



California ISO  
Your Link to Power

California Independent  
System Operator Corporation

April 16, 2007

The Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington D.C. 20426

**Re: Docket Nos. EL07-1-000, EL07-2-000, EL07-3-000, EL07-4-000,  
EL07-5-000, EL07-6-000**

Dear Ms. Bose:

Enclosed, please find an original and fourteen copies of a Compliance Filing of the California Independent System Operator Corporation to the Order Instituting Inquiries Into Gas-Electric Coordination Issues.

Sincerely,

A handwritten signature in black ink that reads "Beth Ann Burns" followed by a stylized flourish or initials.

Beth Ann Burns  
Senior Counsel  
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Operator Corporation  
151 Blue Ravine Road  
Folsom, CA 95630

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

<b>California Independent System Operator Corp.</b>	)	<b>Docket No. EL07-1-000</b>
<b>ISO New England, Inc.</b>	)	<b>Docket No. EL07-2-000</b>
<b>PJM Interconnection, LLC</b>	)	<b>Docket No. EL07-3-000</b>
<b>Midwest Independent Trans. System Oper., Inc.</b>	)	<b>Docket No. EL07-4-000</b>
<b>New York Independent System Operator, Inc.</b>	)	<b>Docket No. EL07-5-000</b>
<b>Southwest Power Pool, Inc.</b>	)	<b>Docket No. EL07-6-000</b>

**COMPLIANCE FILING OF THE  
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION  
TO THE ORDER INSTITUTING INQUIRIES INTO  
GAS-ELECTRIC COORDINATION ISSUES**

Pursuant to Rules 213 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“FERC” or “Commission”), 18 C.F.R. §§ 385.213 (2006), and the Commission’s October 25, 2006 Order Instituting Inquiries into Gas-Electric Coordination Issues in the above-captioned matter (“October 25 Order”), the California Independent System Operator Corporation (“CAISO”)<sup>1</sup> hereby submits its compliance filing. As discussed in this compliance filing, the CAISO, in accordance with the Commission’s directive in the October 25 Order, has reviewed its pertinent scheduling practices and compensation mechanisms in conjunction with the issues and concerns the Commission raised in that order about the effectiveness of gas-electric coordination and has determined that no changes to those provisions or procedures are warranted at this time.

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<sup>1</sup> Capitalized terms not otherwise defined herein have the same meaning as set forth in the CAISO Tariff, Appendix A, Master Definitions Supplement.

## I. BACKGROUND

As a result of reliability issues that occurred during the winter of 2004 when New England experienced extremely cold weather conditions, the Commission became concerned that the scheduling practices of independent system operators (“ISOs”) and regional transmission organizations (“RTOs”) may limit the ability of gas-fired must-run generators to obtain gas when gas transportation is constrained or gas prices are volatile during cold snaps or hot weather. The Commission issued the October 25 Order to consider whether the scheduling practices of the ISOs and RTOs are effectively coordinated with the scheduling of natural gas purchase and transportation transactions. Specifically, the Commission seeks to “examine whether scheduling and compensation mechanisms need to be revised to ensure that gas-fired generators can obtain gas when the gas-fired generation is necessary for reliability and that they are compensated appropriately when volatility in gas prices creates difficulty in recovering gas costs.”<sup>2</sup> The October 25 Order directed the ISOs and RTOs to file by January 16, 2007 either proposed changes to their scheduling and compensation provisions to address these issues or an explanation why such changes are unnecessary.

On January 16, 2007, the CAISO filed a motion requesting a 90-day extension of time to file its response in order to allow it an opportunity to conduct a stakeholder process and obtain needed input about the effectiveness of existing scheduling practices and compensation mechanisms during emergency conditions and how gas-electric coordination could be improved. On January 19, 2007, the Commission issued a Notice of Extension of Time, which granted the CAISO's

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<sup>2</sup> October 25 Order at P. 1.

motion and extended its time to comply with the October 25 Order until April 16, 2007.

On January 17, 2007, the CAISO held a meeting to obtain stakeholder input on the coordination of electric operations with gas procurement and transportation. On February 15, 2007, the CAISO issued a Market Notice to encourage stakeholders to submit comments on the matter through an e-mailbox, and provide a schedule for comments to be the submitted and the CAISO to prepare a responsive white paper. As discussed below, only two written comments were received. In light of the limited stakeholder feedback the CAISO received on the subject of the Commission's inquiry, the CAISO issued a Market Notice on March 8, 2007 that cancelled the remainder of the stakeholder process for this initiative.<sup>3</sup>

## **II. DISCUSSION**

The CAISO supports the Commission's initiation of this inquiry and its objective of improving coordination between the gas and electric industries across the country. As directed by the October 25 Order, the CAISO has reviewed its scheduling practices and its compensation mechanisms to determine whether they encourage gas-fired generation to be available during fuel contingencies and provide an opportunity to recover appropriate compensation for doing so. The CAISO believes that its provisions are adequate and that no modifications are warranted, for the reasons that:

- The CAISO already successfully coordinates and communicates with the gas industry to improve electric grid reliability;

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<sup>3</sup> The CAISO received a couple of inquiries, but no objections from stakeholders about cancelling the stakeholder process.

- The CAISO's scheduling practices and compensation mechanisms encourage gas-fired generation to be available during fuel contingencies and provide an opportunity for compensation of gas price volatility; and
- Stakeholder feedback on this initiative does not support changes to the CAISO's applicable scheduling practices or compensation mechanisms.

**A. The CAISO Successfully Coordinates and Communicates With The Gas Industry**

The availability of gas-fired generation during weather events is critical to maintaining CAISO system reliability and avoiding involuntary loss of load. Because of the interrelationship between gas supply and electric generation availability, the CAISO believes that working closely with the gas industry, and maintaining open and continual communication with its participants, is imperative to the reliable operation of the CAISO Controlled Grid. Accordingly, the CAISO has for several years taken proactive steps to improve coordination with gas transmission providers, gas suppliers, and end users, and establish multiple levels of communication with those entities to assist in identifying potential problems as well as resolving real time issues.

The CAISO meets twice annually with each of the gas transmission providers, generally in the spring and fall, in advance of the winter and summer peak seasons. The content of each of these meetings is subject to a Non-Disclosure Agreement between the CAISO and the gas transmission provider in order to facilitate discussion on an array of subjects relevant to electric grid operations, including the level of gas inventory on hand, 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.

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 after the day ahead load forecast, a weather forecast of extreme conditions in the form of either a heat wave or cold spell, an unplanned outage of major gas facilities that could impact 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 to the CAISO's coordination and communication efforts, the Commission has initiated proposed rulemaking to improve communications between the gas and electric industries through the promulgation of Standards for Business Practices in Docket Nos. RM96-1-027 and RM05-5-001. The CAISO believes that adoption of such standards will further enhance the ability of all independent system operators and regional transmission organizations, as well as gas-fired generation, to cope with the challenges of weather events and avert the conditions like those experienced in New England during the winter 2004.

**B. The CAISO's Scheduling Practices and Compensation Mechanisms Effectively Encourage Gas-Fired Generation**

The CAISO's applicable scheduling practices and compensation mechanisms contain certain measures that encourage gas-fired generation to remain available during high demand periods when natural gas prices escalate.

Both the existing market rules (Must Offer) and those under the Market Redesign and Technology Update (“MRTU”) (RUC/commitment) ensure that units are appropriately compensated for being committed, on-line and available to serve expected load.

The timing of submitting electric schedules and nominating capacity for gas transmission in the West is staggered and provides flexibility to gas-fired generation to respond to increases in demand. In the electric Day-Ahead Market, each Scheduling Coordinator submits its Preferred Schedules no later than 10:00 a.m. on the day preceding the Trading Day, together with any Adjustment Bids and Ancillary Service Bids.<sup>4</sup> The CAISO reviews the Preferred Schedules and issues Suggested Adjusted Schedules, no later than 11:00 a.m., if necessary in order to resolve congestion.<sup>5</sup> Each Scheduling Coordinator may then submit Revised Schedules by noon, which will become the Final Day-Ahead Schedules for the following Trading Day if no further changes are made.<sup>6</sup> For the Hour-Ahead Market, a Scheduling Coordinator may submit its Preferred Schedules for each Settlement Period during a Trading Day, together with any additional or updated bids, at least 2 hours and fifteen minutes prior to the commencement of that Settlement Period.<sup>7</sup> The CAISO reviews the hour-ahead Preferred Schedules, runs the Congestion Management process, and provides each Scheduling Coordinator with its Final Schedule and Ancillary Service obligations for that

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<sup>4</sup> CAISO Tariff Section 31.1.5.

<sup>5</sup> CAISO Tariff Section 31.1.8.

<sup>6</sup> *Id.* at Section 31.1.9.

<sup>7</sup> *Id.* at Section 33.1.1.

Settlement Period no later than 30 minutes before the Settlement Period begins.<sup>8</sup>

This scheduling timeline correlates well with the gas nomination process, which offers four nomination cycles – two the day prior to gas flow and two on the day of gas flow. On the day prior to gas flow, the initial nomination is due to the transmission provider by 9:30 a.m., which allows gas-fired generation to request gas transmission capacity for the Preferred Schedules they will submit in the electric market. The second nomination is due by 4:00 p.m., which allows for gas transmission capacity to be aligned with the Final Day-Ahead electric Schedules. On the day of gas flow, the nomination repeats, with the first intraday nomination deadline at 8:00 a.m. and the second at 3:00 p.m. This dual nomination process allows gas-fired generation to increase or decrease scheduled volumes, or change receipt or delivery points. This flexibility is critical during extreme weather conditions so that gas-fired generation has the opportunity to secure capacity for increasing demand or possibly redirect deliveries in the event of a local supply disruption.

With respect to the applicable compensation provisions, the CAISO in February 2006 raised its bid cap for real-time Energy from \$250/MWh to \$400/MWh to account for the likelihood that natural gas prices would increase substantially during the 2005-2006 winter season and approach or exceed the prior bid cap.<sup>9</sup> CAISO Tariff Section 28.1.2 provides that the \$400/MWh is a soft bid cap, which allows Market Participants to bid into the real-time Energy market above the cap, but any above-cap bids that are dispatched by the CAISO are not

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<sup>8</sup> *Id.* at Section 33.1.2.

<sup>9</sup> *California Independent System Operator Corp.*, 114 FERC ¶61,026 at P. 4.



eligible to set the Market Clearing Price and are subject to cost justification and refund.<sup>10</sup> The soft cap affords gas-fired generation the opportunity to justify additional cost recovery of operating costs in excess of the cap in situations of rapidly rising natural gas prices.

The CAISO recognizes that, if price caps are set too low, this could adversely affect reliability by artificially suppressing resource prices when resources are scarce and causing a reduction in needed supply. In markets where bid caps are used to help protect against the exercise of market power, it is imperative to set the bid cap at an appropriate level in order to stimulate demand response, as well as to meet other objectives. Accordingly, under the CAISO's MRTU, the maximum Energy bid will increase gradually over time and become a hard cap. Pursuant to CAISO MRTU Tariff Section 39.6.1, the maximum Energy bid will increase to \$500/MWh for the first twelve months following implementation, then increase to \$750/MWh for the next twelve months, and thereafter increase to \$1,000/MWh.

In addition, under MRTU the CAISO will be using more recent gas price information in developing mitigated bids. Today, incremental reference prices are indexed to monthly gas prices, but under MRTU a daily Gas Price Index will be used, subject to a two-day lag for the Day Ahead Market and a one-day lag for the

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<sup>10</sup> Under the process for providing cost justification for a bid price above the soft bid cap, if the CAISO dispatches an incremental Energy bid at a price about the soft bid cap pursuant to CAISO Tariff Section 28.1.2, the supplier must provide a detailed breakdown of the component costs justifying the bid to the CAISO and the Commission no later than seven days after the end of the month in which the bid was submitted. The CAISO will pay dispatched bids for incremental Energy in excess of the soft bid cap based on their bid price, with any payments in excess of the Market Clearing Price being subject to refund by the CAISO if directed by the Commission.

Real Time Market.<sup>11</sup>

The CAISO believes that the market rules already in place, and the changes contemplated in MRTU, effectively encourage gas-fired generation to remain available to maintain reliability during a weather event and ensure that they will receive sufficient compensation for doing so. Changes to these provisions are not warranted. Further, with the implementation of MRTU only months away, it would not be prudent to add a further layer of change to the comprehensive and complex market reforms and technological upgrades contemplated in that program. MRTU is designed to fix market design flaws, enhance reliability, better protect wholesale customers from price volatility and gaming, incorporate price-responsive demand in the markets, and encourage construction of new resources.

**C. Stakeholder Feedback Supports Existing Practices**

The CAISO conducted a stakeholder meeting on January 31, 2007 to discuss the October 25 Order and invited stakeholders to provide written feedback on the issues and concerns raised in the order about gas-electric coordination matters. As previously indicated, the CAISO received only two written comments. Comments by Pacific Gas and Electric Company ("PG&E") addressed: 1) the pass through gas system imbalance costs to electricity purchasers by generators with a Reliability Must Run contract; and 2) whether an additional gas scheduling cycle is needed in the CAISO's Control Area. PG&E did not recommend that changes be made in either of these areas. The other set of comments, by Williams Power Company, Inc., suggested the CAISO review several areas where

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<sup>11</sup> A detailed description of the gas price indices used under MRTU is provided in Attachment C to the Market Instruments BPM, which is posted on the CAISO's website.

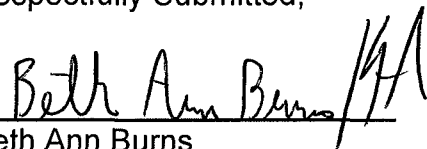
gas and electric interests interface, such as electric market structure and generation unit dispatch, but did raise any specific coordination issues related to situations where gas supply is constrained or gas prices are volatile, which is the focus of the Commission's inquiry. The CAISO encourages Williams to raise these areas of interest again for discussion and consideration in other contexts.

The CAISO does not believe that the limited response to this initiative should be viewed as an indication that stakeholders are disinterested in gas-electric coordination. We do believe, however, that it is a clear signal that stakeholders are satisfied with the CAISO's coordination efforts and that the applicable scheduling and compensation provisions should not be changed.

### **III. CONCLUSION**

For the reasons set forth above, the CAISO believes that the issues raised in the Commission's October 25 Order in this proceeding do not warrant any changes to the CAISO's scheduling practices or compensation mechanisms. The CAISO will continue, however, to improve gas-electric coordination and monitor gas supply conditions in order to mitigate potential reliability issues for the electric system, and will propose appropriate reforms as the need is identified.

Respectfully Submitted,

  
Beth Ann Burns  
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Operator Corporation  
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Folsom, CA 95630

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in the above-captioned dockets.

Dated at Folsom, California, on this 16<sup>th</sup> day of April, 2007.

  
Susan L. Montana  
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916-608-7021