



# Reliability Demand Response Resource Bidding Enhancements: Issue Paper / Straw Proposal

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Policy Development

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# Housekeeping Reminders

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- 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.

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- Please remember to state your name and affiliation before making your comment.
- You may also send your question via chat to the meeting host – Kristina Osborne.

# Agenda

Time	Topic	Presenter
10:00-10:10	Welcome and Introduction	Kristina Osborne
10:10-10:20	Background and Scope	Anja Gilbert
10:20-10:40	Aligning Real Time Bidding Rules with FERC Order 831	Danielle Tavel
10:40-11:20	Representing Minimum Load Costs and RDRR Registration	Anja Gilbert
11:20-11:30	EIM Governing Body Role	Anja Gilbert
11:30-11:50	Additional Q&A	
11:50-12:00	Next Steps	Kristina Osborne

# CAISO Policy Initiative Stakeholder Process

## PROPOSAL DEVELOPMENT

Issue paper and working groups

↳ Straw proposal

Draft final proposal

Draft business requirement specification

Draft tariff and business practice manual revisions

Final proposal

## DECISION

ISO Board

EIM Governing Body

Tariff filing

FERC

## IMPLEMENTATION

Business practice manual

Training

Market simulation

Go Live



Stakeholder input

*This represents the typical process, and often stages of the process run in parallel.*

We are here

# BACKGROUND AND SCOPE

## Background: The RDRR Bidding Enhancements initiative seeks to address stakeholder concerns

Market participant questions and participation during the implementation of the RDRR enhancements adopted in Market Enhancements for Summer 2021 has highlighted the need for improvements to:

- Bidding rules under the FERC Order No. 831 paradigm
- Representing minimum load costs
- RDRR registration

# This initiative explores three enhancements to Reliability Demand Response Resource (RD RR) bidding options

- I. Aligning real time bidding rules with FERC Order 831
  - In a separate stakeholder process the CAISO will develop cost justification methodology for DR resources (including RD RRs participating economically in the day-ahead market) and energy storage resources bidding above \$1,000/MWh
- II. Representing minimum load costs
- III. Re-examining the cap on discrete RD RR registration



# ALIGNING REAL TIME BIDDING RULES WITH FERC ORDER 831

# FERC Order No. 831 Background

- 2016 FERC issued Order No. 831 required ISO/RTOs to revise their tariffs to raise energy bid cap from \$1,000/MWh to \$2,000/MWh
  - Required ISO/RTOs verify generator costs for bids above \$1,000/MWh before the market run to be eligible to set energy prices
- June 2021 CAISO FERC Order No. 831 – Import Bidding and Market Parameters Initiative activated
  - Implemented various tariff revisions and system updates to accommodate bidding flexibility above \$1,000/MWh

# RDRR Bidding rules under the FERC Order No. 831 paradigm

- Currently, RDRR in real time, are required to submit bids at or above 95% of the bid cap (\$950/MWh)
  - RDRR can be released for dispatch when a Warning notice is issued in real-time
  - Under FERC Order No. 831, the bid cap is raised from \$1,000/MWh to \$2,000/MWh only during periods when either:
    - Resource-specific resources have submitted a cost-verified energy bid greater than \$1,000/MWh
    - The CAISO-calculated maximum allowable import bid price is greater than \$1,000/MWh
- When the bid cap is set to \$2,000/MWh RDRR bids are still capped at \$1,000/MWh unless they submit a pre-market manual reference level change request based on higher operating or fuel costs

# Potential solution for consideration to adjust RDRR bidding rules in real-time under the FERC Order No. 831 paradigm

- Propose to maintain the existing bidding structure for RDRR when bid cap is \$1,000/MWh
- In real time, when bid cap is raised to \$2,000/MWh, propose to require RDRR to bid at least 95% of the hard bid cap (\$1,900/MWh) without additional cost-justification support
  - Consistent with RDRR settlement and design which dispatches RDRR only under emergency conditions
  - Prevents RDRRs from suppressing real-time market prices during scarcity events

# Q&A

# RDRR MINIMUM LOAD COSTS

# Summer Readiness

- The CAISO in its Summer Readiness initiative modified its tariff to dispatch RDRRs during real-time unit commitment so they could be optimally dispatched within a longer horizon to increase the efficiency of the market dispatch.
- The CAISO also updated its tariff to allow RDRRs to register as 5-, 15-, or 60-minute dispatchable to better reflect their parameters.
- This increases the likelihood that RDRR will be dispatched by the market, rather than be exceptionally dispatched.

# Reflecting RDRR Capabilities to CAISO

- Minimum load is a generator's minimum sustained operating level at which it can operate continuously
- Minimum load cost is the "\$/hour" for a resource to operate and provide energy at its minimum load
  - RDRRs are currently required to register a \$0 minimum load cost in the Masterfile
- RDRR's one startup per day is used to get to the resources' Pmin
- RDRRs inability to register a non-zero minimum load cost means that there are varying impacts based on what the Pmin is registered as:
  - Pmin of zero: Infeasible dispatch
  - Pmin near Pmax: Commits the resource at its Pmin



# Stakeholder Feedback Requested in Comments

- Do RDRR have actual minimum load costs from a physical and/or program perspective?
- If so, do stakeholders have proposals for calculating their minimum load costs?
- If there was a default RDRR minimum load cost, are there recommendations stakeholders have on how these default costs should be calculated?
- Do stakeholders believe these costs should be included?
- Do any of these answers vary based on if the resource is bidding economically in the day head market or bidding in real time?

# Q&A

# RDRR REGISTRATION

# RDRR Registration

- RDRRs may register their resources in two ways depending on their capabilities:
  1. **Discrete registration** indicates the resource has one bid segment and, when dispatched, will generate to its  $P_{max}$ . (capped at 50MW)
  2. **Continuous (non-discrete) registration** indicates that a resource can operate between its  $P_{min}$  and  $P_{max}$ , based on the cleared bid quantity similar to other resources.
- The CAISO has received stakeholder feedback that some RDRRs operate together in one sub-LAP but due to the 50 MW cap are forced to be represented separately.

## Stakeholder Feedback Requested in Comments

Would a revision to the discrete cap on RDRR of 50 MW to a higher threshold (e.g., 100 MW) enhance RDRR representation and increase the number of RDRR MW using the discrete option?

# Q&A

# EIM GOVERNING BODY ROLE

# EIM Governing Body will have joint authority on RDRR Bidding Enhancements

- This initiative proposes changes to three separate elements of RDRR: 1.) options for bidding RDRR in the real-time market, 2.) cost representation of RDRR, and 3.) registration to provide RDRR.
- EIM balancing authority areas may use the RDRR model assuming they have approval from their local regulatory authority and meet the requirements of RDRR participation.
- CAISO staff believes that the EIM Governing Body has joint authority with the Board of Governors over each of these elements.
  - Charter for EIM Governance § 2.2.1. The tariff changes to implement each of the three elements of this initiative would be “applicable to EIM Entity balancing authority areas, EIM Entities, or other market participants within EIM Entity balancing authority areas, in their capacity as participants in EIM.”
- Stakeholders are encouraged to submit a response to the EIM classification of this initiative in their written comments.



# Q&A

# NEXT STEPS

# RDRR Bidding Enhancements Policy Development Schedule

Date	Milestone
10/29/2021	<b>Publish issue paper/straw proposal</b>
11/04/2021	Stakeholder conference call on issue paper/straw proposal
11/12/2021	Stakeholder comments due on issue paper/straw proposal
12/01/2021	<b>Publish revised straw proposal</b>
12/07/2021	Stakeholder conference call on revised straw proposal
12/15/2021	Stakeholder comments due on revised straw proposal
1/4/2021	<b>Publish draft final proposal</b>
1/11/2021	Stakeholder conference call on draft final proposal
1/18/2021	Stakeholder comments due on draft final proposal
1/28/2021	<b>Publish final proposal and draft tariff language</b>
2/1/2021	Stakeholder conference call on final proposal and draft tariff language
2/7/2021	Stakeholder comments due on final proposal and draft tariff language
February 2022	<b>Present RDRR Bidding Enhancements to EIM Governing Body</b>
March 2022	<b>Present RDRR Bidding Enhancements to CAISO Board</b>

# Comments

- Stakeholders are asked to submit written comments by November 12, 2021 through the commenting tool.
- A comment template will be posted on the CAISO's initiative webpage here:  
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Reliability-demand-response-resource-bidding-enhancements>