



Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market and Infrastructure Development

Date: February 3, 2010

Re: **Decision on Information Release Policy on Transmission Constraints**

This memorandum requires Board action.

As part of its efforts to evolve and enhance market efficiency, the ISO launched a stakeholder process to evaluate information release policies that best support effective and efficient market participation. In particular stakeholders have expressed a need for information regarding ISO's management of transmission constraints in market operations. Management of transmission constraints refers to the practice of enforcing or not enforcing specific transmission constraints, and in the context of this effort it also refers to the ISO's definitions and descriptions of such constraints as well as the ISO's practice of adjusting constraints in its market operations. Stakeholders assert increased transparency into the management of constraints would enable them to better understand ISO market results and would, therefore, facilitate more effective participation in the ISO market. As a result of these requests, a major part of the ISO's current initiative on information policy is focused on transmission constraints management. Further, late last year the ISO expedited its information initiative in response to a Federal Energy Regulatory Commission order issued in October 2009 directing that the ISO more expeditiously address information requests related specifically to the management of transmission constraints. Following a robust stakeholder process, Management proposes new procedures for the release of information on transmission constraint enforcement and non-enforcement, causes of binding constraints, and operator adjustments to such constraints. This information will provide more market transparency and should enable market participants to more effectively participate in the ISO market.

Management recommends that the ISO Board of Governors approve the release of the following information, as further discussed in this memorandum:

- The daily list of constraints, including contingencies and nomograms, that are enforced and not enforced in each day-ahead market run after the results of the day-ahead market are posted;

- The same daily list of information for the constraints the ISO intends to enforce or not enforce for the next day's day-ahead market;
- The cause for any binding constraint shadow price that the ISO already posts on its public website; and
- A new monthly report for all markets on the number and degree of manual adjustments to transmission constraints within the ISO controlled grid by market operators.

Management has also adopted new advance notifications, to the extent feasible, for planned changes to the market model and/or constraint enforcement as well as significant changes between updates. Finally, Management has committed to develop improved network terminology and nomenclature, and expand the permissions for use of the congestion revenue rights (CRR) full network model for the purpose of analyzing and participating in the ISO market.

Moved, that the ISO Board of Governors approves the proposal concerning release of the information about transmission constraints, as detailed in the memorandum dated February 3, 2010; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.

DISCUSSION AND ANALYSIS

Background

The ISO launched a new information requirements initiative in early September 2009 to explore more thoroughly what type of additional information market participants require to effectively and efficiently participate in the ISO markets. This initiative is intended to cover numerous aspects of participation in the ISO markets. The first phase is focused on information related to transmission constraints management both because of requests made by market participants and because of recent FERC directives.

Before and after the start of the new market, stakeholders expressed a need for more information regarding the ISO's transmission constraint management and adjustments practices. In response to such information requests, the ISO included additional information in its Business Practice Manuals prior to the start of the new market and in Technical Bulletins after the start of the new market. The information provided in the BPM and Technical Bulletin explains more thoroughly the reasons for and the process the ISO follows to make decision about what transmission constraints it should enforce or not and guidelines the ISO

follows to adjust transmission constraint limits in its market operations. Market participants have, however, since continued to request more information regarding the actual adjustments made to the setting and enforcement of transmission constraints, including contingencies and nomograms, in addition to the already released guidelines the ISO operators and engineers follow for this purpose.

Concurrently with the ISO's information policy initiative, on October 2, 2009, FERC directed the ISO to expedite its stakeholder process related to information that specifically pertains to transmission constraints, which led the ISO to segment this initiative into three phases. The order was issued in response the ISO's filing on August 3, 2009, clarifying the role of the full network model in the ISO markets and to clarify that in running its markets to avoid infeasible and unrealistic market solutions the ISO does not and cannot enforce all modeled transmission constraints all the time. The FERC accepted the ISO's proposed clarifications with the additional requirement that the ISO include, in its tariff, high-level guidelines that govern its transmission constraints management and that the ISO expedite the stakeholder process to determine what additional information on transmission constraints the ISO can provide and how it can provide such information. FERC specifically identified and directed that the ISO determine through this stakeholder process how it can provide to market participants the list of constraints and contingencies that are or are not enforced in its markets runs. In response the ISO focused the first phase of its information requirements initiative on the transmission constraints.

ISO staff and stakeholders made significant progress last fall with the phase 1 effort and on December 31, 2009, the ISO was able to submit in compliance with the FERC order high-level tariff language that governs over transmission constraint management practices at the ISO. Since then, the ISO has completed its stakeholder process to address the transmission constraint management information requirements and now proposes the provision of new data that satisfies FERC's request and addresses additional information requirements identified through the recent stakeholder process.

Proposed Information Requirements

Management understands that more transparency regarding the ISO's establishment, management, and enforcement of transmission constraints enables participants to anticipate and address market results more effectively. The ISO market optimization processes rely on a series of inputs including in particular the accurate representation of the state of the ISO grid facilities. This particular task is accomplished through the development of network models used to represent the resources in processing an optimal market solution through the ISO market, which the ISO uses to operate the grid and manage congestion effectively and reliably. Phase 1 of this initiative seeks to provide greater insight into the actual constraint definition and enforcement practices so that market participants are better able to determine how such representations drive market results over time.

After a robust stakeholder process to consider these information needs, Management proposes three new data release elements.

1. ***Transmission Constraint and Contingency Lists in the Day-Ahead Market.***

Management proposes the release of, 1) a post-day-ahead market constraints list that would be published daily after the results of the day-ahead market are posted, and, 2) a pre-day-ahead market constraints list that would be published daily after a preliminary market run that the ISO performs to review issues in preparing for the next day's day-ahead market. The proposed two lists of constraints, including contingencies and nomograms, will provide market participants with significant information regarding what actual constraints are enforced or not enforced in the ISO day-ahead market. This is in direct response to requests by market participants for this information and to FERC's October 2 order. At this time, Management only proposes to provide this information for the day-ahead market due to the voluminous amount of information associated with the real-time market, which is run more frequently than the day-ahead market. Because this information identifies transmission facilities specifically and the state of such transmission facilities, Management proposes that the distribution of such information be protected pursuant to a non-disclosure agreement and that the stated purpose of receipt of this information be for the limited purpose of analysis associated with actual participation in the ISO market. Management proposes to seek FERC-approval of high-level tariff language that enables the provision of such information.

2. ***Cause of Binding Constraint.*** In addition to the current publication of the shadow price for each binding constraint on OASIS, Management proposes that the ISO post at the same location the cause behind the binding constraint. The ISO would identify whether the constraint was binding under the base case (base operating conditions relevant to the different markets) or due to contingency conditions, in which case the ISO would identify the actual name of the contingency. The information regarding the cause of the binding constraint will provide market participants with additional insights into the confluence of the market and system operations and the driving forces behind observed congestion. This change will render the ISO practices consistent with the practices of other ISOs and RTOs. Management proposes to seek FERC-approval of high-level tariff language that enables the provision of such information.

3. ***Conforming Constraint Report for the Day-Ahead and Real-Time Markets.***

Management proposes to provide to the public a new monthly constraint report that would include the number and degree of manual adjustments to transmission constraints within the transmission grid controlled by the ISO for the day-ahead and real-time markets. These manual adjustments are made by market operators to conform and adjust transmission constraints and limits to ensure the market optimization has a realistic representation of the actual grid conditions or to allow the market optimization software achieve a more reliable solution based on operator observations of real-time conditions not captured by other market optimization inputs. The ISO would report on such adjustments much like what was provided in the

quarterly Department of Market Monitoring report, but on a more frequent basis.¹ Management proposes to seek FERC approval of high-level tariff language that enables the provision of such information.

Non-Disclosure Agreements (NDAs). Management proposes to modify the stated purpose of the current Non-Disclosure Agreement that governs over the release of the CRR Full Network Model so that it is clear that the CRR Full Network Model can be utilized for purposes of analyzing and participating in all ISO markets including the day-ahead and real-time markets and not only the CRR markets. This modification is proposed in direct response to stakeholder requests that the current restriction prevents parties that don't participate in CRR markets to use the information for purposes of participating in the day-ahead and real-time markets. This modification will not require a tariff amendment given that the tariff does not include this specification. Management also proposes to formulate a similar Non-Disclosure Agreement for execution by parties that seek access to the new transmission constraint and contingency lists in the day-ahead market discussed above.

POSITIONS OF THE PARTIES

The proposal was created through the direct feedback received at three stakeholder meetings, three rounds of formal comments on three papers, and specific guidance from FERC. The straw proposal issued by the ISO on November 5, 2009 contained many of the elements incorporated in the current proposal. Stakeholders generally supported the proposal and expressed significant appreciation for the ISO's current efforts to increase transparency through additional data release.

However, a number of stakeholders have expressed a desire to receive the actual transmission constraint limit values used in the various market runs. Due to complexities, hourly variation and in some cases operational linkages to conditions outside of ISO Balancing Authority Area and, Management proposes to consider release of limits, beyond path limits already provided in OASIS, in phase 3 of the information release initiative.

In direct response to concerns raised by stakeholders during this stakeholder process, Management adopted several new advance public notifications to inform stakeholders of significant planned changes to the ISO's market model or constraint enforcement.² The advance notifications provide market participants with prior notice regarding:

¹ Department of Market Monitoring Quarterly Report on Market Issues and Performance, October 30, 2009, Table 5.1 Real-Time Dispatch Biased Flowgates and Frequency of Biasing with Additional Statistics <http://www.caiso.com/2457/2457987152ab0.pdf>

² Management, however, still proposes to maintain the necessary flexibility to enforce additional constraints in response to unplanned outages and network conditions even after such notifications are provided. Such flexibility is needed to be responsive to unplanned outages and to enforce additional constraints when reacting to unplanned outages in order to maintain its systems and market reliable.

- the implementation of a new full network model or base market model in the market systems, which as part of the ISO normal model maintenance generally occurs every 4 to 8 weeks;
- changes in deployment dates of new market models;
- description of network model changes associated with the model build;
- adoption of new constraint or contingency into the market systems in between model builds; and
- new events or operating condition requires that a new constraint or contingency.³

RECOMMENDATION

The new data elements and information release policy provisions will significantly increase market transparency and will greatly enhance market participants' understanding of market results and outcomes. Management recommends that the Board approve the information release policy on transmission constraints as discussed in this memorandum.

³ The ISO also plans to improve network terminology and nomenclature to use more consistent naming conventions and common data elements and is exploring the possibility of creating additional data mapping that would correlate the transmission facilities in outage reports with the proposed constraints list. The ISO is exploring the possibility of creating additional data mapping that would correlate the transmission facilities in outage reports with the proposed constraints list.