



# Storage Bid Cost Recovery (BCR) and Default Energy Bid (DEB) Enhancements


Stakeholder Meeting

September 11, 2024

# Reminders

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**Note:** \*3 only works if you dialed into the meeting.
  - Please remember to state your name and affiliation before making your comment.
- You may also send your question via chat to either **Brenda Marquez** or to all panelists.

# Today's Agenda

Time	Topic	Presenter
1:00 – 1:05	Welcome and today's agenda	Brenda Marquez
1:05 – 1:35	Background & Stakeholder Feedback	Sergio Dueñas Melendez
1:35 – 2:35	Overview of Alternative Solutions Proposed by Stakeholders	Sergio Dueñas Melendez
2:35 – 3:05	Issues regarding Multi-Interval Optimization (MIO)	Sergio Dueñas Melendez
3:05 – 3:45	Issues regarding Mitigation	Sergio Dueñas Melendez & DMM
3:45 – 3:55	Open stakeholder discussion	
3:55 – 4:00	Next steps	Brenda Marquez

# CAISO Policy Initiative Stakeholder Process



# Background & Stakeholder Feedback

# The ISO has identified that storage resources have received potentially unwarranted BCR

- This is because CAISO's BCR construct does not adequately consider state of charge, which is necessary for an energy storage resource to support awards and schedules
- Current rules result in materially different treatment between conventional generators and energy storage resources
- **Concern 1:** Storage assets are not exposed to real-time prices for deviating from day-ahead schedules
- **Concern 2:** Storage assets may have an incentive to bid strategically to maximize the combined BCR and market payment

## The Issue Paper & Straw Proposal (IPSP) included a Proposed Solution that would attempt to mitigate the two concerns identified

- The Proposed Solution would redefine dispatch unavailable due to SOC constraints in the binding interval as “non-optimal energy,” which would be ineligible for BCR
- If a storage resource’s SOC is equal to its minimum or maximum value at the start of the binding interval, the market would rerate or derate the PMax or PMin to 0 to capture that the asset is completely full or empty



Internal analyses suggest the Proposed Solution may not significantly reduce BCR payments and would be challenging to implement because of the ISO's multi-interval optimization (MIO)

- The proposed solution is based on an assumption that the dispatch is optimal for the binding interval
  - This assumption may not hold because of the MIO
  - Uneconomic dispatch in the binding interval may preserve the SOC for a subsequent interval; a situation that can be repeated over many intervals before the Proposed Solution would trigger, allowing BCR to accumulate
- As a result, to be effective, **the Proposed Solution should be modified to consider advisory intervals, as the Ancillary Services SOC (ASSOC) constraint does. Doing so increases complexity**

## Other concerns have been raised regarding the Proposed Solution, including market power mitigation

- The ISO would **likely recommend adding a specific exception for resources that are not able to meet their DA schedules due to mitigation in prior intervals**, making the Proposed Solution more complex and more time-consuming to develop
  - Stakeholders have noted that instances in which resources were mitigated in intervals prior to a buy- or sell-back should not be excluded from the BCR calculation
  - The MSC agreed with the need for an exception for mitigation
  - If the impact of mitigation is material, the MSC noted that the same approach used for the Hold Exceptional Dispatch could be used to calculate BCR for dispatch due to mitigation that reduced resource revenues over the day
    - Both the ISO and DMM are preparing analyses of the potential impact of mitigation

# Stakeholders have suggested alternative interim solutions to address strategic bidding concerns

- The alternative solution proposed by CESA would modify the formula used to calculate BCR as follows, for intervals with a binding SOC constraint:
  - For a buy-back:  
 $(\text{RT dispatch} - \text{DA schedule}) * ([\text{Max}(\text{DA LMP}, \text{RT DEB}, \text{RT Bid})] - \text{RT LMP})$
  - For a sell-back:  
 $(\text{RT dispatch} - \text{DA schedule}) * ([\text{Min}(\text{DA LMP}, \text{RT DEB}, \text{RT Bid})] - \text{RT LMP})$
- Other stakeholders have proposed variations, some eliminating the real-time default energy bid (RT DEB) from consideration

## Many stakeholders have offered additional comments, highlighting:

- The ISO should develop an interim solution focused on Concern 2, and later focus on a holistic revision of BCR for storage assets
- The ISO should explore open questions associated with alternative proposals to allow stakeholders to assess their merits fully
- The ISO should consider whether an additional iteration of discussions on the stakeholder alternative proposals would be beneficial as it appears there is developing consensus on a workable interim approach

## Given stakeholder feedback, the ISO is currently considering the following proposal:

- Use Track 1 to develop an interim solution that addresses Concern 2 while minimizing issues related to MIO and mitigation
- Continue conversations on a robust and holistic review of storage BCR provisions following approval of the aforementioned interim solution
  - These conversations will be held within this initiative, with consideration of the scope of other upcoming storage efforts such as Energy Storage Enhancements
- Evaluate whether an additional stakeholder meeting or workshop regarding alternative proposals may be warranted

# Overview of Alternative Solutions Proposed by Stakeholders

## In comments submitted August 26, CESA offered clarifications and modifications to its Initial Alternative Solution

- CESA stated that this alternative proposal should only apply in the intervals where the generic SOC constraint is binding; specifically, in 5-minute intervals where the buy-back or sell-back is caused by the generic SOC constraint binding at the end of the binding 5-minute interval (as opposed to at the beginning)
- Given the complexities of using the SOC as the trigger variable, CESA also offered an alternative set of trigger conditions that do not employ the SOC

# In comments submitted August 26, CESA offered clarifications and modifications to its Initial Alternative Solution

- For this alternative, the modified calculation is triggered if an interval fulfills three conditions:
  - In the case of a buy-back of a discharge schedule, the interval must have:
    - (1) a day-ahead schedule or base schedule to discharge,
    - (2) a RT dispatch to discharge that is lower than the day-ahead or base schedule; and,
    - (3) a RT dispatch that does not charge the resource
  - In the case of a sell-back of a charge schedule, the interval must have:
    - (1) a day-ahead schedule or base schedule to charge,
    - (2) a RT dispatch to charge that is lower than the day-ahead or base schedule; and,
    - (3) a RT dispatch that does not discharge the resource



## In August 26 comments, CESA offered clarifications and modifications to its Initial Alternative Solution

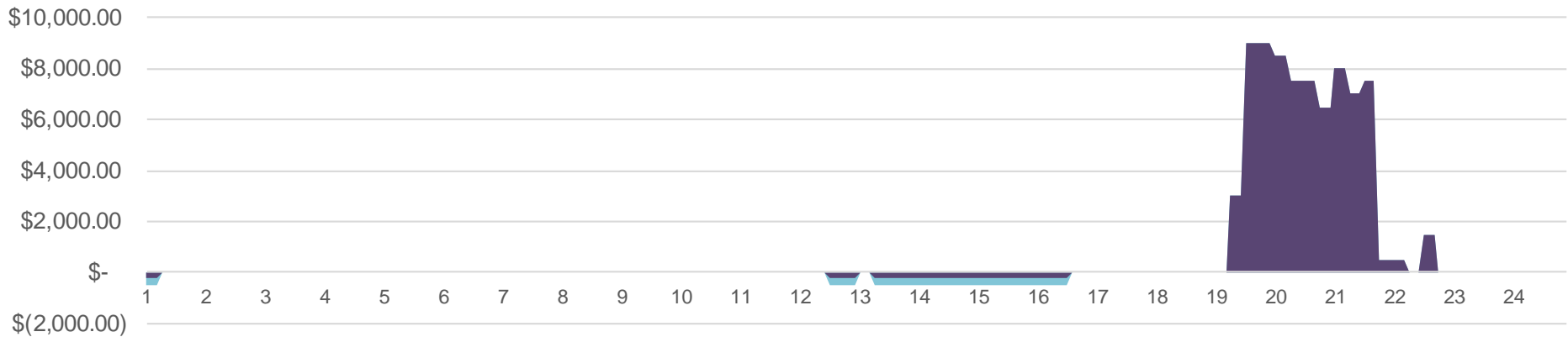
- When a buy-back has occurred, CESA recommends using the higher of either the day-ahead LMP, the RT Default Energy Bid (DEB), or the RT Bid in the interval's BCR calculation
- Conversely, when a sell-back has occurred, CESA recommends using the lower of the day-ahead LMP, the RT DEB, or the RT Bid
  - For a buy-back:  
 $(\text{RT dispatch} - \text{DA schedule}) * ([\text{Max}(\text{DA LMP}, \text{RT DEB}, \text{RT Bid})] - \text{RT LMP})$
  - For a sell-back:  
 $(\text{RT dispatch} - \text{DA schedule}) * ([\text{Min}(\text{DA LMP}, \text{RT DEB}, \text{RT Bid})] - \text{RT LMP})$

## In August 26 comments, CESA offered clarifications and modifications to its Initial Alternative Solution

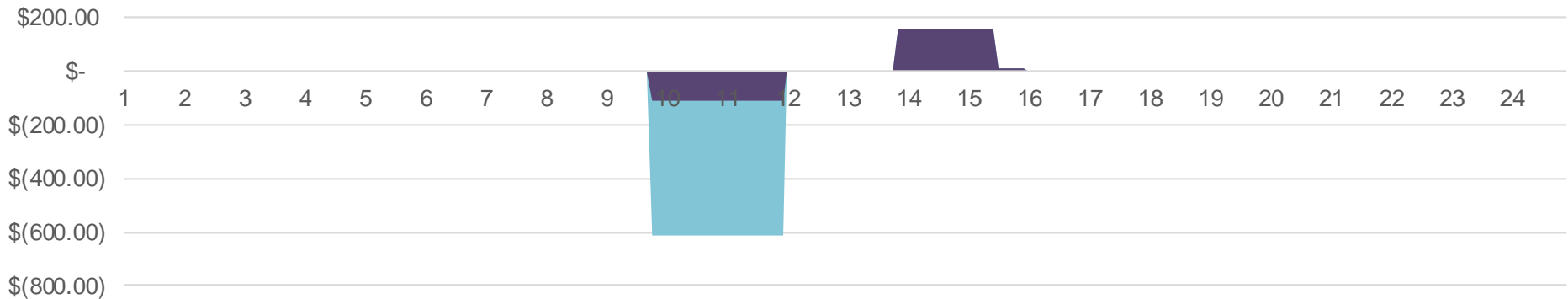
- CESA's proposal explicitly states that it should only apply when the SOC constraints are binding; however, because BCR is calculated over the course of the whole day, modifying the formulae for only a subset of intervals would not fully remove the impact a resource's bid has on BCR payments
  - BCR surplus or shortfall calculated in other intervals, which impacts total BCR payout for the day, would still be derived using a resource's bid
- Overall, the ISO believes that a modification to the RT BCR formulae as proposed by CESA **should be applied across all intervals so as to ensure consistency of the surplus and shortfall estimations throughout the day**
- In addition, applying the modified formulae for all intervals would also **materially minimize issues related to MIO**

# Impacts of applying CESA's Updated Alternative Solution across either a subset of intervals or all intervals

Example 2: BCR Shortfall and Surplus, by 5-minute interval



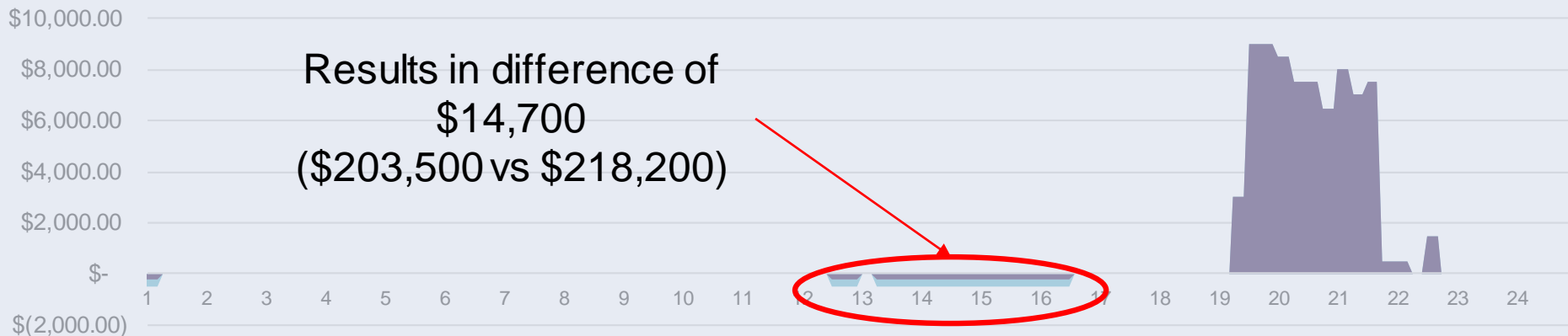
Example 4: BCR Shortfall and Surplus, by 5-minute interval



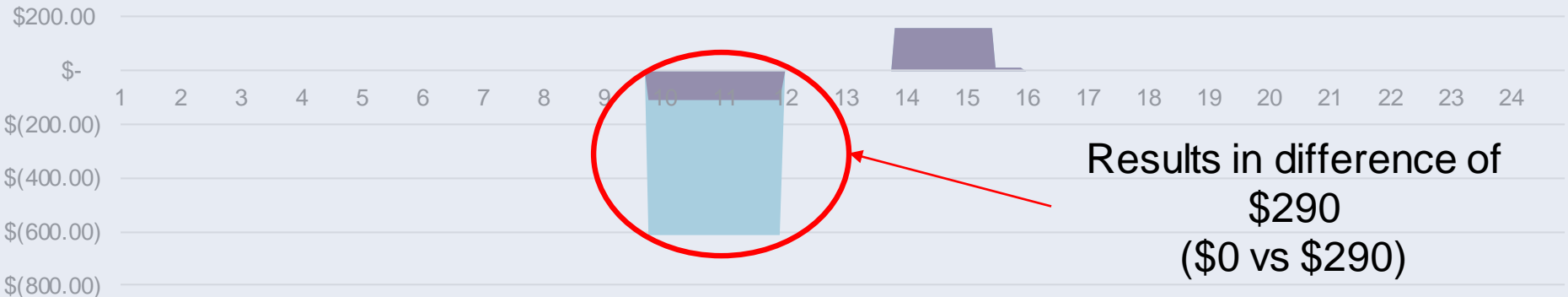
■ Updated CESA Solution / All intervals / Shortfall (+) / Surplus (-) ■ Updated CESA Solution / Only binding intervals / Shortfall (+) / Surplus (-)

# Impacts of applying CESA's Updated Alternative Solution across either a subset of intervals or all intervals

Example 2: BCR Shortfall and Surplus, by 5-minute interval



Example 4: BCR Shortfall and Surplus, by 5-minute interval



■ Updated CESA Solution / All intervals / Shortfall (+) / Surplus (-) ■ Updated CESA Solution / Only binding intervals / Shortfall (+) / Surplus (-)

# Some stakeholders offered their own variations of CESA's Initial Alternative Proposal for consideration

- Pacific Gas & Electric (PG&E)
  - PG&E recommended focusing CESA's Proposal to the hours with day-ahead schedules
  - PG&E proposed a slight modification to CESA's initial proposal; which changes the BCR calculation for discharging as follows:
    - PG&E's proposed modification:  
 $(\text{RT dispatch} - \text{DA schedule}) * (\text{Max}[\text{RT bid}, \text{DA LMP}] - \text{RT LMP})$
  - This modified version of CESA's initial proposal is very similar to the updated CESA Proposal, with the exception that it excludes the RT DEB

# Some stakeholders offered their own variations of CESA's Initial Alternative Proposal for consideration

- Pacific Gas & Electric (PG&E)
  - PG&E argued that WEIM Only and CAISO/EDAM batteries should be handled differently for RT BCR given the fact that WEIM Only Day-Ahead schedules are essentially self-scheduled while CAISO/EDAM day-ahead schedules are a product of the Integrated Forward Market
  - PG&E reasons that a WEIM Only battery bidding in the RT markets should be presumed to have full control of its SOC in forming its bids relative to its base schedule
  - As such, these resources should not be eligible for RT BCR due to buy-back of what can be deemed a self-schedule
- Currently, **the ISO prefers near-term modifications that treat WEIM Only and CAISO/EDAM resources equally, but this discussion could be part of the more holistic BCR revisions for storage assets**

# Some stakeholders offered their own variations of CESA's Initial Alternative Proposal for consideration

- Western Power Trading Forum (WPTF)
  - WPTF proposed that intervals be deemed ineligible for RT BCR only if the following conditions are met:
    - The resource's SOC at the beginning of the interval needs to be at min or max SOC value
    - The resource has a day-ahead or base schedule that cannot be supported
  - WPTF further notes that, in order to address mitigation issues, a third condition could be added; namely, that the resource was not mitigated in a prior interval

# Some stakeholders offered their own variations of CESA's Initial Alternative Proposal for consideration

- Western Power Trading Forum (WPTF)
  - WPTF proposes an interim solution that would:
    - Identify intervals where (1) the resource's SOC in the 5-minute market is at the min or max SOC value going into that interval, and (2) the resource has a day-ahead or base schedule that it cannot support due to the SOC value
    - Replace the RT Bid component of the RT BCR calculation for those intervals with RT DEBs, day-ahead LMPs, and/or RT bids



# Vistra also offered clarifications and modifications to its Initial Alternative Solution in August 26 comments

Vistra proposed the following components:

- Component 1: Classify energy associated with Instructed Imbalance Energy as non-optimal, thereby excluding it from the BCR calculation in intervals where there is an active:
  - Outage card that reduces its PMax (Availability derate), PMin (Load Max derate), Maximum Continuous Stored Energy (Maximum Energy derate), or Minimum Continuous Stored Energy (Minimum Energy derate)
  - Bid parameter that reduces Maximum Continuous Stored Energy (Maximum Energy derate) or Minimum Continuous Stored Energy (Minimum Energy derate)
  - EOH SOC bid parameter constraining the solution to achieve a minimum SOC at the end-of-hour as requested by the SC

# Vistra also offered clarifications and modifications to its Initial Alternative Solution in August 26 comments

- Vistra proposed the following components:
  - Component 2: If a storage resource's SOC at the start of the binding interval is equal to its minimum or maximum SOC value, that binding interval bid cost recovery formula will use the DEB instead of the bid
    - Include a sunset date for this element to ensure accountability for a future filing to provide a replacement make whole payment framework which would need to be in place prior to the sunset date
- Vistra noted that only the energy unavailable would be classified as derated or rerated energy ineligible for BCR if an asset is not fully out of service
- Vistra also noted that when any SOC bid parameter is used, the settlement interval would be considered ineligible for BCR such that all energy is reclassified as non-optimal

## Vistra also offered clarifications and modifications to its Initial Alternative Solution in August 26 comments

- In August 26 comments, Vistra offered the following modifications to Component 2 of its initial proposal:
  - Only apply the new settlement rule in intervals where:
    - Resource is Limited Energy Storage Resource
    - Resource received an IFM award or has a base schedule in that settlement interval
    - Resource received an Instructed Imbalance Energy award from the Fifteen Minute Market or Five Minute Market that is in the opposite direction of its IFM award or base schedule
    - Resource had 0% or 100% SOC (i.e., equal to minimum or maximum continuous stored energy used by the market in the RTD binding interval)
  - Settlement rule would limit unwarranted BCR by changing the BCR settlement only in the triggered interval to the RT DEB

# Issues regarding Multi-Interval Optimization (MIO)

# MIO makes it materially complex to develop a solution focused exclusively on the binding interval

- For context, MIO allows the RTM to position resources to handle changes in the future horizon
- For storage resources, the MIO charges or discharges a storage asset due to projected conditions in the future, linking solutions over intervals to ensure the asset's limited SOC is utilized when it is most valuable
- MIO may charge or discharge a storage resource to prepare for a future energy award, to avoid hitting the resource's maximum SOC constraint, to adjust for future interval economic conditions stemming from supply, demand or net interchange forecasts, or to rebalance an exceptional dispatch
  - As a result, MIO may dispatch a resource uneconomically in the binding interval due to actions taken by the SC, due to factors that inform the ISO's market optimization, or due to the optimization process itself

The issues posed by MIO to a solution that focuses on the binding interval are present under many different conditions, even without a self-schedule

- In the RSP, the ISO offered an example of how MIO works that used a self-schedule to show the dynamic between the binding and advisory intervals
  - This example **is not the only scenario** under which MIO might yield uneconomic dispatch in the binding interval
- There was a discussion of the many conditions in which MIO can lead to uneconomic dispatch at the MSC in October 2021
- <https://www.caiso.com/library/market-surveillance-committee-msc-meeting-oct-1-2021-msc-3>

## The issues posed by MIO to a solution that focuses on the binding interval are present under multiple different conditions, even without a self-schedule

- Consider a 5 MW, 4-hr storage resource with:
  - SOC at 25% (5 MWh)
  - Bid to discharge = \$100
  - Bid to charge = \$50
  - LMP in the binding interval = \$120
- The MIO look-ahead indicates that prices will remain at \$120 for the binding interval and the next five advisory intervals, but then they will be at \$750 for the remaining six advisory intervals
- In this context, the MIO determines that uneconomic dispatch to charge to capture future prices would be optimal

The issues posed by MIO to a solution that focuses on the binding interval are present under multiple different conditions, even without a self-schedule

Outcome if resource is dispatched economically in the binding interval  
(i.e., no MIO)

SOC (MWh)	Interval	Discharge Bid	Charge Bid	LMP	Dispatch (MWh)	Revenue	Profit
5.0	0	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
4.6	1	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
4.2	2	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
3.8	3	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
3.3	4	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
2.9	5	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
2.5	6	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
2.1	7	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
1.7	8	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
1.3	9	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
0.8	10	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
0.4	11	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
0.0	12	\$ 100.0	\$ 50.0	\$ 750.0	0.0	\$ -	\$ -
<b>Total</b>					<b>5.0</b>	<b>\$ 2,175.0</b>	<b>\$ 1,675.0</b>



# The issues posed by MIO to a solution that focuses on the binding interval are present under multiple different conditions, even without a self-schedule

Outcome if resource is dispatched uneconomically in the binding interval  
(i.e., the effect of MIO)

SOC (MWh)	Interval	Discharge Bid	Charge Bid	LMP	Dispatch (MWh)	Revenue	Profit
5.0	0	\$ 100.0	\$ 50.0	\$ 120.0	-0.4	\$ (50.0)	\$ (8.3)
5.4	1	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
5.0	2	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
4.6	3	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
4.2	4	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
3.8	5	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
3.3	6	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
2.9	7	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
2.5	8	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
2.1	9	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
1.7	10	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
1.3	11	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
0.8	12	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
<b>Total</b>					<b>4.6</b>	<b>\$ 2,387.5</b>	<b>\$ 1,929.2</b>

# The issues posed by MIO to a solution that focuses on the binding interval are present under multiple different conditions, even without a self-schedule

Potential outcome if resource is dispatched uneconomically in the binding interval and future prices differ from those forecasted by MIO

SOC (MWh)	Interval	Discharge Bid	Charge Bid	LMP	Dispatch (MWh)	Revenue	Profit
5.0	0	\$ 100.0	\$ 50.0	\$ 120.0	-0.4	\$ (50.0)	\$ (8.3)
5.4	1	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
5.0	2	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
4.6	3	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
4.2	4	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
3.8	5	\$ 100.0	\$ 50.0	\$ 120.0	0.4	\$ 50.0	\$ 8.3
3.3	6	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
2.9	7	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
2.5	8	\$ 100.0	\$ 50.0	\$ 750.0	0.4	\$ 312.5	\$ 270.8
2.1	9	\$ 100.0	\$ 50.0	\$ 150.0	0.4	\$ 62.5	\$ 20.8
1.7	10	\$ 100.0	\$ 50.0	\$ 150.0	0.4	\$ 62.5	\$ 20.8
1.3	11	\$ 100.0	\$ 50.0	\$ 150.0	0.4	\$ 62.5	\$ 20.8
0.8	12	\$ 100.0	\$ 50.0	\$ 150.0	0.4	\$ 62.5	\$ 20.8
<b>Total</b>					<b>4.6</b>	<b>\$ 1,387.5</b>	<b>\$ 929.2</b>

# MIO makes it much more complex to develop a solution focused exclusively on the binding interval

- All of the potential solutions described before commence with the assumption that the ISO will be able to identify when a binding interval has a SOC constraint that is binding to later reclassify the energy associated with that interval, or to modify the BCR calculation applicable to that interval.
- However, SOC constraints are often not binding in the binding interval, primarily due to multi-interval optimization (MIO)
  - It is possible for a storage resource to reach a binding interval with an SOC that is close to either of its limits (0% or 100%) and have that remaining SOC preserved in that and several future intervals
  - MIO might find that the optimal solution over the horizon is to conserve SOC with an uneconomic dispatch in the binding interval so that the asset can be dispatched later

## MIO makes it materially more complex to develop a solution focused exclusively on the binding interval

- The Proposed Solution assumes that the dispatch is optimal for the binding interval, meaning that the SOC would be depleted to meet the day-ahead schedule and the storage asset would be at the SOC limit in the next interval, allowing for the Proposed Solution to be triggered
  - Nevertheless, if the optimal dispatch over the time horizon results in an uneconomic dispatch in the binding interval to preserve the SOC for a subsequent interval, this can be repeated over many RTD runs, thus preserving the SOC for one or several intervals before the Proposed Solution would apply
- Given the fact that both the CESA and Vistra alternatives, as well as the modifications proposed by PG&E and WPTF, rely on first identifying intervals with a binding SOC constraint, these solutions may also run into the issue of being seldom triggered due to MIO
  - **This materially erodes their effectiveness at resolving Concern 2**

# Given the effects of MIO, applying changes to the BCR calculations only to a subset of intervals would introduce complexity and netting challenges

- This situation materially affects the feasibility of applying a solution that focuses only on the binding interval and whether it has a binding SOC constraint
- In this context:
  - Continued development of the Proposed Solution would require modification of its logic to consider advisory intervals
  - Alternatively, if a solution akin to CESA's proposal is pursued (i.e., one that focuses on modifying the RT Bid component of the RT BCR calculation), this issue could be circumvented by simply applying the modified formula for all intervals, not just intervals with a binding SOC constraint
    - ***This alternative may allow for a solution that addresses Concern 2 and is implementable in the near-term***

# Issues regarding Mitigation

# Stakeholders have noted that there are instances that would still warrant BCR, specifically underscoring mitigation

- Some stakeholders have noted that instances in which resources were mitigated in intervals prior to a buy- or sell-back may merit specific BCR provisions
- The MSC noted that we do not know how material this impact would be in the short-run
  - If material, the MSC noted that the same approach used for the Hold Exceptional Dispatch could be used to calculate BCR for dispatch due to mitigation that reduced resource revenues over the day
- **Both the ISO and DMM are preparing analyses to understand the potential impact of mitigation**

## Consideration for instances of mitigation may be warranted, but this is dependent on the solution pursued

- If the Proposed Solution is pursued, a specific exception for mitigation may be warranted, although initial analysis suggests mitigation did not result in significant incremental dispatch
- If a solution akin to the CESA proposal is pursued, it may not need to be modified to account for mitigation because the solution does not eliminate BCR but only modifies the calculation of it
  - If this is pursued, further discussion of mitigation may be warranted in the development of a holistic revision to the storage uplift construct



# Next Steps

# Next steps

- Upcoming milestones:
  - 09/23: Comments on RSP due
  - 09/30:\* Draft Final Proposal (DFP) posted
  - 10/07:\* Stakeholder meeting on DFP
  - 10/21:\* Comments on DFP due

*\*All dates are tentative until confirmed through a notice in the ISO's Daily Briefing.*

## For reference

- Visit initiative webpage for more information:  
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/storage-bid-cost-recovery-and-default-energy-bids-enhancements>
- If you have any questions, please contact [ISOStakeholderaffairs@caiso.com](mailto:ISOStakeholderaffairs@caiso.com)

# ENERGY matters

The California ISO's blog highlights its most recent news releases, and includes information about ISO issues, reports, and initiatives.



*Energy Matters* blog provides timely insights into ISO grid and market operations as well as other industry-related news.

<https://www.caiso.com/about/news/energy-matters-blog>



Story | Transmission

## DOE grant gives boost to grid-enhancing technologies on the transmission network

By Jeff Billinton

08/08/2024

Subscribe to [Energy Matters blog monthly summary](#)

# Market Performance and Planning Forum, Hybrid meeting on 9/18

The California ISO invites stakeholders to register for its quarterly Market Performance and Planning Forum on Sept. 18, 2024. Attendees may choose to participate in person at the ISO, or virtually. If you plan to attend the meeting in person, please [register](#) by end of day Sept. 13, 2024.

- Review key market outcomes, along with an overview of topics covered in the ISO Market update conference calls.
- Discuss market performance issues being monitored by the ISO.
- Discuss major [initiatives](#), anticipated Board reviews and drivers affecting timing and implementation.
- Release planning, release timelines and implementation topics
- Overview of major topics covered in other relevant weekly stakeholder conference calls.
- Assessment of Price Formation Enhancements implemented on August 1.

# New Policy Initiatives Timeline

The California ISO has launched the Policy Initiatives Timeline to offer stakeholders a concise overview of ongoing policy initiatives. At a glance, it offers a snapshot view of key details such as the status of each initiative, projected timelines, and the current phase of the stakeholder engagement process. Updates to this timeline will be made weekly and posted on the [policy initiatives landing page](#). For more information, stakeholders are encouraged to reach out to [ISOStakeholderAffairs@caiso.com](mailto:ISOStakeholderAffairs@caiso.com).







**REGISTRATION IS OPEN**

# 2024 STAKEHOLDER SYMPOSIUM

**Welcome reception - Oct. 29**  
at Kimpton Sawyer Hotel, Sacramento, CA

**Symposium program - Oct. 30**  
SAFE Credit Union Convention Center  
Sacramento, CA

Visit the event website: [www.reg.eventmobi.com/2024stakeholdersymposium](http://www.reg.eventmobi.com/2024stakeholdersymposium)

**SPONSORSHIP OPPORTUNITIES AVAILABLE**

# AIM Certificate Process Replacing Verizon Client User Certs to Entrust Certs

## UAAs Action Required

The ISO would like all UAAs to actively begin replacing your users and business certificates that are still Verizon certificates to Entrust Certificates. Emails to UAAs began in March for this effort.



### Due Date

Completed before the end of October, 2024.



### Instructions

Please see the "Replacing a Verizon Certificate with an Entrust Certificate" section of the [AIM Certificate Process Job Aid](#) section for step-by-step instructions.



### Questions

Email [uaarequests@caiso.com](mailto:uaarequests@caiso.com) or create a CIDI ticket with the subject line "Verizon to Entrust Cutover."