

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**Coordination between Natural Gas  
and Electricity Markets**

**Docket No. AD12-12-000**

**Prepared Statement of Brad Bouillon  
on behalf of the California Independent System Operator Corporation**

**I. Introduction**

My name is Brad Bouillon. I currently serve as Director, Day-Ahead Operations and Real-Time Operations Support for the California ISO. In this position, I oversee operation of the California ISO's day-ahead market and provide support to real-time market operations on scheduling and outage coordination issues. I have nearly 25 years' of experience in utility operations and have worked with the California ISO for over 15 years. During my tenure at the ISO, I have also worked as a manager of the settlements and market quality departments. I hold a Bachelor of Science degree in accounting as well as a Master's of Business Administration in management, a Master's of Science degree in computer information systems, and an Advanced Masters' Certificate in applied project management.

The ISO operates the bulk electric high-voltage transmission system that makes up approximately 80 percent of California's power grid. Approximately 60 percent of the installed capacity in the ISO's balancing authority area uses natural gas as fuel. The ISO also imports power, a portion of which is also sourced from natural gas-fired electric generating units. Natural gas-fired generating facilities generally increase production during the higher load months of the year and the

higher load hours of the day. These resources often set the market clearing price for energy in the ISO system.

My comments focus on three topics: (1) the status of our coordination efforts with natural gas pipelines; (2) an overview of ISO and pipeline coordination activities that occurred following last winter and will occur prior to summer; and (3) future coordination efforts with natural gas pipelines we plan to undertake.

**II. The California ISO has developed a strong framework for coordination with natural gas pipelines.**

Over the last several years, the California ISO has taken steps to improve coordination with gas pipelines to assist in identifying potential problems as well as resolving real time issues. The ISO confers with gas pipelines on at least a quarterly basis. In addition, the ISO meets with these entities in advance of the ISO's summer peak seasons. These meetings include a discussion of available gas inventory, projected supplies, planned maintenance work on gas facilities, upcoming additions to the gas system, outages that could impact the availability or capacity of gas-fired generation, and long-range weather forecasts. In addition, the ISO confers with each of the gas pipelines serving its system in the fall to determine the winter assessment for fuel capabilities of gas-fired generation and related outages.

Communications also occur on a daily and real-time basis as needed. These discussions predominantly focus on more immediate operational concerns, such as changes to the electric grid that occur if the day ahead load forecast changes after the day-ahead market results are published, an unplanned outage of a generating facility that results in a need for additional gas-fired generation after the day-ahead market results are published, a weather forecast of extreme conditions in the form of either a heat wave or cold spell, an unplanned outage of major gas pipeline facilities

that could impact gas supply and affect the capacity or availability of gas-fired generation, and local supply issues when gas turbine units are dispatched and remain on-line for extended periods of time. In addition, each day the ISO sends to the major gas pipelines the aggregate burn rate per hour for each company based on the day-ahead market results of gas-fired generation in California.

The ISO also shares generation and transmission outage information with affected natural gas utilities to manage ongoing natural gas pipeline testing and maintenance along with gas supply shortages in a manner that ensures a sufficient gas supply for reliable operation of the electric grid. This practice has assisted in California's efforts to coordinate operations and outages during a period in time in which pipelines are undertaking pressure testing of their natural gas facilities. The ISO has adopted an operating procedure to help guide the roles, communications and actions of ISO personnel related to natural gas transmission reductions or curtailments and impacts to the electric system in immediate and planned timeframes.<sup>1</sup>

**III. The California ISO is conferring with natural gas pipelines this spring to discuss winter operations and prepare for the summer of 2013.**

As referenced above, the ISO confers with gas pipelines on a quarterly basis. During the first quarter of 2013, the ISO met with Sempra entities, Pacific Gas and Electric Company and Kern River Gas Transmission Company. At these meetings, the parties assessed generator, transmission and pipeline outage coordination activities, both prospectively and retrospectively, as well as exchanged information on topics such as the need for additional electric storage and projected demand on the electric and gas systems.

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<sup>11</sup> Operating Procedure 4120 <http://www.caiso.com/Documents/4120.pdf>

As part of these conversations, Sempra identified the need to perform maintenance on its gas system in advance of summer. The ISO understands that this work is complete. The parties also discussed targeting gas and electric maintenance activities to occur in the shoulder months in order to reduce the potential impacts over our summer peak. This coordination will help ensure adequate gas supplies are available to fuel generation during the summer season. Additionally, the ISO and pipelines discussed their communications procedures and protocols. No fuel related generator outages occurred during the winter of 2012-2013. The ISO did, however, coordinate pipeline outages with Sempra to allow for line inspections.

The ISO is scheduled to commence meetings in June with pipeline operators to discuss the upcoming summer operating season. These meetings will include an effort to compare projected operating conditions and discuss whether adequate fuel and pipeline capability exists to meet peak electric loads. Based on its meetings during the first quarter of 2013, the ISO understands adequate fuel supplies and transportation should exist this summer based on existing storage and pipeline infrastructure. We do not foresee any capacity or supply issues at this time.

**IV. The California ISO is working with natural gas pipelines to explore the need for changes in scheduling or nomination timeframes as well as additional infrastructure to help manage renewable integration needs.**

In light of the Commission's recent technical conference involving coordinating scheduling between the electric and natural gas markets, the ISO has conferred with pipelines to explore whether changes to gas nomination schedules are necessary or appropriate to accommodate electric system operations. While a single energy day does not appear necessary in California, there may be opportunities to refine gas pipeline scheduling based on gas customer demand.

From a longer-term planning perspective, the California ISO is working with other electric and gas industry participants to make our renewable integration studies available to pipeline operators for purposes of their assessment of gas infrastructure needs. The ISO hopes to coordinate these efforts with the work of the Western Governors Association (Western Interstate Energy Board), which intends to conduct a study of gas and electric issues. The ISO understands that the Western Gas-Electric Regional Assessment Task Force<sup>2</sup> has adopted a scope of work for that study and anticipates issuing a request for proposals for study work.<sup>3</sup> These inquiries should provide a more detailed assessment of whether adequate gas infrastructure exists to meet the needs required by high levels of renewables and whether certain pipelines might require more flexibility in scheduling practices or additional natural gas storage. The ISO plans to provide ongoing support to pipeline operators and policy makers to answer questions concerning projected electric system needs as reflected by these studies.

## **V. Conclusion**

Any action the Commission considers in this proceeding should recognize that the issues independent system operators and regional transmission operators face with respect to natural gas differ significantly across different regions. At this time, the ISO does not believe it is necessary to adopt new rules or reliability standards to advance electric and natural gas coordination in the west. The Commission should, however, continue to encourage the electric and natural gas industry sectors to coordinate so both systems operate in a reliable and efficient manner.

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<sup>2</sup> See generally <http://www.westgov.org/ngei/index.htm>

<sup>3</sup> See <http://www.westgov.org/wieb/meetings/crepcsprg2013/briefing/RFPsow.pdf>