

Memorandum

To: ISO Board of Governors
From: Elliot Mainzer, President & Chief Executive Officer
Date: March 17, 2021
Re: CEO report

This memorandum does not require Board action.

INTRODUCTION

The past month has been a very intense and consequential time for the ISO and its many partners, dominated by summer 2021 market enhancements and operational readiness, and very active and sometimes pointed stakeholder feedback. With this report, I would like to provide a higher-level perspective on these issues and activities and to ensure our partners and stakeholders that we are hearing their input and concerns and responding accordingly.

SUMMER 2021 MARKET ENHANCEMENTS

In the Final Root Cause Analysis report released on January 13, the ISO, CPUC and CEC concluded that several underlying factors contributed to the rotating outages of last summer. One of the contributing factors was unforeseen problems associated with the ISO's residual unit commitment process. Through additional analysis of last summer's stressed grid conditions, we also discovered issues associated with the EIM sufficiency test, irrational price formation during highly stressed operating conditions, and challenges with the dispatch of demand response resources. It is critical that the ISO address each of these issues in an open and transparent fashion. As a result, we initiated a stakeholder process to address these and other issues critical to summer 2021 readiness, and based on significant stakeholder feedback and calls for greater prioritization and policy clarification, settled on a set of key market design enhancements, most of which are before the Board this month for approval.

I want to acknowledge the significance and importance to our EIM stakeholders of taking steps to address the issues that arose with the EIM sufficiency test. We have proposed two enhancements to the sufficiency test for summer 2021 implementation, but there is more work to do. Of ongoing interest to EIM entities and other stakeholders is conducting additional forensic analysis to better understand the drivers of the ISO's performance with respect to the sufficiency test last summer and to also establish revised consequences for failing the sufficiency test. Based on discussions at last week's EIM Governing Body

meeting, we have circled back with the Market Surveillance Committee to conduct additional analysis and will be commencing an additional round of stakeholder discussions later this month to provide greater clarity and transparency on the ISO's passing of the sufficiency tests last summer. In early April, we will launch a new stakeholder initiative to consider further enhancements to the sufficiency tests and possible changes to the consequences of failing the sufficiency test, including the potential for an approach that does not require market software changes and could be more readily implemented this summer.

As a consequence of our efforts to address issues associated with the residual unit commitment process, we are also working actively with market participants throughout the West to address a challenging set of issues related to scheduling priorities for resource adequacy imports, exports and wheel-throughs. This conversation has been a crucial test of the ISO's ability to coordinate and collaborate with a broad set of market participants to meet our shared reliability responsibilities in a mutually satisfactory manner. We are still working out the final details of our proposal on this issue, but are hopeful that we can land on a workable interim solution for 2021. This has been a very difficult emerging issue, and I have appreciated the spirit of creativity and collaboration that has animated these discussions so far.

I will also note that the dialogue about scheduling priorities has also highlighted something recently noted by WECC in their regional resource adequacy assessment: every sub-region within WECC is effectively short and relies on imports to meet its resource adequacy requirements. Increasingly, utilities across the West are competing for scarce resources and this is likely to increase in the next few years with significant resource retirements throughout the region. This new era of scarcity for the West calls for much greater urgency and inter-regional coordination on resource adequacy, transmission development and market design/coordination in order to meet our mutual needs. The ISO is committed to being an active player in helping to advance these important efforts.

Returning to our package of market enhancements, the steps we are taking to address scarcity price formation, while not necessarily representative of a long-term solution, are steps in the right direction to ensure that the ISO market is appropriately reflecting scarcity when we are experiencing extreme operating conditions and arming load in order to maintain system reliability. We look forward to working on a longer-term and more comprehensive approach to scarcity pricing that also addresses enduring concerns about system market power by certain stakeholders within California.

Finally, we have also made significant progress in working with the battery storage community to support system reliability during stressed operating conditions through the establishment of a minimum state of charge requirement that will be applied when the day-ahead market indicates the potential for insufficiency. I have appreciated the constructive partnership with the storage industry and their appreciation of the key role their resources will play this summer in providing dispatchable capacity during the system net peak. We are now beginning to initiate longer-term market design work with storage providers and other stakeholders to develop longer-term market design enhancements that will support system reliability while more effectively addressing the commercial and asset optimization needs of what will ultimately be a more diverse fleet of storage resources.

SUMMER OPERATIONAL READINESS

As we head into the spring, the ISO is taking several steps to maximize planning, preparation and regional coordination for summer 2021. On April 15, we will be hosting a summer 2021 Leadership Readiness Roundtable with approximately 15 entities throughout California and the West, including California and other western state utilities and transmission operators and representatives of the independent power, storage and community choice aggregator sectors. The purpose of the Readiness Roundtable is to ensure a shared understanding of the lessons learned from last summer, review actions taken within California and other states since last summer to increase readiness, review supply and demand fundamentals going into the summer, and explore whether there are any additional individual or collective actions that we can take to maximize preparedness for the summer. Following the Readiness Roundtable, ISO system operators will be conducting table-top exercises with adjacent system operators to rehearse operational scenarios and test communication channels to ensure efficient coordination going into the summer. Per my statements above, this summer will require high levels of operational coordination to ensure that California and its partners in other states can meet their shared resource adequacy and load service requirements.

Notwithstanding all of these efforts, there is still reliability risk going into the summer. The ISO will provide a steady stream of communication through market notices, stakeholder meetings, social media, and direct constituent outreach about operational conditions and risks leading up to and throughout the summer.

DEMAND RESPONSE AND DISTRIBUTED ENERGY RESOURCES

The ISO has been working closely alongside the California Public Utilities Commission and California Energy Commission to carefully listen to and address the concerns of a wide variety of stakeholders in the demand response community. Following the release of the Final Root Cause Analysis report in January, in which we provided analysis about the performance of demand response resources, we received significant pushback that a key variable in demand response performance was the framework of rules and requirements faced by demand response providers. Of particular concern among certain stakeholders is the issue of baselines that are used to measure demand response performance. In response, the ISO has begun exploring possible alternative approaches to baseline administration and other means of measuring demand response performance with both short-term and longer-term applications. We are refining proposed changes to the ISO baseline methodology that may be ready on a trial basis for summer 2021 operations. We are working with the Department of Market Monitoring to develop the framework for what would effectively be a revised baseline experiment and defining data requirements and evaluation criteria to measure effectiveness of the changes and any subsequent applications of learnings.

Through our Transmission and Distribution Interface Group – an initiative established to help with the ISO’s implementation of FERC Order 2222 -- we are also working to evaluate systematic barriers to broader participation in the ISO market by behind-the-meter distributed energy resources. I will continue to report out on these conversations and hope to make some tangible progress in removing barriers in the coming year.

EIM GOVERNANCE

I have been encouraged by the progress made by the EIM Governance Review Committee, but there is additional work to do in the next few months to further explore the issues associated with expanded joint authority between the ISO Board of Governors and the EIM Governing Body. I have heard clearly from EIM entities throughout the West that continued progress on joint authority is a significant factor in their satisfaction with EIM participation and their willingness to continue to explore further market evolution with California parties. The California parties have also done a good job clearly articulating their concerns and I am encouraged by the spirit of openness and engagement across the region to bring these issues to greater resolution in the near future.

We are also very busy onboarding new energy imbalance market entities, with Balancing Area of Northern California Phase 2 and Turlock Irrigation District scheduled to go live on March 25, Public Service Company of New Mexico and Los Angeles Department of Water and Power on April 1, and Northwestern Energy in June. These implementations are proceeding very well and thanks to our EIM partners and ISO staff for their dedication and focus during these very busy and challenging times.

GAS MARKET VOLATILITY IN FEBRUARY

In February, we saw significant gas price increases and volatility affecting the gas fleet in the southern part of the ISO's system. This volatility was caused by cold weather events in Texas and other parts of the country, exposing generators to unprecedented fuel prices. The ISO acted swiftly to implement enhancements that allow us to better capture fuel price increases in our calculations of cost-based bids such as start-up and minimum load cost bids, and default energy bids used when resources are mitigated. At the time of the cold weather and gas price increases, we were in the midst of preparing to implement these changes later in February, but accelerated and implemented the software changes early in order to be prepared for further potential volatility the week of February 16.

We also asked FERC to allow us to implement features of FERC Order No. 831 requirements earlier than we had planned so that generators could request after-the-fact uplift payments to cover any unrecovered fuel costs in case they had been constrained by the current \$1000/MWh energy bid cap. In addition, we informed FERC of our intent to implement our compliance with FERC Order No. 831 no later than March 21, 2021, which will allow the market to capture fuel price increases driving energy bids above \$1000/MWh in the market clearing process. These new features allow us to verify supplier requests to bid above \$1000/MWh and up to \$2000/MWh prior to clearing the market, and if approved, use the higher bids to economically optimize the fleet and reflect such costs in market clearing prices. The ISO is continuing to work towards implementing additional measures that allow for verification of import bids above \$1,000/MWh, as well as graduated increases of the bid cap to \$2,000/MWh. These measures are expected to be in place in June, 2021.

SPRING OPERATIONS SET NEW RECORDS

As spring operational conditions set in with low demand and high wind and solar production, we experienced some new operational records: On March 13, 2021 at approximately 12:30 pm, we were serving 92.5% of load with renewables and 98.1% of load with carbon-free resources. On the same day, we established a new minimum net load (load minus wind and solar) of 3,614MW. Lastly, on February 28, 2021, we observed our maximum 3-hour net load ramp of 17,259MW.

MARKET SURVEILLANCE COMMITTEE APPOINTMENT

Dr. James Bushnell has served as a member of the ISO Market Surveillance Committee since 2002 and his term as a committee member expires on March 31, 2021. During his tenure on the MSC, Dr. Bushnell has provided invaluable expertise and advice to the Board of Governors, EIM Governing Body, Management and staff on numerous issues relating to the operation of the ISO market.

The tariff requires that the ISO CEO, subject to approval by the Board of Governors, make appointments to the MSC. Therefore, as outlined in the Board memo, I request that the Board of Governors reappoint Dr. Bushnell as a member of the MSC and authorize execution of a contract for a three-year term.

COVID PREPARATIONS – SAVING GOOD NEWS FOR LAST!

Finally, shortly after the one-year anniversary of the ISO's very successful pandemic response, I am pleased to say that all ISO employees have been notified of their eligibility for vaccination by the California Health Authority. This is extraordinarily good news and a strong signal that we may be able to return to some sense of normality within the next few months. I am deeply grateful to our outstanding Business Continuity Team and all of our employees for their professionalism, commitment and productivity during this most challenging of times.