UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Coordination between Natural Gas and Electricity Markets	)	Docket No. AD12-12-000

COMMENTS OF THE NEW ENGLAND STATES COMMITTEE ON ELECTRICITY

Pursuant to Commissioner Moeller's February 3, 2012 Request for Comments[1] and the Federal Energy Regulatory Commission's ("Commission" or "FERC") February 15, 2012 Notice Assigning Docket No. and Requesting Comments,[2] the New England States Committee on Electricity ("NESCOE") hereby files these comments in the above-captioned proceeding.

NESCOE is the Regional State Committee for the New England region. NESCOE is governed by a board of managers appointed by the Governors of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont and is funded through a regional tariff administered by ISO-New England, Inc. (ISO-NE). NESCOE's mission is to represent the interests of the citizens of the New England region by advancing policies that will provide electricity at the lowest reasonable cost over the long term, consistent with maintaining reliable service and environmental quality.

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1 *Request for Comments of Commissioner Moeller on Coordination between Natural Gas and Electricity Markets* (Feb. 3, 2012), available at: http://www.ferc.gov/about/com-mem/moeller/moellergaselectricletter.pdf.

2 *Coordination between Natural Gas and Electricity Markets*, Notice Assigning Docket No. and Requesting Comments, Docket No. AD12-12-000 (Feb. 15, 2012).

I. Communications

Pursuant to the Commission's Rules of Practice and Procedure 203 and 2010,[3] the persons to whom correspondence and other papers in regard to this matter should be addressed and whose names are to be placed on any Commission official service list that may be developed are designated as follows:

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II. Comments

NESCOE appreciates Commissioner Moeller and the FERC undertaking this important examination of coordination issues between the gas and electric markets. As Commissioner LaFleur observed in her statement issued in connection with Docket No. RM96-1-037, this issue has been of particular concern to New England since January 2004, when an unusually cold weather condition, referred to as New England's 2004 Cold Snap, increased the demand for gas for heating and threatened the availability of gas for electric generators. In response, New England developed new operating procedures that were approved by the Commission.[4] Those procedures helped, but did not fully resolve, gas and electric market coordination issues in New England.

Today, ISO-NE, stakeholders and the New England states are further considering important gas-electric industry issues in the context of New England's Strategic Planning Initiative[5] and in the context of redesigning New England's Forward Capacity Market.

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3 18 C.F.R. §§ 385.203 and 385.2010 (2011).

4 *ISO New England, Inc.*, 117 FERC ¶ 61,082 (2006).

5 *See* http://www.iso-ne.com/committees/comm_wkgrps/strategic_planning_discussion/index.html.

For example, there are potential market-based solutions to some issues noted below that may address elements of New England's gas-electric coordination concerns. As FERC considers the important issues raised in the request for comment, and the constructive role FERC can and should play in addressing some of them, FERC should do so in a way that allows regions to tailor solutions to conform to and work comfortably within their markets.

In recent years gas-fired generating capacity has supplied nearly half the region's electricity demand. In the future the prevalence of gas-fired generating capacity is likely to increase as older coal and oil-fired generators retire and additional flexible gas-fired plants are needed to balance growing reliance on intermittent renewable power. With this growing dependence on gas in mind, our proposed measures to improve coordination involve changes in the way both industries operate

In these comments, NESCOE offers its view on the appropriate federal agency to assist in the resolution of these issues; the need for regional resolution to many of the issues, tailored to specific regional problems, their timing, and markets; and identifies and offers observations about coordination issues and potential solutions for some of them.

A. FERC Is the Appropriate Federal Agency to Address Industry Coordination Issues that Are not Amenable to Resolution by Regions

FERC is the appropriate entity to facilitate discussions, mediate disputes, and decide in instances where parties are unable to reach agreement to resolve problems in connection with gas and electric market coordination issues. Specifically, FERC has authority over the expansion of interstate gas pipelines and gas storage facilities and over the rates charged by gas transmission companies; has an oversight role in the wholesale electric power market; regulates the market design and tariffs of the Regional Transmission Organizations (RTOs); and through oversight of the wholesale power market, FERC can influence generators with respect to procuring gas.

Moreover, while the coordination challenges facing the gas and electric industries influence the reliability of both, the challenges discussed below are not fundamentally technical in nature. Accordingly, potential solutions are generally not technical in nature and resolutions are highly unlikely to be achieved through new engineering approaches. Accordingly, FERC, rather than either the North American Electric Reliability Corporation (NERC) or the North American Energy Standards Board (NAESB) is the appropriate entity to facilitate coordination issues between the gas and electric markets.

B. To the Extent Problems Are Able to be Resolved by Regions through, for Example, Modifications to Market Rules, FERC Should Give Deference to Regions to Tailor Solutions to Regional Markets and Issues

The specific nature of gas and electric industry coordination problems is likely to vary regionally, and so appropriate solutions will likely also differ regionally. While FERC is the appropriate federal entity to ensure issues between gas and electric markets do not adversely affect reliability, FERC should in the first instance allow regions to identify and implement solutions tailored to regional problems and market structures, in conjunction with other regions, when applicable. Where regions are unable to develop and implement solutions, FERC should address remaining industry coordination problems on a regional basis.

For example, in New England, which has a relatively large winter gas heating load and where fuel options for new or replacement generating capacity are very limited, coordination problems are already having a deleterious effect on the efficiency of the energy market and raising concerns with respect to reliability. These coordination problems are likely to be exacerbated in the near future by expected retirements of coal- and oil-fired generating capacity. ISO-NE projects that 7.3 GW[6] of existing generation in

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[6] *Study prepared for ISO-NE's Planning Advisory Committee by ICF International presented December 14, 2011 (http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2011/dec142011/gas_study_public.pdf)* This so-called Gas Study is in draft form at this time. NESCOE and other stakeholders have urged ISO-NE to be cautious about

New England will retire between now and 2020 and 8.5 GW[7] will retire between now and 2030. These retirements will likely be replaced to a significant degree by additional gas-fired generation. Accordingly, ISO-NE, market participants and the New England states are already in the process of discussing potential solutions. By contrast, in other regions, the winter heating load may not be as large compared to industrial and electric power generation demand, thereby allowing other regions more time to address the coordination issues. Further, New England has a competitive wholesale electricity market, which could be adjusted to resolve some coordination issues without injecting mandated national regulatory solutions that may unintentionally interfere with the operation of the wholesale markets. On the other hand, in areas that do not rely on competitive markets, mandated regulation-based solutions may be more appropriate.

If regions do not identify and implement solutions to their unique set of problems, it could be appropriate and constructive for FERC to play a mediating or adjudicatory role. Once the region implements solutions to coordination issues FERC should, of course, oversee and enforce the agreements.

With regard to the request for input on whether creating "baskets" of issues might help resolve issues more expeditiously, NESCOE encourages FERC to allow each region to work on those issues the region identifies as able to provide near-term improvements without being constrained by pre-defined categories. This may help expedite regionally tailored solutions appropriate for region specific issues.

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drawing any conclusions about how to most cost-efficiently solve a potential natural gas supply issue before all potential solutions have been thoroughly evaluated. The natural gas issue is complex and starts with operational reliability but has a host of potential solutions, only one of which is the region's customers investing in more pipeline capacity. For example, there are changes that could be made to the market rules to encourage different behavior by both generators and system load that could satisfy any identified needs. These types of changes could mitigate or even eliminate any pipeline capacity shortfall that the Gas Study may ultimately establish.

[7] *ISO-NE 2010 Economic Study Request (http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2011/feb162011/2010_economic_study.pdf).*

C. Observations on a Range of Gas-Electric Industry Coordination Problems and Potential Solution Space

A mismatch in the scheduling and delivery timelines between the gas and electric industries appears to cause operational and market participation problems for both the gas and electric industries. The scheduling conflicts stem from the fact that the scheduling of gas shipments occurs before generators know whether their bids to provide power in the day-ahead energy market have been accepted. While gas pipelines offer a later day-ahead nominating period and two intra-day nominating options, these nominating periods typically involve smaller gas volumes (and in tight gas situations perhaps no spot gas) and are also misaligned with ISO-NE's day-ahead and real-time market scheduling.

> ***Potential Solution Space****: ISO-NE intends to implement additional flexibility in its day-ahead energy market scheduling by adding re-offer periods. ISO-NE's modifications will not, however, correct the underlying mismatch in day-ahead gas and electric scheduling, which are an appropriate subject for FERC-directed and supervised discussion and resolution.*

The mismatch of gas and electric "days" or delivery times is a related problem. The gas delivery day is a 24-hour period beginning at 10:00 AM eastern time on the day ahead, while in ISO-NE's wholesale electricity power market, the day runs midnight to midnight. This misalignment of gas and electric "days" leaves power generators unable to be certain of gas availability for the entire electric day. This can lead to operational as well as market difficulties. For example, a generator must commit to be available to the electric market without knowing the availability of fuel for the second part of the electric day (hours ending 1100 through 2400). If this gas is ultimately not available (via pipeline restrictions on gas flow), this can result in generators falling off-line at 10:00 AM. This puts generators at risk for real-time price and volume deviations from their day-ahead market responsibilities and potentially creates reliability issues for the system operator in dispatching replacement power. Alternatively, in the absence of flow restrictions, generators who did not nominate day-ahead gas can continue generating, honoring their

commitment in the electric market, but potentially causing operational flow issues on the gas pipelines. Either of these outcomes can lead to reliability and financial challenges in the region for both the electric and gas system operators.

For those wholesale electric markets' that need to balance generation and electric demand in real time using gas-fired capacity there are inherent conflicts with the limited intra-day operational flexibility of gas pipelines. Historically, before the introduction of significant amounts of gas-fired generation, there was little need for gas pipelines to accommodate intra-day variations in gas usage. Accordingly, gas pipeline procedures offer limited flexibility to handle intra-day variations in gas usage. However, today, in ISO-NE's wholesale electric market, gas-fired generators are typically on the margin, with coal, hydro and nuclear units providing most of the base load energy. In this marginal position, gas-fired units are the units that will be ramped up and down during the day as electric demand changes or in the event of a contingency. Additionally, gas fuels many of the quick-start units needed to balance system needs in times of unexpected load usage or loss of generation. The wholesale electric market requires that its marginal and quick-start units be flexible. This concern is likely to be exacerbated in the future, as New England becomes more reliant on gas-fired capacity, due to the projected retirement of the region's older coal, oil and possibly nuclear units and the projected need for more gas-fired quick-start units to respond to sudden changes in output from intermittent renewable resources.

> ***Potential Solution Space****: There is a need for concerted effort by both the gas transmission companies and Regional Transmission Organizations to craft operating procedures and tariffs that bridge the inherent mismatch. Stakeholders should also explore whether strategically located storage supply would assist generators in stabilizing their ability to run during times of gas pipeline constraints.*

The gas markets are more flexible with intraday trading than the wholesale electric markets. Gas pricing and availability can change during the intraday period for various reasons but the electric generators may only be able to revise price once prior to the start of the real time electric day**.**

Potential Solution Space: *Hourly real time offering intervals should be implemented in the wholesale electric markets. While some wholesale electric markets may offer this feature or may be considering it, hourly real time offering should be available in all markets.*

Commitment to new/expanded gas pipeline capacity exposes differences in risk tolerance between gas market participants and electric generators. The types of companies that bid in pipeline open seasons include Local Distribution Companies (LDCs), gas marketers, and gas producers. Gas LDCs that make commitments for firm capacity, which commitments receive regulatory approval, are generally allowed to recover the costs of that firm capacity through retail rates. Gas marketers (that may also supply some gas to LDCs) take the risk of making commitments to future firm pipeline capacity in order to be in a position to offer gas availability. Gas producers that contract for firm capacity seek to secure access to the markets for their gas. By contrast, in a competitive wholesale electric market such as New England, generators are not guaranteed recovery of their fixed costs, including any commitments to pipeline capacity, and therefore have minimal financial ability and/or risk tolerance to sign a contract for long-term pipeline capacity.

Growing gas demand for electric generation threatens the historic economic benefits of non-firm gas sold to the electric sector. Historically, accommodating gas-fired power generators on pipelines has to some degree benefited existing firm customers of the pipelines. LDCs' gas consumption is highly seasonal. By incorporating gas-fired generators whose demands are generally counter seasonal, the year-round utilization rates of the gas transmission lines improved and the costs to firm customers decreased (as firm capacity holders sold their excess capacity on a spot basis). While there is still a very high degree of counter-seasonality to the gas demands of the electric power sector in New England, the trend towards gas-fired generation on the margin (and the expected future growth in demands for gas-fired generation to complement the intermittent nature of renewable resources) has led to increasing competition between electric generators and firm pipeline customers over winter gas pipeline capacity.

There is an inherent tension between gas pipelines, which operate in a world of long-term firm contracts, and electric generators, which function in a spot environment with no guarantee of recovering their fixed costs. In regulating pipeline expansions, FERC requires that existing pipeline users not fund expansions from which they do not benefit. Therefore, FERC requires that requests to build or expand gas pipeline facilities be accompanied by evidence of firm contracts. This ensures that existing customers are not at risk for paying for new capacity. By contrast, New England's wholesale electric market has been designed to minimize marginal costs on daily and even hourly basis. By definition, dispatch on the basis of marginal costs does not assure recovery of any fixed costs.

Potential Solution Space

Potential Modifications to the Wholesale Electric tariffs:

- *Supplemental capacity payments for generators that commit to firm gas supply (for a percentage of the capacity or for the winter season) or alternatively, reduce capacity payments for lack of firm gas supply;*
- *Requirements that gas-fired generators without firm gas supply have back-up fuel capability for the winter season or make some portion of the capacity payment subject to having back-up fuel capability; or*
- *Stricter performance standards so that generators that fail to follow dispatch due to a lack of gas are subject to penalties sufficient to encourage adequate fuel supply.*

Potential Modifications to Gas Pipeline Practices:

- *More flexible contracting options for firm pipeline capacity, for example seasonal blocks, or shorter commitment periods than the traditional long term contracts;*[8]
- *Rate incentives for pipelines that implement flexible contracting terms for firm capacity; or*
- *Innovative operating practices that increase load factor during peak load periods.*

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[8] Texas Gas Transmission has just completed a FERC authorized two-year pilot program for winter no-notice service (winters of 2010/2011 and 2011/2012), which allowed generators to sign short-term gas contracts during the winter months. Based on the success of this trial, Texas Gas Transmission is currently requesting that FERC permanently allow the offering of this service. (*Inside FERC*, March 26, p. 5).

Additional difficulties exist due to differences in time horizons in planning gas pipeline expansion, electric transmission expansion, and generation capacity expansion. In New England's Forward Capacity Market, capacity purchases are currently made approximately three years ahead of the delivery date. This is not synchronous with the gas transmission companies' planning time horizon, which looks ten years ahead. It is also not adequate lead-time to properly plan, permit and construct gas pipeline expansion *if* the region concludes after evaluating ongoing studies and solution options that such expansion was necessary and is the most cost-effective solution. Whether there is a need for gas pipeline or storage expansion in New England is to be determined, and thus the question whether the planning time horizon must be resolved remains to be determined.

> ***Potential Solution Space***: *With regard to time horizons associated with generation capacity and transmission expansion, New England is currently considering better aligning markets and planning in the context of Strategic Planning Initiative discussions and potential modifications to the Forward Capacity Market.*

III. Conclusion

NESCOE appreciates the Commission's initiative to explore the important issues raised in the request for comment and the opportunity to provide our views. NESCOE looks forward to further participation in the dialogue about gas-electric industry coordination going forward.

Respectfully submitted,

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Date: March 30, 2012