

Memorandum

To: ISO Board of Governors

From: Eric Schmitt – Vice President, Operations

Date: January 30, 2014

Re: Decision on Outage Management System Proposal

This memorandum requires Board action.

EXECUTIVE SUMMARY

As part of the California Independent System Operator Corporation's effort to support the state's renewable policy goals, and to accommodate an aging infrastructure, Management proposes improvements to its outage management system to address a significant increase of resource and transmission outage requests. A lack of automation, coupled with manual processing of outage data, has created a strain on the existing outage management systems. With new market enhancements and a continued rise in outage requests on the horizon, identifying ways to more effectively manage these transactions has become increasingly critical.

In July 2013, the Board approved Management's outage management system replacement project proposal. As part of this effort, Management has worked extensively with internal discussion groups and external participants to identify ways to improve the outage process. Utilizing this feedback, we have identified multiple opportunities to reduce manual processing and increase the accuracy of the outage data used to determine the viability of resource and transmission outage requests. These changes will position the ISO to effectively and efficiently manage the increasing number of outage transactions, while still maintaining the highest level of market and grid reliability. The proposed tariff changes are outlined below:

1. Provide customers with the ability to submit detailed reasons for outage requests;
2. Require customers to submit detailed resource outage data;
3. Provide participating transmission owners with the ability to submit transmission outage requests in structured data formats;
4. Extend electronic outage processing efficiencies to real-time operations;
5. Align the timeline for resource outage requests to the timeline for transmission outage requests;

6. Eliminate unnecessary reporting requirements; and
7. Provide customers with the ability to submit ancillary service limitations as structured data.

Management recommends the following motion:

Moved, that the ISO Board of Governors approves the outage management system proposal, as described in the memorandum dated January 30, 2014, 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

The ISO's current outage management systems and processes were designed under much different market and regulatory requirements than today. New ISO market systems and reliability study tools have since been developed to incorporate significant amounts of structured data that were not utilized until recently. Additionally, the ISO has experienced a dramatic increase in the number of resource and transmission outage requests. In 2004, the ISO processed 42,000 new outage requests, compared with over 82,000 new outage requests processed in 2013. ISO System Operations has raised numerous concerns regarding the increase in outage requests and the lack of automation necessary to accurately process these requests, while at the same time continuing to maintain bulk electric system reliability. Management's proposal is aimed at providing external participants and internal users with an outage management system that is capable of handling new market and regulatory requirements, as well as a continued increase in outage requests.

The proposal includes several key elements that are described briefly in the following paragraphs:

Provide customers with the ability to submit detailed reasons for outage requests: Customers will have the ability to submit detailed reasons for outage requests in the form of structured data (data that resides in a fixed field within a record or file). The introduction of detailed reasons will allow the ISO to process all outage requests with a single outage request template, eliminating the need for multiple outage request templates. The ISO will use this structured data to increase automation in the processing of outage requests. Additionally, downstream ISO systems will use this structured data to ensure appropriate outage processing throughout the settlements lifecycle.

Require customers to submit detailed resource outage data: Currently, resource outage requests are submitted without the sufficient detail necessary for accurate ISO reliability studies. Additionally, the Western Electricity Coordinating Council requires

detailed resource outage data to support the west-wide model. The ISO will ensure steps are taken to minimize the impact to customers due to this change, including providing pre-populated outage request templates at the time of outage submission.

Provide participating transmission owners with the ability to submit transmission outage requests in structured data formats: Outage requests in the current outage management system are unable to support structured data formats, therefore relying on free-form text to specify isolation points¹ for the work being performed. The ISO translates this free-form text into usable structured data, which the ISO market and reliability study tools consume. However, the practical reality is that the participating transmission owners that submit outage requests have the best understanding of the correct isolation points to be used when processing the requests. The current practice of the ISO converting free-form text into structured data introduces possible interpretation error into the equation. Receiving isolation points as structured data dramatically reduces the risk of incorrect interpretation, and provides assurance to participants that the exact isolation points they submit are being used in the ISO markets.

Extend electronic outage processing efficiencies to real-time operations: An increase in outage requests and associated workload has created additional manual work for real-time operators, who spend considerable time manually processing and managing these requests through phone communications. Some of these outage requests are routine and innocuous, but the current outage management systems do not have the capability to distinguish between routine and critical outage requests. Management proposes to utilize functionality that would distinguish routine outage requests from critical outage requests, and create automated rules based on these distinctions. These distinctions and rules would allow for electronic processing of outage requests in real-time operations, thereby reducing unnecessary phone communications that may divert attention from reliability related responsibilities.

Align resource and transmission outage request timelines: Current tariff language states that resource outage requests will be considered forced if submitted within three business days of the outage start. This timeline is not consistent with transmission outage requests, which are considered forced if submitted within seven calendar days of the outage start. Aligning these timelines provides the ISO with the amount of time necessary to analyze resource and transmission outages together to properly understand the full impact of all outages on the bulk electric system. In addition to aligning resource and transmission outage request timelines, Management proposes limited modifications to the existing rules and calculations for the resource adequacy program. These modifications will ensure that resources are not unduly penalized due to proposed changes in the resource outage request timeline, and ensure the application of standard capacity product will continue to align with the calculation of the availability standard, availability incentive payments and non-availability charges.

¹ Isolation points (or clearance points) are exact, physical locations on the electrical grid where equipment is de-energized. These are used by ISO market systems and reliability study tools.

Eliminate unnecessary reporting requirements: Management proposes to eliminate the requirement for customers to submit forced outage reports. These reports have been identified as unnecessary, and the elimination of them will reduce the workload for customers and streamline the outage management process.

Provide customers with the ability to submit ancillary service limitations as structured data: Customers will now have the ability to use structured data to submit ancillary service limitations for resources. Currently, these limitations are communicated to the ISO through the use of free-form text in the outage request. This data will be utilized by ISO market systems to ensure ancillary service limitations are appropriately considered in the day ahead and real-time markets.

POSITIONS OF THE PARTIES

Beginning in April 2013, the ISO conducted several rounds of stakeholder meetings on these topics, including a new collaborative effort called “Voice of the Customer”. Information gathered from these efforts was used to compile a straw proposal, a revised straw proposal, a draft final proposal, and a draft final addendum where stakeholders were able to provide comments. The proposal was modified in response to comments received from stakeholders. A summary of stakeholder comments and Management’s response to the concerns raised is provided as Attachment A.

Overall, stakeholders are supportive of both the objectives of this proposal and the elements contained within it. Stakeholders widely acknowledge that the proposal offers significant benefits and improvements to the overall outage management process.

However, despite broad support, some stakeholders still have concerns. San Diego Gas & Electric supports the submission of transmission outage requests in the form of structured data, but is concerned that this initiative may inappropriately shift responsibilities from the ISO to SDG&E, in addition to causing a substantial increase in costs. The ISO understands there may be additional costs associated with the implementation of this element, but we believe this change will improve efficiency and accuracy. Additionally, the ISO believes it is in the best interest of grid reliability, and the ISO market, for participants to submit outage requests as structured data, as the participating transmission owners have the best understanding of the correct isolation points in their outage requests. Furthermore, this proposal provides assurance to participants that the exact isolation points they submit in the outage request are being used in the ISO market and reliability study tools.

With respect to extending electronic outage processing efficiencies to real-time operations, SDG&E and Southern California Edison express concerns. SDG&E supports the goal of eliminating redundancies and improving overall efficiencies, but does not feel the ISO has demonstrated how this element of the proposal will accomplish those intended goals. Also, SDG&E’s existing real-time format does not support additional responsibilities for outage data management, which is currently handled via phone communications. SCE states strong opposition to this element of the

proposal, and expresses concern that it may degrade SCE's core obligations of safety, reliability, and situational awareness. The ISO understands these concerns and seeks to clarify the intent and proposed implementation of this proposal. The ISO believes that using electronic processing, prioritizing tasks, and reserving phone communications for critical matters improves safety and reliability. The intent of this element is to increase efficiency, reliability and situational awareness by providing real-time personnel with the ability to prioritize tasks according to levels of criticality. The ISO believes this can be achieved by reducing the amount of unnecessary phone communications related to non-critical matters. The ISO appreciates the concerns from stakeholders regarding this element, and continues to encourage the use of oral communications for outage processing whenever it is deemed necessary by the participant.

Stakeholders are not opposed to aligning the resource and transmission outage request timelines, but many request the ISO to clearly denote when outage requests are, and are not, subject to standard capacity product non-availability charges. The ISO agrees that it is important to clearly indicate this information within the outage request, and we will continue to work with stakeholders to ensure proper implementation of this element of the proposal.

The Six Cities² expressed confusion over the counting method used for resource and transmission outage requests, and urges the ISO to take steps to conform the counting method applied to resource and transmission outage timelines to the counting method applied in other provisions of the tariff. The ISO understands the counting method proposed for resource outage timelines may be confusing, and will consider changing it in the future, after full impacts to the tariff and other processes have been thoroughly vetted.

Wellhead Electric proposes that the function of resource adequacy replacement be handled within the new outage management system, but this will need to be explored under a separate initiative as this is outside the scope of the current proposal.

CONCLUSION

Management recommends that the Board approve the outage management system proposal discussed in this memorandum. These changes are generally supported by stakeholders and were refined to address many of their comments and concerns. Management will continue to monitor the effectiveness of the proposed enhancements and believes that these changes will position the ISO to effectively and efficiently manage the increasing number of outage transactions, while still maintaining the highest level of market and grid reliability.

² Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California ("Six Cities")