



California ISO

# Market Parameters Changes Enhancement


Guillermo Bautista Alderete  
Market Analysis and Forecasting

January 26, 2023

## Housekeeping reminders

- This call is being recorded for informational and convenience purposes only. Any related transcriptions should not be reprinted without ISO's permission.
- Meeting is structured to stimulate dialogue and engage different perspectives.
- Please keep comments professional and respectful.
- Please try and be brief and refrain from repeating what has already been said so that we can manage the time efficiently.

## Instructions for raising your hand to ask a question

- If you are connected to audio through your computer or used the “call me” option, select the raise hand icon  located on the top right above the chat window. Note: #2 only works if you dialed into the meeting.
  - Please remember to state your name and affiliation before making your comment.
  - If you need technical assistance during the meeting please send a chat to my Event Producer, or meeting facilitator **Brenda Corona**
  - For general questions for the meeting send a chat with your name and affiliation to all panelists.

*Jane Doe: Company  
XYZ....Question..*

# CAISO Policy Initiative Stakeholder Process



## Stakeholder comments and suggestions on the shift factor threshold

- Apply the reduced shift factor to intertie locations, or all locations
  - CAISO will defer for future consideration the application of the reduced threshold to sizable intertie locations
  - CAISO will not further consider applying it to all locations since original concerns are still relevant
- Apply the 2% threshold to the CRR process instead
  - Threshold applied to default load aggregated points (DLAPs) and trading hubs (THs) in the CRR process will be of no benefit since CRR are cleared at the decomposed locations
  - CRRs are cleared in the CRR process at the pairwise source-to-sink effectiveness

## Stakeholder comments and suggestions on the shift factor threshold

- Application of a reduced shift factor to DLAPs and THs will increase prices and result in constraint infeasibilities
  - To the contrary, consideration of flow contributions with smaller threshold will allow the market to more frequently find an economical solution
  - Consideration of flow contributions with reduced shift factors will result in more accurate formation and pricing of power flows
  - Prices will either increase or decrease at the DLAPs and THs, depending on the relative contribution of the additional flows considered
  - CAISO has included analysis on pricing to showcase the potential impact of this threshold change

## Stakeholder comments and suggestions on the shift factor threshold

- Suggestion to expand scope of this initiative beyond the shift factor threshold
  - This is a very narrow scope to address one specific item within the scope of general efficiency.
  - Proposing changes to the core Policy for CRR settlements implemented in 2019 is beyond the scope of this proposal.
  - CAISO commits to continue assessing drivers and conditions impacting the CRR settlements to determine next steps.

# Stakeholder comments and suggestions on the proposal for expedited changes process

- Request to inform the market more timely when a change is implemented
  - CAISO is proposing language to indicate CAISO will notify the market within three (3) business days of the change.
- Provide examples and illustrations of cases triggering this expedited change
  - CAISO provided a description of more general conditions to trigger changes and refers to a specific illustration from a recent change.



## Scope of this initiative is twofold

1. Change to the shift factor parameter threshold
2. Procedure to expedite parameter changes

These two items are not interdependent

# 1. Shift factor threshold

- CAISO's Tariff defines a 2% threshold to be applied to shift factors
- Shift factors measure the effectiveness of a power injection at certain location to power flows on a given constraint
- Shift factors are used in the congestion management process of the energy markets, including resource dispatches and price formation
- Threshold used in the markets to mitigate for ineffective redispatch and handle computational burden

## Market issue with using a shift factor threshold

- Injections at locations with a shift factor below 2% will not be considered in congestion management (dispatches and prices)
- Although default load aggregation points (DLAPs) and trading hubs (THs) may have a shift factor below 2%, their MW contributions to flows can still be significant.

A DLAP=15,000 MW with a 1.6% shift factor on a given constraint represents a flow contribution of 240MW

Relative to small-capacity constraints, the flow contribution from DLAPs/THs can be too large to disregard, even when their shift factor is below 2%

## Market issue with using a shift factor threshold

- Under certain conditions, the use of the shift factor threshold for DLAPs/THs has resulted in inefficient outcomes in the settlements of congestion revenue rights (CRRs)
  - It may result in over-payment of CRRs
  - It may result in under-collection of congestion rents
- The 2020 performance analysis of CRRs\*, as well as analysis of Q1 2022, identified the impact of this issue
- It resulted in a \$3 million impact in the first 15 months of the new CRR settlements.

\* The CRR performance report (page 49) available at

<http://www.caiso.com/InitiativeDocuments/CongestionRevenueRightsMarketAnalysisReport-May12-2020.pdf>

## Proposal for shift factors threshold

- For default load aggregated points (DLAPs) and trading hubs (THs) in the CAISO balancing area only, a 0.2% threshold will apply.
- Current threshold of 2% will continue to apply to any other location.
- Proposed logic will apply to both day-ahead and real-time markets.

## 2. Procedure to expedite parameter changes

- CAISO's energy market uses a set of parameters to enforce the relative scheduling and relaxation priorities in the market clearing process
- All parameters work in synchronization and require ongoing monitoring of their performance
- Under outlier scenarios, the specific values assigned to certain parameters can result in unintended or inefficient outcomes
- CAISO needs to be able to mitigate for these outcomes expeditiously

## In a June 26 compliance filing CAISO proposed to have a process for making expeditious changes to parameter values

- This process would allow CAISO to modify market parameters when necessary to ensure feasible and reliable solutions
- Similar provisions are in place in other ISOs
- Some stakeholders expressed concerns about the use of this process to change the relative scheduling priorities
- CAISO made supplemental filings to indicate the limited scope of the process is not intended to change relative scheduling priorities

## CAISO proposes a parameter change procedure that allows to make expeditious parameter changes

- On March 15, 2022 FERC rejected this proposal because it was outside the scope of the compliance directive
- It also indicated CAISO could submit a Tariff amendment filing
- This procedure will allow a parameter change for up to 90 days, provided CAISO will file such change within 30 days of the modification
- CAISO will notify the market of the change within three (3) business days



# Propose Tariff Language for the proposed change of shift factor threshold applied to DLAPs and THs

## 27.4.3.5 Effectiveness Threshold

The CAISO Markets software includes a lower effectiveness threshold setting that governs whether the software will consider a bid “effective” for managing congestion on a congested Transmission Constraint, which in the case of Nomograms will be applied to the individual ~~flowgates~~ that make up the Nomogram, rather than to the Nomogram itself. The CAISO sets this threshold at two-tenths of a percent (.2%) for: Trading Hubs; Default LAPs; and Interties with significant Total Transfer Capability, as specified in the Business Practice Manual. The CAISO ~~will sets this the~~ threshold at two percent (2%) for all other Nodes.

# For the proposed process to change of parameters, CAISO proposes to add the following Tariff Language

## **31.4.1 Temporary Changes to Scheduling Run Parameter Values**

If the CAISO determines it is necessary to modify the scheduling run parameter values in sections 31.4, 34.12.1, or 34.12.2 to ensure the market clearing solution is feasible or avoid operational or reliability problems the resolution of which would otherwise require recurring operator intervention outside normal scheduling and market procedures, it may temporarily modify the value for a period up to ninety days, provided however CAISO will file such change with FERC under Section 205 of the Federal Power Act within thirty days of such modification. If circumstances reasonably allow, CAISO will consult with FERC and the CAISO's Market Monitoring Unit before implementing such modification. In all circumstances, the CAISO will (i) consult with those entities as soon as reasonably possible after implementing a temporary modification, and (ii) notify Market Participants within three business days after the change of any temporary modification and explain the reasons for the change. This section does not authorize the CAISO to change the scheduling run parameter values in a manner that changes the relative scheduling run priorities specified in sections 31.4, 34.12.1, and 34.12.2."

# WEIM Decisional Classification

- Reducing the existing 2 percent shift factor threshold to 0.2 percent for default load aggregation points and trading hubs, which are aggregated locations within the CAISO balancing authority area only.

## Advisory role of the WEIM Governing Body

- Creating a procedure to enable the CAISO to adjust identified penalty price values to address production issues. This procedure may apply equally to the CAISO balancing authority area and WEIM balancing authority areas.

## Joint authority of the WEIM Governing Body

# NEXT STEPS

# Next Steps

- This draft final proposal and call also covers proposed Tariff Language
- Next Steps

Date	Milestone
<del>Publish Draft Final Proposal</del>	<del>19-Jan-23</del>
<del>Stakeholder Call on Draft Final Proposal</del>	<del>26-Jan-23</del>
Stakeholder comments due	31-Jan-23
Joint ISO Board of Governors and WEIM Governing Body	22-Mar-23
Expected Implementation	June-23

# Next Steps

- All related information for the Market Parameter Changes Enhancement initiative is available at:  
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Market-parameter-changes-enhancement>
- Please submit stakeholder written comments on today's discussion and the storage enhancements draft final proposal and Tariff language paper by Jan 31, 2022, through the ISO's commenting tool
  - The commenting tool is located on the Stakeholder Initiatives landing page (click on the “commenting tool” icon):  
<https://stakeholdercenter.caiso.com/StakeholderInitiatives>