



# Memorandum

**To:** ISO Board of Governors and WEIM Governing Body  
**From:** Elliot Mainzer, President and Chief Executive Officer  
**Date:** July 12, 2023  
**Re:** CEO report

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**This memorandum does not require ISO Board of Governors or WEIM Governing Body action.**

## INTRODUCTION

For my July 2023 CEO Report, I provide an update on early summer grid conditions, tariff filings for the extended day-ahead market and day-ahead market enhancements initiatives, interconnections process enhancements, a refresh of the 20-Year Transmission Outlook, our final proposal for the subscription participating transmission owner model, a historic battery storage milestone reached in June, some of the ISO's recent international activities, and changes related to the Western Energy Imbalance Market (WEIM) Governing Body.

## SUMMER READINESS

During the long July 4 holiday weekend, we experienced the first significant warming of the year, with above normal temperatures impacting Northern California. The ridge of heat that brought the high temperatures during the ISO holiday weekend then shifted more over the Desert Southwest and we had no issues meeting demand, which peaked at 36,111 megawatts (MW) on Friday, June 30. Our forecasting team will continue to monitor conditions throughout the summer for the Western interconnection and has pointed to the likelihood of above normal temperatures throughout the West for the month of July, with the strongest probability being in the Desert Southwest over the next several weeks.

As we move further into the summer and more hot weather, we are well prepared for summer operations and have completed all readiness activities from operations and customer training to refining our playbook and communications protocols.

Our Operations team, along with the Reliability Coordinator, neighboring balancing areas, load-serving entities and participants in the WEIM across our footprint took part in several ISO-hosted operational tabletop drills and workshops in late May and early June to help ensure effective communication and coordination during emergency operations. Our Communications and Public Relations team has also continued to meet regularly with colleagues in the Governor's office and state agencies to enhance coordination. These

meetings as well as regular summer readiness touchpoints with California utilities are now occurring on a regular cadence. We also completed customer outreach and training, where we provided a virtual refresher for all of our scheduling coordinators on communication protocols including Energy Emergency Alerts (EEA) that may be declared during emergency operations.

Also, on the July 1 trading day, the ISO successfully activated the summer release market enhancements, which focuses on items that are important to maintain economic and reliable system operation. The summer release excludes lower priority exports from the ISO's obligation in the WEIM resource sufficiency evaluation (RSE) tests and facilitates assistance energy transfers between WEIM balancing areas that failed the RSE test. The summer release also updates the day-ahead storage resources default energy bid to include opportunity costs similar to real-time default energy bids. Finally, the summer release introduces a new requirement for the battery resources to bid in energy in the opposite direction of the awarded ancillary services to allow the market to economically charge and discharge the battery resources and restore their ancillary services awards.

## **EDAM AND DAME**

We continue to make progress on our extended day-ahead market (EDAM) initiative and on our day-ahead market enhancements (DAME). We originally had intended to file proposed tariff changes with the Federal Energy Regulatory Commission (FERC) by the end of June but have extended that timeline to mid-August to file EDAM and DAME tariffs together in a single filing. Because of the interdependency of the two initiatives, our team believes it will make for a more efficient filing and FERC process to file jointly and we are continuing to move forward on that timeline.

By way of background, we held a series of three EDAM workshops in May to review in-depth the EDAM tariff sections and to respond and incorporate an initial set of stakeholder comments. On June 8, we published the revised draft tariff for stakeholder review. Comments were due on July 6, with a stakeholder meeting scheduled for July 26 to do another comprehensive walk through the relevant tariff sections and to discuss stakeholder feedback. Prior to our FERC filing in mid-August, we will publish the final draft EDAM tariff on the ISO web-page.

At the same time, we have been working with several entities to co-host an EDAM forum in Las Vegas on August 30. This will be an open stakeholder forum to bring together parties from California and across the West to take stock of the current EDAM progress related to the tariff filing. We also want to help advance understanding of EDAM, its evolution and the path forward and look forward to bringing the conversation to the desert southwest.

For our day-ahead market enhancements initiative, we published the initial draft tariff language on May 22 and received stakeholder comments June 16. That was followed by a

stakeholder meeting to review comments June 23, and the next iteration of the DAME tariff was published after the July 4 holiday. Another stakeholder meeting is scheduled for July 27.

## **INTERCONNECTION PROCESS ENHANCEMENTS TRACK 2**

With track 1 of the interconnection process enhancements initiative approved by the Board in May and our filing in to FERC, the team has turned its attention to track 2 of the initiative. We are taking a much more inclusive and intensive approach to collecting stakeholder feedback early in the process to help inform development of the straw proposal.

ISO staff published a discussion paper May 31 that outlined proposed principles and problem statements for stakeholder feedback. The paper also put forward several concepts to address two challenges in our current interconnection process:

- The high volume of new interconnection requests from cluster 15, in particular (541 validated interconnection requests for a total of 354 gigawatts (GW));
- The large number of outstanding interconnection requests from previous clusters, including cluster 14 and previous clusters totaling 188 GW for 464 projects.

The working group process began in June, with engagement and leadership from both Infrastructure Operations & Planning and Stakeholder Engagement and Customer Experience groups. We have convened three working group sessions to collect stakeholder input to develop revised principles and problem statements, and began to discuss potential solutions to the problems.

Stakeholders presented their proposed solutions at the July 11 workshop, and we will continue to engage stakeholders throughout the policy initiative to bring the Board a policy that includes the transformative and sustainable changes necessary to enable the ISO to move projects through the interconnection process more efficiently, with significant stakeholder support and buy-in.

The team currently plans to bring the revised interconnection process proposal to the Board in Q1 of 2024 to make these changes in time to apply relevant adjustments to cluster 15. During this process, we are maintaining good communication with the CPUC, CEC, and local regulatory agencies and remain committed to operationalizing changes to the interconnection process that are consistent with our implementation of the Memorandum of Understanding signed last December with the CPUC and CEC.

## **UPDATING THE ISO'S 20-YEAR TRANSMISSION OUTLOOK**

When the ISO released its first 20-Year Transmission Outlook in May of 2022, we said it would be updated periodically as part of our ongoing efforts to more proactively plan for the infrastructure California needs to meet its future clean-energy policy goals.

Work on that update is underway as the ISO continues to coordinate with the CEC and CPUC on revised resource portfolio and load forecast input assumptions. The update is being undertaken in parallel with the ISO's 2023-2024 transmission planning process. The next 20-Year Transmission Outlook will look out to the year 2045 with the resource portfolio scenario identifying approximately 165 GW of new resources and 15 GW of gas-fired resources being retired by 2045. This represents the interconnection of approximately 7.5 GW of new resources each year to 2045.

## **SUBSCRIBER PARTICIPATING TRANSMISSION OWNER MODEL FINAL PROPOSAL**

The California ISO Board of Governors is being asked this month to approve the ISO's final proposal for our new subscriber participating transmission owner (SPTO) model for development of generation and transmission from outside of the ISO balancing area, which will facilitate delivery of critically needed resources to the ISO. This model can enable new transmission lines outside the ISO balancing area for developers who want to build and place their transmission facility or facilities under ISO operational control and use those transmission facilities to connect generation to the ISO balancing area. The transmission project to connect such generation, financed through the FERC-approved subscriber process, would be outside the transmission revenue requirement of the ISO's transmission access charge.

This model enables development of out-of-state renewable generation identified in the CPUC's Final Decision Ordering Supplemental Mid-Term Reliability Procurement, the CPUC resource portfolios used in the ISO's 2023-2024 transmission planning process, and the new transmission facilities required to reach identified resource locations. These portfolios call for out-of-state wind generation that requires new transmission to reach the ISO border: 1,000 MW from Idaho, 1,500 MW from Wyoming, and 2,328 MW from New Mexico. These volumes build on the amounts provided as part of the ISO's 2022-2023 transmission planning process, and match the values that the ISO used to size transmission needed from the ISO border to load centers in the 2022-2023 plan. These amounts also align with the longer-term requirements set out in the scenario provided by the CEC and the CPUC to the ISO for the ISO's 20-Year Transmission Outlook.

## **BATTERY STORAGE MILESTONE**

During the first week of June, the amount of installed battery storage capacity on the California grid exceeded 5,000 megawatts for the first time, achieving another noteworthy milestone. This is a very impactful evolution, especially when considering that in 2020 the grid had about 500 MW of battery storage capacity installed. This is the result of a lot of hard

work here at the ISO, but it is also testament to the visionary policy makers, regulators, state officials and utility leaders who have embraced this important technology and helped California reach this milestone.

Additional storage capacity is also in the works, and these resources help ensure grid reliability during the most stressed times of the year. They also now provide most of the regulation services on the grid and daily energy shifting from peak solar generation hours to evening hours with high net loads. Notably, storage resources were available and provided generation to the grid last year during critical times on September 6 and through the entire 10-day heat event, when loads reached an all-time record.

I want to give a big thank you to our operators and members of the storage sector and market policy teams for their outstanding work on the successful integration of all that new capacity and the new tools and market features to support storage. This work enables our operators to take full advantage of these resources and our Communications and Public Relations team is working on sharing this story more broadly.

## **INTERNATIONAL COLLABORATION**

The ISO has also been busy with its international collaboration. Recent work has included exchanges with Grid Operators 15 (GO15), the Global Power System Transformation (G-PST) initiative, and the Powering Past Coal Alliance (PPCA), along with hosting multiple international entities to the ISO campus. Some highlights of these recent meetings include:

G-PST – hosted a consortium of philanthropies in a discussion between the G-PST, EPRI, ESIG, NREL and two founding system operators (California ISO and ERCOT) regarding accelerating the decarbonization agenda across several fronts including the control room of the future, resource adequacy, system stability, distributed energy resources, grid forming resources and system needs and services.

Engagement with GO15 counterparts has also been strong. The ISO participated in a long-range planning presentation from MISO that highlighted its changing grid. We also participated in an interconnection meeting where Saudi Arabia presented collected survey responses on the topic. There have also been governing board and steering board meetings during June. These leadership meetings discussed progress on GO15 technical activities, reviewed outstanding survey data collected, and discussed key topics on papers relating to future grid challenges and resiliency.

Last, the ISO has hosted several international tours including groups from Morocco, South Africa, Italy, Vietnam, and Abu Dhabi. These tours have focused discussion on distributed energy resources, operating a high inverter-based resource grid, managing control room reliability, the impacts of electrification and the use and management of storage on our grid.

## **WEIM GOVERNING BOARD POSITIONS**

Congratulations to Rebecca Wagner for her recent appointment to the WEIM Governing Body. Rebecca will serve the remainder of Jennifer Gardner's term, which ends on June 30, 2024.

In addition to her professional experience, Rebecca's participation on WEIM committees – including the initial Energy Imbalance Market Transitional Committee when the real-time market was being developed – has provided her with insight into issues facing our partners. Most recently, Rebecca's leadership of the WEIM's Governance Review Committee was essential in successful development of the joint authority governance model.

I also want to thank Jennifer Gardner, who was appointed to the Governing Body in 2021, for her service. She was an outstanding member and instrumental in advancing the evolution of the western market with her support of the EDAM proposal governance changes.

Thanks and congratulations also to Anita Decker for her appointment to a third term on the Governing Body. Anita, who has been a member since 2019, has been a strong supporter of policies and activities that better serve our partners throughout the West.

I also want to acknowledge the new chair of the WEIM Governing Body, Andrew Campbell, and that Robert Kondziolka has been elected vice chair. Congratulations to you both and thank you Rob for your service as chair over the past year. I look forward to working with the entire Governing Body as we continue efforts to implement new market services to our partners in the Western Interconnection.