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

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 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

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.

The FERC NOPR addresses electric and gas market timing issues

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

Source: NERC, FERC
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.

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 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 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

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