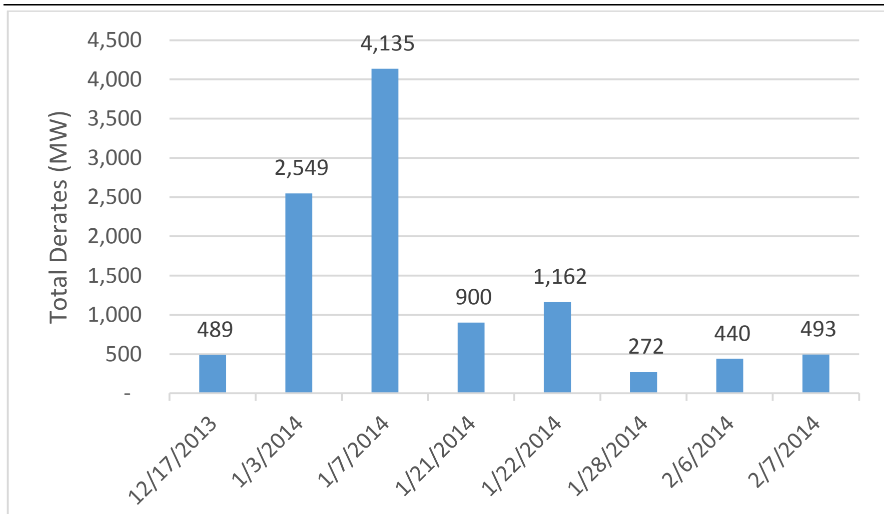
Aligned Gas and Electric Markets Aim to Relieve Procurement, Supply, and Price Risk

Electric industry stakeholders support moving the Gas Day to 4:00 a.m. CCT. They say the earlier Gas Day start would better align gas-fired generators with the morning electric demand ramp-up, as the current 9:00 a.m. CCT Gas Day end can leave generators short on contracted supply as their operating day comes to an end. Gas industry stakeholders expressed concerns of increased safety risk and operational costs due to lack of sunlight with a 4:00 a.m. Gas Day start time. ISO-New England (ISO-NE) and the New York Independent System Operator (NYISO) commented that moving the Gas Day start earlier would also improve electric reliability, as any potential de-rates or alternative sources would occur during the preferred overnight hours. FERC is scheduled to file consensus-based standards on the scheduling timeline by September 29, 2014.

Moving the Gas Day to 4:00 a.m. CCT better aligns with morning electric demand

With the current Gas Day end at 9:00 am CCT, gas-fired generators may experience fuel supply risk during the morning electric demand ramp-up. Unplanned gas-fired power generator de-rates or full outages in times of peak demand (Figure 2) lower system reliability and can significantly raise wholesale electricity prices. To meet demand during natural gas-fired generation de-rates, the northeast region relies primarily on oil-fired and nuclear capacity.

Figure 2 – NYISO Total Generator De-rates (Dec. 17, 2013 to Feb. 7, 2014)



Source: EnerKnol analysis of NYISO data

Day-Ahead Market Timing Leads to Uncertainty

In addition to the start of the Gas Day, FERC is also addressing market timing. The day-ahead natural gas transportation nomination market is currently split into two periods, the Timely Nomination Cycle and the Evening Nomination Cycle. According to FERC, most shippers place transportation bids prior to the Timely Nomination Cycle deadline of 11:30 a.m. The issue with this schedule is that in all ISO/RTO markets – except for NYISO – accepted day-ahead electric

Moving the first day-ahead gas nomination cycle to 1:00 p.m. CCT gives generators added market flexibility

dispatch bids are released after the Timely Nomination Cycle deadline, which creates liquidity, price, and reliability risk for generators that choose to acquire natural gas supply and transportation capacity after being confirmed for next-day electric dispatch. For generators that choose to acquire natural gas supply and transportation capacity prior to ISO/RTO electric dispatch confirmation, they risk having to dispose natural gas commitments during less liquid evening or intraday periods if they are not to be dispatched.

Intraday Nomination Expansion to Add Market Flexibility

The current two intraday nomination cycles – Intra-Day 1 and Intra-Day 2 – limit gas-fired generators' ability to respond to real-time events. The FERC-proposed expansion to four intraday nomination cycles would give gas-fired generators greater flexibility in meeting intraday system and load demands. The new nomination cycles would also improve the balance between firm (senior) and interruptible (junior) shippers through increased scheduling opportunities.

Natural Gas Market Reform Progressing, But Significant Near-Term Relief Not Expected for the Northeast

The FERC NOPR aims to update and better align the natural gas transportation scheduling market in response to increased reliance on natural gas for electric generation. The proposed rules – which come after years of ISO/RTO and industry input – would reduce gas procurement risk and increase northeast gas-fired generation reliability during high-demand winter periods, despite continued pipeline constraints.

The NOPR and consensus standards filing comment period ends on November 28, 2014

The FERC is working on rule changes to relieve the potential for winter market challenges. The NAESB has directed the Wholesale Gas Quadrant to develop consensus-based standards on the day-ahead and intraday gas nomination schedules and file them by September 29, 2014. The NOPR and consensus standards filing comment period ends on November 28, 2014.

In the near term, FERC will continue to address natural gas market concerns, with a September 18 meeting to "improve the way in which natural gas is traded, and to explore the concept of establishing a centralized trading platform for natural gas." The FERC has already approved some market improvements for NE-ISO through their "Offer Flexibility" program, which allows power supply offers to be changed in real time to reflect changes in actual fuel prices. In addition, FERC is working closely with NE-ISO to refine and implement its proposed 2014-2015 Winter Reliability Program, which would provide incentives to dual-fuel generators demand response providers.

Disclosures Section

RESEARCH RISKS

Regulatory and Legislative agendas are subject to change.

AUTHOR CERTIFICATION

By issuing this research report, **Erin Carson** as author of this research report, certifies that the recommendations and opinions expressed accurately reflect her personal views discussed herein and no part of the author's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

IMPORTANT DISCLOSURES

This report is for industry information only and we make no investment recommendations whatsoever with respect to any of the companies cited, mentioned, or discussed herein. EnerKnol, Inc. is not a broker-dealer or registered investment advisor.

Information contained herein has been derived from sources believed to be reliable but is not guaranteed as to accuracy and does not purport to be a complete analysis of the company, industry or security involved in this report. This report is not to be construed as an offer to sell or a solicitation of an offer to buy any security or to engage in or refrain from engaging in any transaction. Opinions expressed are subject to change without notice. The information herein is for persons residing in the United States only and is not intended for any person in any other jurisdiction.

This report has been prepared for the general use of the wholesale clients of the EnerKnol, Inc. and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this report in any way. If you received it in error, please tell us immediately by return e-mail to info@enerknol.com and delete the document. We do not guarantee the integrity of any e-mails or attached files and are not responsible for any changes made to them by any other person. In preparing this report, we did not take into account your investment objectives, financial situation or particular needs. Before making an investment decision on the basis of this (or any) report, you need to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of your particular investment needs, objectives and financial circumstances. We accept no obligation to correct or update the information or opinions in it. No member of EnerKnol Inc. accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this report and/or further communication in relation to this report. For additional information, please visit enerknol.com or contact management at (212) 537-4797.