



Memorandum

To: ISO Board of Governors and WEIM Governing Body
From: Elliot Mainzer, President and Chief Executive Officer
Date: May 14, 2024
Re: CEO report

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

INTRODUCTION

For my May 2024 CEO report, I will provide an update on this spring's clean-energy milestones, our summer readiness activities, the ISO's 2023-2024 transmission plan, our interconnection process enhancements initiative, the SunZia transmission project's application to become a subscriber participating transmission owner (SPTO), the launch of our new website, developments related to the ISO's extended day-ahead market, the April 8 eclipse and first quarter benefits report for the Western Energy Imbalance Market.

Before going through these various issues, however, I first want to acknowledge the excellent work and staff support that have helped move forward the three important items mentioned in my introduction related to transmission. The ability to more proactively identify, plan and build transmission infrastructure for both the short and long-term is a top priority for our state, for the region and for the ISO. Much of the progress made on that front is captured in a new document posted recently on our Energy Matters blog entitled: *Taking the Long View: The California ISO's Collaborative Approach to Transmission Planning & Coordination*. The post provides a good overview of our more proactive, collaborative and longer-term planning approach to transmission infrastructure. I hope you have time to read it and share it with your peers around California, the West and the rest of the country.

The transmission items on the meeting agenda are all very exciting and have taken a great deal of thoughtful work and stakeholder engagement to reach this point. The executive team and I look forward to our discussion and to any questions you might have.

SPRING RENEWABLES MILESTONES

Our clean-energy numbers this spring have generated interest in the media and elsewhere. The attention came because we were seeing grid records for wind, water and solar energy set sometimes within days or hours of each other. While we're still validating all the numbers, it's clear that this is a good story for the state's transition to a carbon-free grid. The numbers on our Today's Outlook web page showed that the ISO met 100% or more of the demand for power with renewable energy produced by wind, water and solar energy for multiple hours on multiple consecutive days in April and May, and for longer periods of time than in previous years.

We also saw simultaneous battery storage discharge exceed six gigawatts, and batteries were the largest source of supply to power the grid at a point during two days in April.

The bottom line is that we are seeing higher percentages of renewables every spring, so this phenomenon has been building since we broke the 100% mark in May 2022. These renewable peaks are for a small number of hours in the year, and under ideal conditions, but it means more renewable generation is coming online and our operators are skillfully managing substantial amounts of carbon-free resources on the system.

SUMMER READINESS

Our coordination and various activities carried out in preparation for the potential challenges of summer continue to ramp up as they always do this time of year. Among other things, our close coordination with California state agencies has included reviewing and updating the ISO's operational playbook, which outlines processes, potential operational actions, and communication touchpoints in advance of and during a potential grid event. In recent years, various state programs have been developed to help support grid reliability during extreme weather events, including the state's Strategic Reliability Reserve, as well as demand response programs. And we have been working with our partners at the state and across the industry to make sure everyone is on the same page as we get closer to summer.

As part of those efforts, we have also been offering more comprehensive summer-related refresher training for market participants on topics that include managing inertia transactions, export priorities, operational actions associated with unit response and performance, and emergency assistance protocols and communications.

The ISO and state entities are also participating in tabletop exercises to again practice and test operational processes, communications protocols, and sequencing of various state emergency programs under different operational scenarios. And we will be joining with the Governor's Office and other state entities in a pre-summer media briefing to answer questions and walk media through some of the tools at the disposal of the state and ISO, including the possible deployment of once-through-cooling natural gas plants that are now part of the state's strategic reserve. We never fully know what any summer will bring to California and the Western U.S., but this level of planning and coordination helps us be well positioned to respond to potential grid events.

Our 4th annual Summer Readiness Leadership Roundtable once again brought together leaders from Western utilities, energy trade associations, and other power providers to review any lessons learned, outline the supply and demand picture for the upcoming summer, and determine if there are additional individual or collective actions that can be taken to further support reliable operations. The session always helps set the stage for continued robust communication, coordination and support for the upcoming summer.

Finally, and perhaps most notably, our Annual Summer Loads and Resources Assessment was released earlier this month and it shows we are again going into the summer in better shape thanks to additional resources that are now on the grid. These gains, along with average hydro conditions and a softening of the summer 2024 load forecast peak demand, more than offset plant retirements and the transition of once-through cooling into the state's strategic reserves, resulting in increased overall reserve margins that exceed current capacity and performance target levels.

Other key takeaways include the following:

- 926 MW of capacity has been added to the ISO grid in Q1 2024. Expected new additions from April 1, 2024 through June 30, 2024 total around 4,569 MW.
- The ISO's probabilistic assessment of the anticipated 2024 summer resource portfolio based on the California Public Utilities Commission's (CPUC) preferred system plan indicates a surplus of 2,550 MW for meeting the "one day every 10 years loss-of-load expectation" ("1-in-10 LOLE") planning target.
- The ISO multi-hour stack analysis shows that expected resources are sufficient to meet forecasted demand plus an 18.5 percent reserve margin for all summer months in 2024. There is more than 3,500 MW of surplus over forecasted demand plus an 18.5 percent reserve margin during peak net load hours 18 through 22 in September.
- The weather outlook for the months of June through August 2024 continues to show the probability of above normal temperatures across the Western U.S., with the highest probabilistic chances across the Desert Southwest and lower chances of above normal temperatures in coastal locations, especially Southern California. Forecasts also indicate an increased chance of heat events in August and September 2024 across interior California.
- For summer 2024, emergency resources total more than 3,445 MW. The CEC and CPUC will provide estimates of state emergency demand response programs in the CEC's California Reliability Outlook to be published this month.

2023-2024 TRANSMISSION PLAN

On April 1, we released our draft 2023-2024 Transmission Plan, which looks out over a 10-year planning horizon and was again developed in close coordination with California state agencies, utilities and stakeholders throughout the region. The plan identifies 26 new projects with an estimated cost of \$6.1 billion at buildout, including the transmission infrastructure needed to deliver the first wave of offshore wind development in California. The plan also recommends various grid enhancements to increase inter-regional transfer capability.

I again want to thank all of our partners and stakeholders for working with us on the transmission plan to enhance reliability, affordability and environmental sustainability across the Western Interconnection.

INTERCONNECTION PROCESS ENHANCEMENTS (IPE) PHASE 2

Our work to improve the interconnection queuing process has been a challenging undertaking but the proposal scheduled for a briefing to the Board at the May meeting reflects robust stakeholder engagement in establishing a common set of principles and clearly defining the problems we're trying to solve. And that input is reflected throughout the final proposal.

You will hear more from our team on the proposal, which is part of a broader effort between the ISO, the CPUC, the CEC and local regulatory agencies to better synchronize resource and transmission planning, procurement, and interconnections. In keeping with our close coordination with the state, this proposal would prioritize interconnections in zones with available or planned transmission capacity, and give load-serving entities an opportunity to signal which projects best align with their procurement needs, thereby increasing the likelihood that the projects that advance through the study process will have willing off-takers on the other side. We also propose a number of procedural reforms to expedite the advancement and commercialization of projects that are currently in the queue.

I also want to say that suggestions that the ISO consider smaller, more incremental changes, or that we simply comply with Federal Energy Regulatory Commission (FERC) Order 2023 and monitor the results, rather than move forward with this overhaul, are not realistic. We simply do not have the time nor the resources to continue to tread water in this flood of interconnection requests. We currently have over three times the resources we will need over the next few decades in the queue. We have far more projects in line than we can study or accommodate; reform is needed for the ISO to onboard the best new resources that California will need for near-term reliability and longer-term policy requirements.

Over the past month, the ISO has been reflecting on and responding to stakeholder feedback on the final proposal, which the IPE team has posted an addendum to that clarifies key details on some of its more novel elements. A stakeholder workshop has been scheduled for May 16 to discuss these clarifications and we now plan to have a special ISO Board of Governor's meeting for you to vote on this final proposal on June 12. This will allow you to digest stakeholder comment and spend more time with the proposal before a decision. The timing will also keep us on track with our schedule to re-engage with over 500 Cluster 15 interconnection requests in Q4 of 2024, hopefully under a reformed process. We are committed to getting this right and continuing to work with stakeholders to ensure an open, competitive, and streamlined interconnection queuing process that aligns with need and transmission availability.

We will initiate track 3 of our enhancements initiative immediately, where we intend to address modifications to the deliverability allocation methodology before Cluster 15 deliverability allocations early in 2025. We plan to bring this set of reforms to you for consideration in late 2024.

SUN ZIA

The other major transmission item this month is Pattern Energy's SunZia project application to become a subscriber participating transmission owner. The 550-mile line between central New Mexico and south-central Arizona will have the capacity to transport 3,000 MW of wind energy to California and neighboring states. The SunZia line is the second transmission project to apply for subscriber status after TransWest Express, which was approved by the ISO Board of Governors in December 2022.

The subscriber participating transmission owner model, which was approved by the FERC this past March, enables new transmission lines outside the ISO balancing area to connect generation to the California grid, placing the transmission facilities under ISO operational control. With this innovative approach, entities subscribing to use the transmission line help finance the up-front cost of the project without increasing the ISO's transmission access charge. Individual load-serving entities across the West will then have the opportunity to sign long-term contracts for renewable energy delivered from these projects.

NEW WEBSITE LAUNCH

I am happy to say that after a lot of hard work by our Creative and Web Services, Corporate Systems and Architecture teams, we are ready this month to launch the new and improved CAISO.com website. The new website will be a big help for the organization and to our stakeholders and others who depend on this resource for current and accessible information about the grid and related matters.

The new website is more than just a new design and updated homepage. Behind the scenes is a more robust content platform, publisher, and content management system that will give ISO staff the needed tools to keep information flowing out to our customers, stakeholders and the general public.

Like anything new, it will take some time for everyone to learn how to best navigate the new website and we have a robust schedule of training sessions and opportunities to help bring everyone up to speed. Thank you to everyone who has worked so diligently on creating and launching the new CAISO.com.

EXTENDED DAY-AHEAD MARKET (EDAM)

We continue to move forward with our work to build and launch the new extended day-ahead market and received some very positive news on March 21 when Portland General Electric announced that it plans to join the EDAM. On that same day, Idaho Power released a letter stating that it is also leaning towards joining the market when it launches in 2026. Also, on April 25, PacifiCorp became the first entity to formally commit to joining EDAM by signing an implementation agreement with the ISO for its participation.

At the same time, we are encouraged by the progress of the Pathways Initiative and the focus and dedication of that diverse group of stakeholders to develop further governance changes that will help unlock the full reliability and economic benefits of an integrated day-ahead Western energy market. We are looking forward to hearing firsthand about its progress when members of the Pathways Launch Committee provide a briefing at our joint general session meeting.

On another EDAM matter, the ISO filed its access charge tariff revisions with the FERC on April 12. The EDAM access charge was the only element of the design denied, without prejudice, by FERC in its December 2023 order approving our market design. The ISO held two stakeholder meetings reviewing the tariff revisions, and effectively re-filed the original design approved by the ISO Board of Governors and WEIM Governing Body. We also responded further to FERC requests for additional explanation around the different components of that specific design. The EDAM access charge establishes the ability for EDAM transmission providers to continue to recover certain transmission revenues that may otherwise be impacted by their participation in the extended day-ahead market. Also of note, on April 30, FERC accepted our compliance filing submitted on February 16, 2024, to clarify certain tariff provisions effectuating aspects of EDAM and our day-ahead market enhancements in compliance with the directives in the December 2023 order approving these designs.

SOLAR ECLIPSE

The total solar eclipse that passed over the United States on April 8, 2024 was a memorable event but no part of the Western Energy Imbalance Market (WEIM) footprint fell within the path of totality. The Desert Southwest and Southern California regions experienced the largest impact from this eclipse and the ISO navigated its impacts through coordinated efforts among teams within the ISO and close coordination with market participants and balancing authorities in the WEIM footprint. In particular, the ISO took proactive measures to manage the eclipse conditions effectively. These included adjustments to regulation needs, charging storage resources ahead of time and additional procurement of day-ahead capacity.

Within the ISO balancing authority area, the solar obscuration varied between 34 and 58 percent. The eclipse reduced solar production by about 3,000 megawatts (MW), while partial obscuration of the sun reduced output of rooftop solar and increased load by 2,100 MW. Storage resources were the primary supply to offset the impacts of the eclipse on solar production.

Because we had storage resources charged, they provided up to 3,400 MW of supply during the eclipse. This was complemented with an additional 1,100 MW of supply from hybrid resources. In addition, storage resources also supported critical reliability services with over 1,000 MW of both upward and downward capability. The ISO grid, I am happy to note, operated reliably and without any incidents.

Q1 WEIM BENEFITS REPORT

In its latest benefits report for the first quarter of 2024, the Western Energy Imbalance Market's (WEIM) reported that cumulative benefits increased to \$5.49 billion during the first three months of this year. The time period covered in the report was also significant because it again demonstrated the value of regional coordination by the market being able to help maintain system reliability during a January cold snap that stressed grid conditions in the Northwest.

During the first quarter of 2024, the WEIM's 22 participants realized \$436 million in benefits for their customers. While the efficient transfer of power offered by the WEIM supports all participants, by leveraging resource diversity and transmission connectivity during an extreme winter event over the January 13-15 Martin Luther King Jr. holiday weekend, energy transfers from California and the Southwest helped meet demand in Pacific Northwest balancing authority areas that needed assistance due to heightened demand.