

Memorandum

To: ISO Board of Governors
From: Elliot Mainzer, President and Chief Executive Officer
Date: December 7, 2022
Re: CEO report

This memorandum does not require ISO Board of Governors action.

INTRODUCTION

For my December CEO Report, I will provide an update regarding the release of our summer heat wave analysis, winter readiness and electricity prices, our successful Stakeholder Symposium, the latest on EDAM, including publication of a new report analyzing the benefits a full realized extended day-ahead market would bring to California and the West, the status of the WEIM Governance Review Committee's work, the decision to delay our fall release until February, progress on our scheduled report to the Legislature requested under Assembly Concurrent Resolution 188 (ACR 188), the Q3 Western Energy Imbalance Market benefits report and our participation in the Electric Power Research Institute's new Climate READi collaboration.

SUMMER HEAT WAVE ANALYSIS

On November 2, the ISO's Market Analysis and Forecasting team released its much-anticipated Summer Market Performance Report for September 2022. The report includes an in-depth analysis of how our markets and the grid performed during the historic heat wave in early September. In addition to strong conservation efforts from residential and commercial electricity customers, the report cited the following specific factors that enabled us to maintain reliability throughout the unprecedented 10-day event that saw record temperatures across much of the West:

- Increased resource adequacy procurement since 2020, including 3,500 MW of battery storage;
- Improved coordination and communications with California utilities and state agencies, including the Governor's Office, the California Public Utilities Commission, and the California Energy Commission, and enhanced coordination with other regional utilities and members of the Western Energy Imbalance Market (WEIM);
- Market enhancements put in place in the past two years;
- Use of new state programs to provide non-market resources to address extreme events and other conservation efforts;
- Close coordination with load-serving entities during the ISO's highest emergency alert level of the event;
- Emergency assistance energy flowing into and out of the ISO grid, demonstrating the importance of resource-sharing among collaborating electricity systems in the West.

The report also cited needed market enhancements to improve how increasingly frequent, extreme, and lengthy heat events are managed, including the clearing of energy exports in the market and real-time testing for resource sufficiency. Some necessary software changes identified in the report have already been completed.

WINTER READINESS AND ENERGY PRICES

While some other parts of the country are heading into winter with very real reliability challenges, we have determined that the ISO-managed grid is in good operating condition. We are currently experiencing the typical moderate fall weather with early precipitation and snowfall and so far, we have seen no real adverse weather-related impacts to the Bulk Electric System.

We do continue to observe higher than typical natural gas prices, leading to higher energy prices in the system. We have not seen any material operational consequence from those higher prices, however, and our systems are set up well to absorb such price variations.

We have also been having a series of meetings with SoCal Gas and other gas pipeline companies to bolster electric-gas coordination in preparation for winter demand peaking, and while we now are ready to absorb price swings in gas, physical challenges on the pipes can be a bigger problem. So that is something we are keeping a close watch on.

Also, the winter load forecast by the California Energy Commission has increased only about 1.5% from last year.

A SUCCESSFUL STAKEHOLDER SYMPOSIUM

The ISO hosted its Stakeholder Symposium on November 9-10 following a 4-year hiatus due to COVID. The event was very successful and extremely well attended, with 880 in-person attendees and additional people participating virtually.

The day-and-a-half event was held at the new wing of the Sacramento Convention Center, which – based on stakeholder and survey feedback – turned out to be a very good and convenient venue. Stakeholder reaction and feedback about the overall event and program content have been positive, with some helpful suggestions on how we can make the next Symposium even stronger.

We were honored to be able to start things off with live remote comments from U.S. Energy Secretary Jennifer Granholm, who has been a strong supporter of regional coordination in the West. She set a great positive tone for the panel discussions that followed and spoke eloquently about the value of greater regional collaboration. Panel conversations focused on everything from perspectives on market design and governance of the developing extended day-ahead market from several CEOs of major organizations in the West, to the challenges and opportunities around adding transmission and the interdependencies of resource adequacy, transmission planning and market evolution and how these issues will need to be better coordinated for a cohesive regional footprint. Mark Rothleder gave a well-received presentation on Day 2 about our summer heat wave report and it was wonderful to be able to connect again in person with longtime friends and colleagues. The entire event filled me with pride for the outstanding work the ISO does and for the respect for the organization that has been built up over the years. I am deeply appreciative of that

fact and of all the sponsors and participants who made the event possible, as well as our entire Symposium planning team for their outstanding work in delivering a well-executed event. We look forward to hosting the next Symposium in 2024 and getting back to a more regular biennial schedule.

EDAM MARKET DESIGN

An amazing amount of hard work and robust stakeholder engagement are coming to fruition with publication this week of our final extended day-ahead market design. The strong stakeholder participation and engagement have helped shape the design through its various iterations and we are committed to working with stakeholders in making any necessary adjustments that might be needed once the market is up and running. You will be receiving a briefing during your joint general session with the WEIM Governing Body December 14 on EDAM progress to date, as well as updates on the complementary initiatives we have been working on, including transmission service and market scheduling priorities.

Our current schedule calls for bringing forward the EDAM design for a joint authority decision during the February 2023 joint session of the ISO Board of Governors and WEIM Governing Body. I am very excited about the progress that has been made and now that we are at this advanced stage in the process we are looking forward to a high level of interest from entities that want to participate in what would be a dynamic extended day-ahead market.

On a similar track, the final proposal for our transmission service and market scheduling priorities initiative is also being published this week. We have a stakeholder meeting scheduled for December 16, with comments due back by January 4. We then plan to take this initiative to the WEIM Governing Body, in an advisory role, and to the ISO Board of Governors for a decision at the February 2023 joint general session.

EDAM BENEFITS STUDY

The Committee on Regional Electric Power Cooperation (CREPC) hosted a webinar on Friday, November 18 that was sponsored by the ISO titled “Energy Strategies Extended Day-Ahead Market (EDAM) Benefits Study: Estimating Savings for California and the West Under EDAM Market Scenarios.” The ISO had engaged Energy Strategies LLC earlier in the year to build on work it had done in the 2021 State Led Market Study and to evaluate the operational benefits and capacity savings of EDAM. The 2021 State-Led Market Study, which was funded by the U.S. Department of Energy and led by state energy offices in Utah, Idaho, Colorado, and Montana, forecasted operational benefits and capacity savings that could accrue to individual states under various future market scenarios, including real-time, day-ahead, and RTO market constructs. As Keegan Moyer from Energy Strategies explained during the webinar, the methodology used in the new study is consistent with the methodology in the state-led study.

Some of the more salient findings in the new study were as follows:

- Total annual operational savings for the West would be up to \$543 million per year, sourced from reduced power production expenses – this represents a 4.5% decrease from the status quo;

- Total annual operational savings for California would be \$214 million per year, a 6.2% decrease from the status quo;
- A West-wide extended day ahead market would reduce CO2 emissions an estimated 1.5% or 2.92 million metric tons a year, equal to removing more than 634,000 vehicles from the road;
- If a West-wide extended day ahead market were to be used to enable a resource adequacy program, the study estimates that certain capacity resources could be avoided. Savings for California would be up to an additional \$95 million per year, and other Western states would save up to \$557 million per year from these avoided investments;
- Should the entire suite of benefits from EDAM be realized, the entire West could save as much as \$1.2B annually, with California accruing \$309 million of these annual savings.

WESTERN ENERGY IMBALANCE MARKET GOVERNANCE REVIEW COMMITTEE

The WEIM Governing Review Committee will be posting its extended day-ahead market governance draft final proposal on December 7 and will provide a briefing to the Board of Governors and WEIM Governing Body at their joint meeting on Dec 14. GRC members have been working hard, communicating with their sectors and other interested stakeholders to address the remaining refinements to their proposal - and we are so thankful for the incredible amount of time and collaboration they have expended over the past several years on these issues.

FALL RELEASE

The ISO made the decision to move the launch of the Hybrid Resources Phase 2-B and Flexible Ramping Product Improvements of the fall release from December 1, 2022 to February 1, 2023. This decision was made based on the deep commitment to deliver high-quality solutions to our customers as well as ensuring customer readiness for launching new features. Deferring these two projects by several months gives us the time to ensure that we meet those standards.

The functionality will remain available to market participants in the testing environments for continued testing and readiness activities while the ISO works with all impacted entities to ensure customer readiness for the February 1 activation. The Central Procurement Entity feature of the fall release is not affected and will activate as planned on January 1, 2023.

We appreciate the support and positive feedback that we have received from stakeholders on the decision to delay and look forward to working with them to go live on February 1. We intend to make our final decisions for going live on February 1 by mid-January to allow for sufficient notification time and awareness.

ACR 188 REPORT

On another matter related to identifying the benefits from a more regional approach to market operations, the ISO continues to work with other California balancing authorities, the National Renewable Energy Laboratory, and the public on a report summarizing existing relevant studies on the impacts to California of a regional market operator, as well as discussing the collaboration and engagement among Western states on the future of such a regional operator to maximize consumer savings. We plan to post a draft report for the public to review before the holidays, host

a public call in early January, and request public input before sending a final report to the Legislature, as requested under the resolution, by the end of February. More information is and will be posted on the “regional solutions” page of our website.

WEIM BENEFITS FOR Q3 OF 2022

As we reported in a media release on October 31, the WEIM reached an all-time high of \$526.5 million in quarterly benefits during the third quarter of 2022, positioning the real-time energy market to exceed \$3 billion in cumulative benefits by the end of this year. The third-quarter results put the total benefits achieved since the WEIM was launched eight years ago at \$2.91 billion, with more than \$1 billion accruing in 2022 alone.

The benefits achieved in the third quarter of the year have been attributed to strong hydro conditions and high natural gas prices experienced throughout the quarter as well as heightened demand and electricity prices for the summer due to extreme heat across much of the West.

THE ISO’S CLIMATE READi COLLABORATION

The ISO is participating in a new, three-year global research initiative designed to provide grid operators, utilities, regulators and policymakers with the most advanced scientific data needed to help make the power system more resilient to climate change.

Established by the non-profit Electric Power Research Institute (EPRI), an industry group that conducts research on the generation, delivery and use of electricity, the new program goes by the name Climate READi, which stands for the Climate Power Resilience and Adaptation initiative. It is seen as one of the most comprehensive, integrated approaches yet to deal with climate risk assessments across the power sector.

The ISO is a longstanding member of EPRI and sees tremendous benefit in utilizing this initiative to better plan for and mitigate the impacts of climate-related risks to reliability. Climate READi can also strengthen the ISO’s ongoing climate-related collaboration with the state’s primary energy agencies, including the California Energy Commission and the California Public Utilities Commission. We will be collaborating and sharing information with the agencies, and with our other partners, as the initiative moves forward.

GRATITUDE AND APPRECIATION

Since this is our last board meeting before the holidays, I want to close by reiterating how much I appreciate everyone’s hard work and support for such a productive and collaborative year. Working together, we achieved a lot of great things in 2022 and your support and collaboration have been extremely helpful. I hope you and your families have a joyous holiday season and a very Happy and Healthy New Year.