



May 20, 2024

CAISO Board of Governors:  
Mary Leslie  
Jan Schori  
Severin Borenstein  
Angelina Galiteva  
Joe Eto

WEIM Governing Body:  
Robert Kondziolka  
Rebecca Wagner  
Andrew Campbell  
Anita Decker  
John Prescott

Dear CAISO Board of Governors and WEIM Governing Body Members,

The Western Power Trading Forum (WPTF) is a California nonprofit, public benefit corporation dedicated to enhancing competition in Western electric markets while maintaining high system reliability. WPTF supports uniform market rules, open access transmission, and transparency to facilitate transactions among market participants. Its membership includes load-serving entities, energy service providers, scheduling coordinators, generators, power marketers, financial institutions, and public utilities active in the California market and other regions across the country.

WPTF appreciates the opportunity to provide comments and the CAISO staff's attention to stakeholder concerns about inefficiencies in the current hydro and storage bidding rules. We support the proposal with one caveat, which we explain below. This caveat arises from a policy change made in the Memo posted on May 17.<sup>1</sup> We only received notification that this change would occur the evening of May 16, so hope the Board of Governors and Governing Body will understand why this letter is being received now and will still give it due consideration.

As stated in the CAISO's Memo, this initiative had two objectives: first, to enable storage and hydro resources with intraday opportunity costs to reflect these costs more accurately in energy bids; and second, to ensure that these resources can preserve their limited energy for the hours when it is most valued. To achieve these objectives by summer 2024, the CAISO had to limit the solutions to what is feasible from a market design and implementation perspective. This is understandable, and WPTF has no objection to the *necessary* interim limitations on the proposed policy.

However, the CAISO made a concerning change in the Memo that was not due to an implementation issue, which we ask the Board and Governing Body to direct the CAISO to reverse. The memo changes the policy for storage resources only: while hydro resources can

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<sup>1</sup>CAISO Memo, page 4: " Note that it is a modification from the Draft Final Proposal to apply this only in the real-time market and not also in the day-ahead market."



bid their intraday opportunity costs when they exceed \$1,000/MWh in the day-ahead and real-time markets, storage resources can only bid these costs above \$1,000/MWh in the real-time market.

WPTF strongly objects to this change due to basic market optimization principles, the introduction of FERC risk, and unnecessary discrimination against storage. Most storage capacity is resource adequacy capacity and consequently has a must-offer obligation to bid into the day-ahead market. This change will prevent storage from reflecting intraday opportunity costs when such costs rise above \$1,000/MWh in the market they must offer into first. Since the real-time market is incremental to the day-ahead market, storage capacity will not be able to reflect these costs in their bids and, if awarded in the day-ahead market, are not guaranteed recovery of these costs through the market or Bid Cost Recovery. Additionally, if storage is the marginal day-ahead resource, the resource will not fully recover its legitimate costs, and the entire day-ahead market will not reflect the accurate system marginal energy price. Moreover, different bidding rules between the day-ahead and real-time markets may incentivize storage resources to favor the real-time market, where they can fully reflect their legitimate intraday opportunity costs. It is hard to anticipate the impact on bid strategy, which is in part why ISO/RTOs strive for consistent bidding rules in both markets.

WPTF is also concerned that denying storage the ability to bid costs into the day-ahead market risks FERC rejecting the entire filing. FERC Order No. 831 allows resources to submit offers up to \$2,000/MWh to set prices, as long as the underlying costs are verified. FERC has given ISO/RTOs flexibility on whether opportunity costs should be included in cost-based incremental energy offers and has accepted opportunity costs as legitimate short-run marginal costs.<sup>2</sup> Therefore, if the CAISO states that intraday opportunity costs are legitimate short-run marginal costs and should be included in incremental energy offers, WPTF is concerned FERC will consider it discriminatory to allow hydro, but not storage, from being able to include these costs in the day-ahead bids.

The proposal allows hydro resources to reflect intraday opportunity costs in offers exceeding \$1,000/MWh in the day-ahead market. Specifically, hydro resources may bid up to the higher of \$1,000/MWh or its Default Energy Bid (DEBs). Hydro DEBs include an opportunity cost component recognizing daily limitations, allowing hydro resources to bid up to that level in the day-ahead market when it exceeds \$1,000/MWh. Notably, CAISO's proposed hydro bid cap

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<sup>2</sup> 831 Order on Rehearing: <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=01F050B8-66E2-5005-8110-C31FAFC91712> Paragraph 38: Opportunity costs are legitimate short-run marginal costs and not adders above cost.



allows hydro to include intraday opportunity costs based on a four-hour limitation, the same limitation for most storage resources.<sup>3</sup>

We understand that the last-minute change was partly driven by the MSC opinion. This opinion, 41 pages long and posted on May 14 and discussed on May 15, expressed a view that there is no clear need to raise the offer cap for storage in the day-ahead market. It stated, "...we do not see a clear need to raise the offer cap for batteries in the IFM. As we have pointed out in prior opinions relating to storage resources, the IFM solves the allocation of battery charging and discharging over the day and efficiently calculates opportunity costs automatically." WPTF did not believe CAISO would change their draft final proposal based on this mild point, given the strong economic and market design reasons for consistent bidding rules between the day-ahead and real-time markets. We have communicated with the CAISO reiterating our support for the existing proposal after the MSC opinion came out but there was no additional formal comment opportunity. We strongly believe there is a clear need to raise the offer cap for storage resources in the day-ahead market.

We urge the Board and Governing Body to direct the CAISO to reverse the last-minute policy change and ensure fair, equitable, and consistent treatment for storage resources in both the day-ahead and real-time markets. To be clear, these are not theoretical concerns; there is currently over 7,500 MW of storage on the CAISO system, and this is expected to reach 10,000 MW by year's end. This alignment is therefore crucial for market efficiency and reliability.

For any questions, please reach out to CAISO Committee Chair, Carrie Bentley, at [cbentley@gridwell.com](mailto:cbentley@gridwell.com).

Sincerely,

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<sup>3</sup> CAISO [FERC Filing](#), page 41 "These short-term water-use limitations are either daily limitations or limitations over a time span up to a month. Stakeholders generally came to the consensus that four hours per day was a reasonable typical value to accommodate short-term water use limitations." And "the CAISO concluded that dispatch no more than four hours per day would address the short-term limitations most likely faced by hydroelectric resources. Thus, this multiplier should enhance the hydro DEB sufficiently to ensure the typical hydroelectric resource is not dispatched inefficiently such that it exceeds its short-term limitations and exceeds its opportunity costs."