



California ISO

Policy Initiatives Catalog & Roadmap

Stakeholder proposal presentations

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April 3, 2025

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- This collaborative meeting is intended to stimulate open 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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Today's Agenda

| Time | Topic | Presenter |
|---------------|---|---|
| 9:00 – 9:20 | Introduction Prioritization survey <ul style="list-style-type: none"> • Background • Update – prioritization of current 2025 initiatives • Timing | ISO staff |
| 9:20 – 9:30 | Questions | |
| 9:30 – 9:45 | Settlement enhancements in the EIM | Elsa Chang Bonneville Power Administration |
| 9:45– 10:00 | Real-time congestion offset enhancements | ISO staff |
| 10:00 – 10:15 | (1) Standalone uplift payment for uneconomic dispatch of BESS resources (2) Remove VER “must-follow” flag for co-located BESS providing ancillary services | Sam Hile NextEra Energy Resources |
| 10:15 – 10:30 | Flexible Ramping Product Enhancements | Vijay Singh PacifiCorp |
| 10:30 – 10:45 | Economic intertie bidding under EDAM | Seth Cochran Vitol, Inc. |
| 10:45 – 11:00 | (1) On-going transparency effort (2) Internal and external market seams issues (3) EDAM enhancements | Carrie Bentley WPTF |
| 11:00 | Questions & next steps | ISO staff |

Annual Policy Catalog & Roadmap Process

Policy Initiatives Catalog

- ISO accepts policy initiative proposals from stakeholders and documents stakeholder support for proposed initiatives
- Catalog reflects shared priorities of ISO stakeholders and Regional Issues Forum (RIF)
- Input to the Policy Roadmap prioritization process

Policy Initiatives Roadmap

- Work plan that describes the policy initiatives the ISO will undertake over the next 3 years
- Final Roadmap represents intersection of stakeholder-identified priorities from the Catalog, [ISO Critical & Strategic objectives](#), initiative feasibility, urgency, and ISO resources.
- Includes initiatives identified by both stakeholders and the ISO

Policy Roadmap & Catalog Timeline



Stakeholder-led prioritization process

Stakeholder Workshop

- Develop understanding of breadth of stakeholder support for individual submissions & reasons for support
- Identify logical groupings of submissions
- Clarify purpose of submissions

Regional Issues Forum Roundtable

- RIF sector liaisons compile feedback from members about themes, issues, and priorities; synthesize common priorities among sectors.

Prioritization Ranking Survey

- All stakeholders invited to nominate individual initiatives and categories of initiatives as top priorities, and rank remaining initiatives as support/neutral/oppose
- Update: stakeholders also asked to prioritize current policy initiatives for 2025

Catalog & Roadmap Schedule: Next Steps

- **April 3:** Stakeholder prioritization survey open
- **April 29:** Stakeholder prioritization survey closed
- **May:** Prioritization survey results
 - Survey submissions published
 - Updated 2025 Roadmap schedule published for current/existing policy initiatives
- **June:** Policy Initiatives Catalog published

CATALOG SUBMISSION PRESENTATIONS

Elsa Chang, Bonneville Power Administration

SETTLEMENT ENHANCEMENTS IN THE EIM

Settlements enhancements in the EIM

Elsa Chang

Initiative to address 3 settlements-related issues in the EIM

This initiative is intended to address 3 settlements-related issues in the EIM:

- 1) Assess CAISO practices regarding resolving settlements issue or disputes. Consider allowing price adjustments more than 5 days after operating day.
- 2) Consider redefining the timelines for allowable resettlements due to market engine errors. For example, reconsider allowing 2 years worth of resettlements for a recently identified error when participants had no opportunity to review market participation and consider adjustments in response to settlements outcomes.
- 3) Review policies and practices regarding resolution of inappropriate outcomes in the market and settlement-related resolution of the financial outcomes. i.e. If an entity submitted an incorrect base ETSR that resulted in a charge and credit, but both entities agree that the ETSR submitted was wrong. CAISO could develop practices to move that money around as a settlement adjustment between the BAs without rerunning the market.

Price Adjustment Request Policy

- Currently CAISO has a 5-day deadline (5 calendar days after the operating day) for price adjustment request submissions.
- The relationships between operational issues and their settlement impacts are often very complex and require more time to perform analysis and assess the need for settlement adjustments/disputes.
- Sources of issues include network, data integration, tagging practices, manual dispatch automation, and digital certifications. These issues can arise internally or externally.
- Consider allowing price adjustment requests more than 5 days after operating day providing WEIM entities with enough time to perform post-operation settlement analysis.

Resettlement Policy

- BPA received multi-million charges from CAISO as the result of the 2-year resettlement related to a recently identified error in CAISO's FRP forecast of movement calculations.
- Affected market participants were not receiving the negative feedback required to alert them to alter operations. They are now being financially impacted retroactively for market outcomes that could have otherwise avoided through modifications to market participation.
- Part of the 2-year resettlement period is outside of the allowed dispute window.
- Consider improving the consistency of the forecasted movement settlement approach with underlying principles:
 - a. Disproportionality of forecasted movement charges relative to the operational significance of flex capacity issues that do not manifest in the real-time market and, indeed, are mostly resolved by the time of the T-40 test.
 - b. Financially binding consequences of *advisory* intervals in the RTUC run associated with the T-55 test, particularly when the issue is resolved by the T-40 test.
 - c. Exclusion of the ETSR base schedule movement from the calculation of forecasted movement (if applicable).
- Consider redefining and aligning the timelines for allowable resettlements and disputes due to market engine errors. For example, reconsider allowing 2 years worth of resettlements for a recently identified error when participants had no opportunity to review market participation and consider adjustments in response to settlements outcomes.

Base ETSR Related Settlement Resolution

- BPA submits base ETSR schedules for many adjacent EIM entities.
- System issues can sometimes interrupt BPA's base ETSR submissions to CAISO resulting in inappropriate settlement outcomes.
- The ETSR submission redundancy is one of CAISO's future enhancements. Before the technology enhancement is in place, interim policies are needed.
- Consider reviewing policies and practices regarding resolution of inappropriate outcomes in the market and settlement-related resolution of the financial outcomes. i.e. If an entity submitted an incorrect base ETSR that resulted in a charge and credit, but both entities agree that the ETSR submitted was wrong. CAISO could develop practices to move that money around as a settlement adjustment between the BAs without rerunning the market.

CDWR – State Water Project submission, presented by ISO staff

REAL-TIME CONGESTION OFFSET ENHANCEMENTS

Issue description

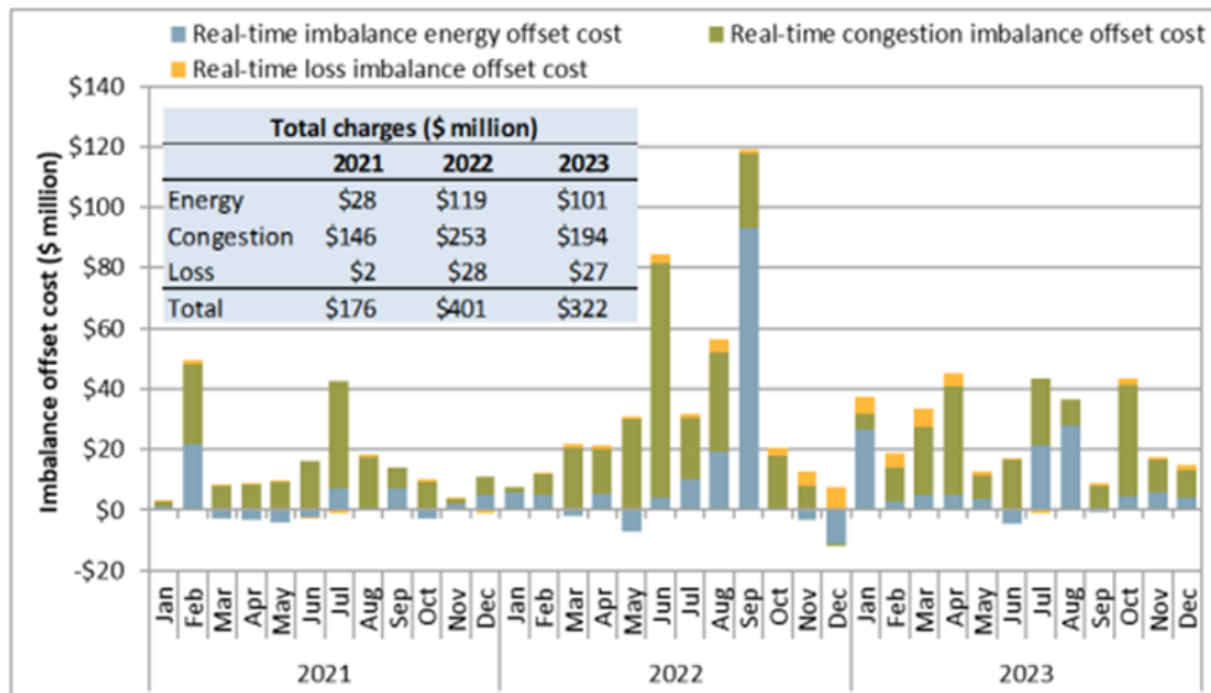
- The RTCO charges normalized by Load Serving Entities' (LSE) loads have increased steadily over the years with some years having a significant rate of increase compared to the prior year. For example, for CDWR, there was a significant increase, that amounted to 36.67%, in the RTCO charges observed in 2021 (compared with the year 2020) and to 45.55% in the year 2022 (compared with the year 2021 values). CDWR-SWP has observed that the magnitude of RTCO charges have been rising significantly irrespective of load growth resulting in a significant cost to CDWR-SWP.

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Issue description

- The chart shown below illustrates RTCO charge increasing over time for CAISO load:

Figure E.9 Real-time imbalance offset costs



Initiative description

- While investigating the causes for such increases, CDWR-SWP recommends CAISO initiate a new stakeholder process to discuss what can be done to transform the current RTCO into a true neutrality charge code that reverses to each market participant, the respective market participant's Hour Ahead (HA) and Real Time (RT) congestion rents.

Market impact

- CDWR-SWP believes that the main objective of the RTCO settlement mechanism is to reverse the HA and RT congestion rents collected from a market participant. However, the RTCO charge code does not provide the CAISO stated neutrality by including additional and much larger charges than the reverse of the HA and RT congestion rents collected from the market participants.

Timing & urgency

- CDWR-SWP observes that not addressing this issue has incurred higher RTCO charges over time for impacted LSEs, and believes postponing the issue will continue to increase charges to LSEs.
- Further investigations by CAISO will improve discussions on past market impacts and potential severity increases that will further unbalance markets in the future.

Sam Hile, NextEra Energy Resources

**(1) STANDALONE UPLIFT PAYMENT
FOR ECONOMIC DISPATCH OF BESS
RESOURCES**

**(2) REMOVE VER “MUST-FOLLOW”
FLAG FOR CO-LOCATED BESS
PROVIDING ANCILLARY SERVICES**

NextEra Energy Resources' Submissions to CAISO's 2025 Policy Catalog

Sam Hile, Analytics, NextEra Energy Resources

Sarah Garcia, Regulatory Affairs, NextEra Energy Resources

April 3, 2025

Submission 1: Standalone Make-Whole Payment for BESS

Submission 1: Standalone Make-Whole Payment for BESS

Problem Statement

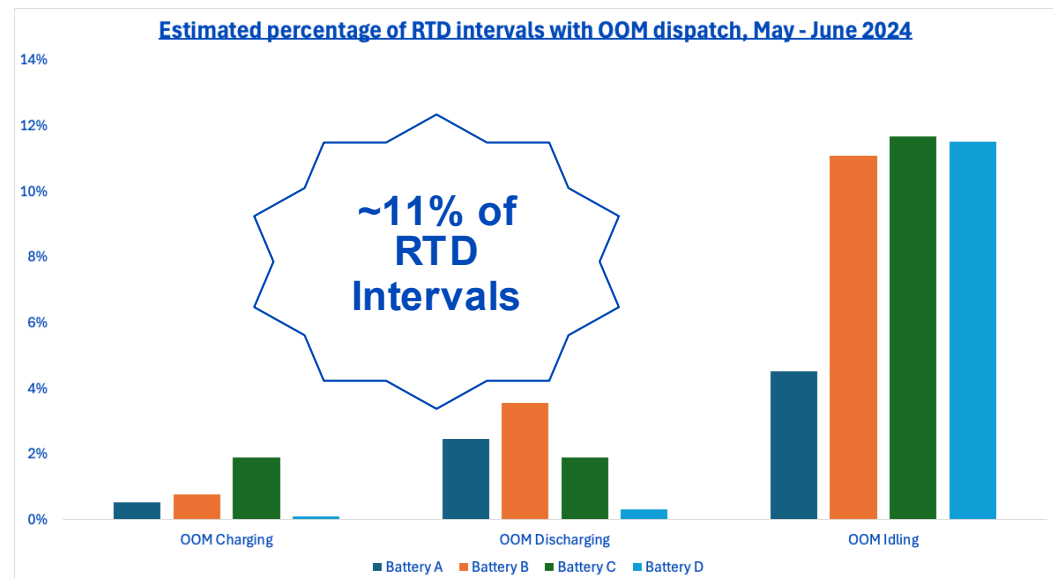
- Multi-interval optimization (MIO) sometimes results in resources being dispatched out of merit (OOM) (relative to their RT energy offer curves) in the binding interval based on anticipated advisory prices for future intervals
- When these forecasted advisory prices fail to materialize, OOM dispatch can become sub-optimal and erode BESS daily RT energy revenues
- Even if MIO benefits the storage fleet overall, financial losses at individual BESS units due to sub-optimal OOM dispatch are largely beyond BESS' control and should not be brushed aside as the “cost of doing business”
- CAISO's primary uplift mechanism, Bid Cost Recovery (BCR), is only available when resources realize a net loss for the trade date
- New make-whole payment (separate from BCR) is therefore needed to help mitigate this revenue erosion outside of trade dates with net losses

Current BCR framework is insufficient for holding BESS harmless to sub-optimal dispatches produced by MIO

Submission 1: Standalone Make-Whole Payment for BESS

MIO-Driven OOM Dispatch Happens Frequently

- NextEra Energy Resources (NEER) observations of OOM dispatch at 4 batteries over Summer 2024⁽¹⁾
 - OOM idling occurred ~ 11% of all RTD intervals
 - Hard to determine whether these intervals had a net positive or negative impact on daily revenues



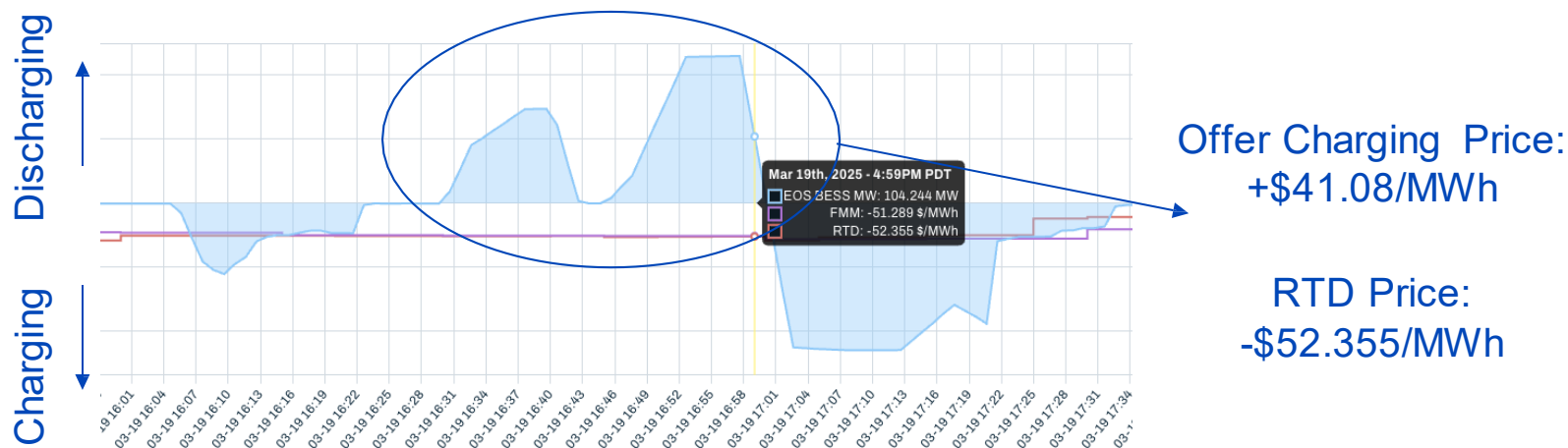
NextEra Analytics findings indicate OOM dispatch occurs frequently enough to warrant further investigation

1) Excludes intervals with Flexible Ramp Product awards and where OOM dispatch may be attributable to the RT Ancillary Service SoC constraint pre-positioning the BESS to ensure deliverability of upcoming A/S awards.

Submission 1: Standalone Make-Whole Payment for BESS

In Some Instances, OOM Dispatch is Harmful

- NEER battery was dispatched to discharge OOM during ~ -\$50 RTD LMPs despite having positive discharge offer prices
- Battery forced into *paying* to discharge rather than *getting paid* to charge
 - LMPs remained similar for the remainder of rolling hourly horizon



OOM dispatches to discharge during highly negative prices clearly indicate sub-optimal MIO outcomes

Submission 1: Standalone Make-Whole Payment for BESS

MIO Lacks Transparency

- CAISO does not publish advisory prices, preventing market participants from identifying OOM dispatch intervals and generally understanding the accuracy of advisory pricing at their node(s) with certainty
 - CAISO's mission is, in part, to facilitate effective markets through the provision of timely and accurate information
- Market participants can only infer OOM dispatch by comparing bid costs from relevant offer curve segments against actual prices

OOM dispatch is difficult for market participants to identify

Submission 1: Standalone Make-Whole Payment for BESS

CAISO Should Address Sub-Optimal Outcomes

- NEER requests CAISO undertake a policy initiative to address sub-optimal, harmful impacts of OOM dispatch created by MIO
- CAISO should address sub-optimal outcomes with proposed make-whole payment
 - For trade dates where CAISO identifies OOM dispatch for a BESS that realizes positive net revenue, CAISO would calculate counterfactual RT market revenues if there had been no OOM dispatches that day⁽¹⁾
 - If BESS would have earned more by being dispatched strictly according to its bid prices (all else equal), BESS receives make-whole payment
 - If OOM dispatch was a net benefit to the BESS for that day, no make-whole payment would be issued
 - If BESS realized a net loss for the day, no need for this make-whole payment because BCR should provide appropriate compensation

CAISO should develop policy to address suboptimal, harmful impacts of out-of-merit dispatch created by multi-interval optimization

1) This assumes CAISO would be able to exclude from settlement intervals where OOM dispatch occurred due to other market processes like Flexible Ramp Product awards or the RT ASSOC constraint.

Submission 1: Standalone Make-Whole Payment for BESS

Proposal Leverages Exceptional Dispatch Settlement

- Following Energy Storage Enhancements Phase 1, CAISO revised its Tariff to settle BESS that receive Exceptional Dispatch instructions to hold SoC based on the difference between BESS' max potential RT energy revenues with and without the Exceptional Dispatch⁽¹⁾
 - Implemented as new RT settlement charge code⁽²⁾
- Proposed make-whole payment for BESS negatively impacted by OOM dispatch would similarly rely on a CAISO-calculated counterfactual
 - However, proposed make-whole payment would be calculated on daily basis rather than interval-by-interval like Exceptional Dispatch make-whole payments to limit over-payment and gaming issues

Counterfactual-based settlement for Exceptional Dispatches to hold SOC offers template for proposed make-whole payment

1) Tariff § 11.5.6.1.2.

2) CG PC RTM Net Amount, § 3.6.1.

Submission 1: Standalone Make-Whole Payment for BESS

Other Potential Solutions Have Known Consequences

- Allow resources to opt out of MIO
 - NEER agrees with previous CAISO position that only considering a subset of bid stack in MIO could exacerbate market inefficiency and inhibit price formation
- Continue relying on BCR to mitigate extreme revenue impacts
 - Offers no relief to a BESS that realizes significantly-reduced-yet-still-positive profits for a given trade date due to OOM dispatch
 - Could create incentive problems for market participants manipulating offer spreads to avoid OOM dispatch
- Remove net loss eligibility criterion from current BCR framework
 - Modifying this fundamental element of CAISO market design could have unintended consequences

Other potential solutions for addressing OOM dispatch impacts fall short

Submission 2: Co-located BESS and VER “Follow DOT” Flag

Submission 2: Co-located BESS and VER “Follow DOT” Flag

Problem Statement

- Variable Energy Resources (VERs) are required to follow their Dispatch Operating Target (DOT) whenever any co-located resources behind the same Aggregate Capability Constraint (ACC) or Sub-ACC receive ancillary service (A/S) awards⁽¹⁾
 - VER is not allowed to freely generate as available in RT
- This requirement unnecessarily discourages co-located BESS participation in A/S markets, inhibits price formation, and poses coordination issues when VER and BESS have different owners/operators
- CAISO should identify policy rationale for Follow DOT flag in this context and reevaluate whether it outweighs flag’s significant drawbacks for market participants

CAISO should revisit whether the “Follow DOT” flag remains necessary when co-located resources receive A/S awards

1) Market Operations BPM § 2.1.22.

Submission 2: Co-located BESS and VER “Follow DOT” Flag

Unclear Rationale for Follow DOT Flag

- To NextEra’s knowledge, CAISO has never provided a written policy rationale for triggering the Follow DOT flag for VERs when another co-located resource participates in A/S
 - Appears to have been introduced in Market Operations BPM v88 following the Hybrid Resources Phase 2b initiative (PRR 1471)
- ACC logic already ensures co-located resources’ combined output stays below point of interconnection (POI) limits, so flag does not appear necessary for POI management
- Unclear why flag would be needed to prevent VER output from “fighting” with BESS Regulation Up/Down deployment given that CAISO procures A/S on a zonal rather than nodal basis
 - How would this be different from a VER freely generating at one node and a standalone BESS providing Regulation at an adjacent node?
 - At a minimum, flag should not apply when co-located BESS carries Spin/Non-Spin awards given CAISO’s position that previous Tariff prohibition against co-located BESS deviating from DOT when providing *any* A/S was “overly broad”⁽¹⁾

1) FERC Docket No. ER23-2537-000, Transmittal at 7 n.26.

Submission 2: Co-located BESS and VER “Follow DOT” Flag

Flag Creates Financial and Operational Risks

- When a single market participant controls both the BESS and VER
 - Flag unnecessarily discourages BESS participation in A/S because the estimated value of bidding BESS into A/S markets is typically outweighed by foregone energy revenue due to VER following DOT
 - Flag forces VER to follow its 5-minute forecast rather than freely generate
 - Even when VER forecast is reasonably accurate, VER’s DOT will still be below its actual capability ~ 50% of the time, resulting in VER curtailments
 - Unnecessarily shrinks A/S supply stack, which inhibits price formation and could promote artificial scarcity (especially during tight supply conditions)
- When a market participant only controls the VER
 - Flag unnecessarily penalizes VER due to BESS actions beyond VER’s control
 - Difficult for VER owner to isolate financial impacts from BESS participation in A/S vs. other potential drivers of VER curtailment
 - How often BESS participates in A/S
 - Quality of VER forecast
 - POI congestion due to deployment of upward A/S awards on BESS

Submission 2: Co-located BESS and VER “Follow DOT” Flag

Proposed Policy Initiative

- NEER requests CAISO undertake a policy initiative to consider eliminating current requirement for VERs to Follow DOT when co-located resources participate in A/S
 - Elaborate on policy rationale for current requirement

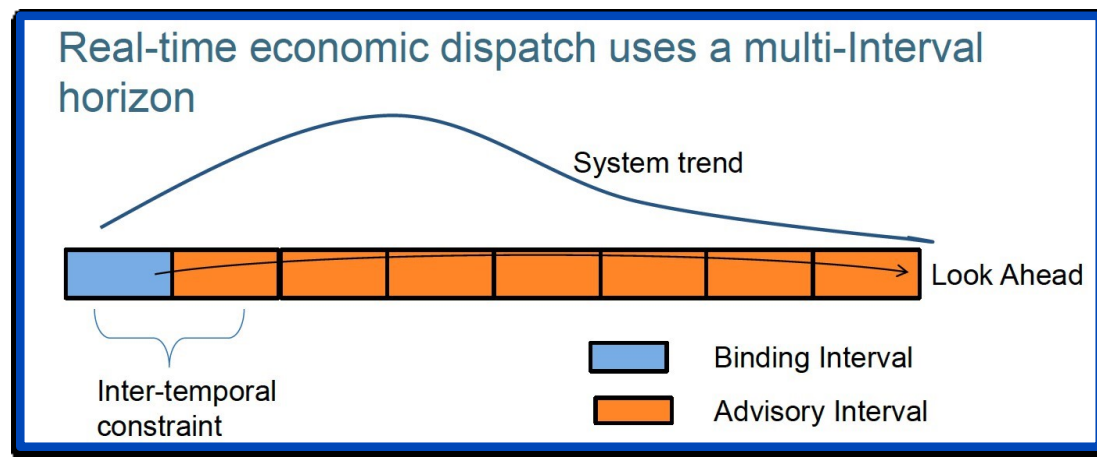
CAISO should revisit whether the “Follow DOT” flag remains necessary when co-located resources receive A/S awards

Appendix

Appendix: Background on MIO in Support of Submission 1

Background on MIO

- RT economic dispatch uses MIO to position resources to react to expected conditions within the MIO's one-hour lookahead⁽¹⁾
- MIO can result in “uneconomic” or “out-of-merit” (OOM) dispatches⁽²⁾
 - Dispatches to charge at LMP greater than min charging bid price
 - Dispatches to discharge at LMP less than max discharging bid price
 - Dispatches to idle at 0 MW despite being economic to charge/discharge



1) Rahul Kalaskar and Guillermo Bautista Alderete, Real-Time Dispatch Multi-Interval Optimization, October 2021 at 7 ([link](#)).

2) This presentation uses the term “out-of-merit” (OOM) dispatch because a dispatch that appears uneconomic over the next hour may appear economic over a longer horizon.

Appendix: Background on MIO in Support of Submission 1

Background on MIO

- MIO's ability to reach a more efficient market solution in the binding interval (even via OOM dispatch, if necessary) hinges on the accuracy of CAISO's advisory price forecast
 - When advisory prices materialize, OOM dispatch can benefit BESS by fully optimizing its limited charging/discharging capacity over the next hour (e.g., holding BESS with limited SoC back from discharging until anticipated LMP spike)
 - When advisory prices fail to materialize, OOM dispatch becomes sub-optimal and can erode daily revenues (e.g., forcing a battery to pay more than necessary for charging energy)

MIO can be helpful or hurtful to BESS

Appendix: Background on MIO in Support of Submission 1

Background on MIO

- CAISO has explained that MIO only results in OOM dispatch for BESS under certain conditions⁽¹⁾
 - BESS State of Charge (SoC) is less than 25% or greater than 75% (for a 4-hour battery)
 - Price spread between advisory and binding intervals exceeds spread between BESS charging and discharging offer prices (plus losses)

MIO only triggers under certain conditions

1) CAISO presentation at February 2015 Storage Design and Modeling working group ([link](#)).

Appendix: Background in Support of Submission 1

Complex Process to Infer OOM dispatch

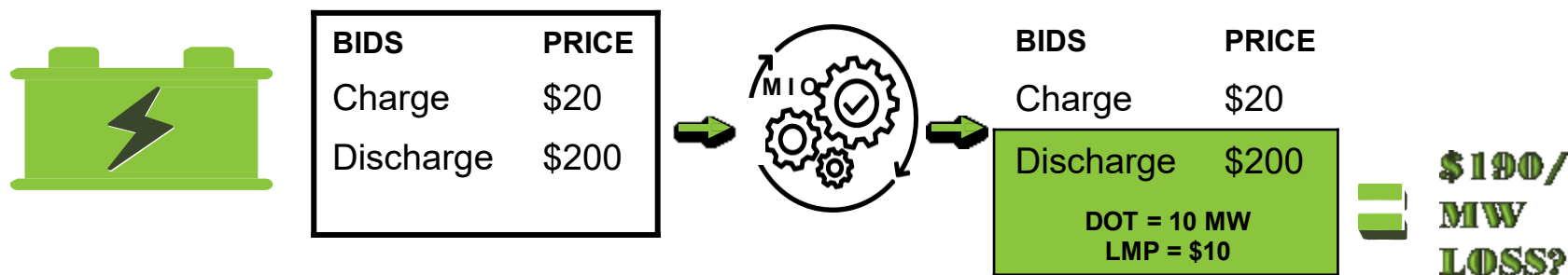
- Market participants can only infer OOM dispatch by comparing bid costs from relevant offer curve segments against actual prices
 - Requires market participants to filter out other market outcomes that present as OOM dispatch but may be due to other RT market processes
 - Flex Ramp Product reserves resource ramp capability for future intervals
 - RT ASSOC constraint ensures BESS has enough SoC/headroom to support deliverability of upcoming ancillary service awards (including via uneconomic dispatch if necessary)

OOM dispatch is difficult for market participants to identify

Appendix: Example in Support of Submission 1

Example – Infer but Cannot Quantify Harm

- Suppose a BESS has a \$20 maximum charging offer, a \$200 minimum discharge offer, and is OOM dispatched to discharge 10 MW at \$10 LMP
 - How to calculate financial harm?



- If the OOM discharging creates extra charging headroom during a later interval with highly negative prices, should that be considered an offsetting benefit?

OOM dispatch impacts are difficult for market participants to quantify

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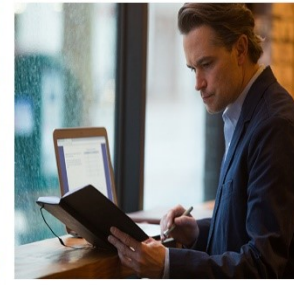
RESOURCES

Vijay Singh, PacifiCorp

FLEXIBLE RAMPING PRODUCT ENHANCEMENTS

PacifiCorp's Submittal for Flexible Ramping Product Enhancements

Vijay Singh
Senior Organized Markets Analyst
April 3, 2025





Agenda

- Background
- Motivation
- Proposal

Background

- The Flexible Ramping Product (FRP) Refinements initiative was completed in 2022
 - Major enhancement included procuring FRP nodally instead of zonally
 - Smaller changes have been made since then, including to the FRP requirement calculations
- There have recently been discussions related to changing certain aspects of the FRP
 - Short-term forecasting discussions around the FRP requirements calculations
 - A proposal by the CAISO Department of Market Monitoring to expand the procurement time horizon
 - Ideas around extending the FRP demand curve to act as a scarcity pricing signal
- There are also many open questions about how the imbalance reserve product will interact with FRP

Motivation

- Post-EDAM go-live, PacifiCorp believes it will be worth evaluating whether the market is procuring adequate flexible capacity
- Some key indicators that it may not be:
 - Systematic market operator load biasing
 - Unutilized FRP when it is needed
 - Large swings in FRP requirements in WEIM RSE
 - Particularly between advisory intervals
 - FRP pricing that is not intuitive
 - Example: FRP priced at \$0 when energy supply may be tight
- PacifiCorp does not have specific problem statements
 - Proposal is conceptual
 - Would rely on analysis from the CAISO to understand how FRP is performing

Proposal

- Examine how FRP is functioning within the market by analyzing utilization data, price impacts, demand curve and interaction with the imbalance reserve product
 - Initiative kick-off would be after there is enough data to understand how FRP is being used with respect to the imbalance reserve product
 - Non-urgent and conceptual
- Key questions PacifiCorp has:
 - Is the flex requirement on WEIM entities reasonable and justified?
 - What is the quantity of procured flexible capacity that is being dispatched?
 - Is FRP deliverable when and where it is needed?
 - Can FRP procured in one region be used to meet flexibility needs in another region?
 - How does the FRP interact with the imbalance reserve up product?
 - Is FRP demand curve working as intended?

Questions?

Seth Cochran, Vitol, Inc.

ECONOMIC INERTIE BIDDING UNDER EDAM



Intertie Bidding in Extended-Day-Ahead Market

Presented by Vitol Inc.

April 3, 2025 - Annual Policy Prioritization Workshop

Intertie Bidding under CAISO's E-DAM

- CAISO EDAM tariff grants EDAM Entities with the flexibility, but not the obligation, to permit economic bidding at the interties between EDAM Balancing Area Authorities (BAAs) and a non-EDAM BAAs whereas today CAISO's market allows economic bidding at its intertie points
- Today, each WEIM entity has the option to enable economic intertie bidding, but none have done so
- Forgoing or delaying this market feature is missing an opportunity improve the optimization of transactions at the seams



Intertie bidding enhances market seams coordination and the ability for participants to manage price risk

- Price sensitive bidding is stabilizing to markets whereas price taking self-schedules impede risk management by not permitting an entity to reflect its willingness to buy or sell power at a specified price
 - Not permitting price sensitive bidding introduces unavoidable congestion and/or basis price risks for transactions because the downside risk cannot be assessed
- Unmanaged risk premiums ultimately flow to end-users through higher bid costs
- The ability to submit price sensitive interchange transactions would incentivize excess supply from external areas to offer into the E-DAM market
- Enabling intertie bidding across the E-DAM would help improve coordination along market seams, as is the case today at the CAISO external interties



Organized markets generally have processes in place to facilitate efficient transactions across market seams

- Day-ahead Markets in eastern RTO/ISO generally permit price sensitive bids for interchange transactions
- Coordinated Transaction Scheduling (CTS) functionality is operating today between MISO/PJM; PJM/NYISO; NYISO/ISO-NE.
 - CTS enables price-based interchange offers between organized markets in the real-time market
- More advanced seams optimization can include shared congestion management through market-to-market coordination at defined flowgates
 - Market-to-market coordination is operating today in MISO/SPP; PJM/MISO; PJM/NYISO
- SPP Markets+ permits economic import and export transactions if the interchange requirements (such as transmission service) are met



Vitol recommends the CAISO explore how to enable economic intertie bidding with external areas within six months after E-DAM operations commence

- We understand E-DAM entities may want to stand up the new market prior to enabling this functionality, however it is important to not delay the benefits of more efficient seams management
- CAISO has experience with economic intertie bidding so extending this functionality should be relatively straightforward



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Carrie Bentley, Western Power Trading Forum

**(1) ON-GOING TRANSPARENCY
EFFORT**

**(2) INTERNAL AND EXTERNAL
MARKET SEAMS ISSUES**

(3) EDAM ENHANCEMENTS



WPTF Comments on CAISO Policy Roadmap

March 31, 2025

Carrie Bentley—Gridwell Consulting
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Proposals

1. Extended Day-ahead Market Enhancements
2. Internal and External Market Seams
3. On-going Transparency Effort



EDAM Enhancements Background

- EDAM is entering implementation phase, but some design gaps and stakeholder concerns remain unresolved
- Delaying enhancements could lock in inefficiencies or create fairness issues post go-live
- Stakeholders have raised concerns around cost allocation, intertie participation, and CRRs
- Launching an enhancements effort now allows CAISO to adapt to emerging market needs and stakeholder feedback



EDAM Enhancements Scope

- The scope should remain flexible but initially include:
 - Intertie participation and economic bidding rules.
 - Transmission charges and cost allocation concerns.
 - Congestion Revenue Rights (CRRs) and their allocation across entities.
 - Inclusion of convergence bidding for market efficiency.
- This initiative should begin before EDAM go-live and evolve as operational experience grows



Market Seams Background

- Western energy markets are moving toward multiple overlapping frameworks: EDAM, Markets+, WRAP, and bilateral trading
- This patchwork design introduces seams—points of friction where rules, priorities, and data do not align
- Seams reduce efficiency, create reliability risks, and increase complexity for all participants
- Coordination is needed now, as EDAM and Markets+ develop in parallel with diverging policies and timelines



Market Seams Challenges Faced by Market Participants

- Resource Adequacy (RA) Fragmentation: Incompatible counting rules and standards cause the potential double-counting and lost diversity benefits
- Transmission Coordination: Separate OATTs, carve-outs, and reservation rules reduce available capacity for optimization
- Economic Seams: No joint dispatch or transaction scheduling; limited or no economic trading between markets
- Resource Sufficiency Evaluation: Conflicting methodologies between EDAM and WRAP increase procurement costs and reduce reliability



Market Seams Scope

- Create a standing stakeholder initiative, led by CAISO, to address intermarket seams proactively
- Coordination priorities include:
 - Aligning RA standards, including PRMs and counting rules
 - Addressing transmission usage conflicts and carve-out impacts
 - Developing trading tools such as interface pricing, intertie bidding, and joint congestion management
 - Harmonizing RSE processes across EDAM and WRAP to prevent duplication and inefficiency
- Look to proven RTO approaches (e.g., PJM-MISO JOA) while adapting to Western market dynamics



On-going Transparency Effort

- Market participants frequently request additional transparency to guide investment decisions and increase market efficiency
- For example, there have been recent requests for additional data and information regarding the following. All of these could be considered within the proposed policy process as initial asks:
 - Documentation and examples on how the AGC algorithm determines which resources to use for regulation
 - Data on regulation deployment at a more granular level than provided by the attenuation factors
 - Full hourly load distribution factors
 - Shift factors for DA binding constraints
 - Data on outage modeling in the DAM (similar to what is provided in ERCOT)



Transparency proposal

- A structured, recurring process would formalize these requests and ensure public tracking
- This effort would be an on-going/reoccurring effort that would provide a venue for market participants to make formal requests for added transparency
- The requests could range from more documentation on specific market elements or rules
- We envision there would be a process for submissions to be made throughout the year, discussed openly with CAISO staff and stakeholders, and ultimately a resolution is determined and made public – very similar to the PRR process



Conclusion & Request

- WPTF respectfully urges CAISO to include three targeted initiatives in the 2025 Policy Roadmap:
 - A recurring stakeholder-driven transparency request process.
 - A formal seams coordination initiative across RA programs and market interfaces.
 - A process to evaluate and implement necessary EDAM enhancements.
- These efforts will support efficient, transparent, and fair markets throughout the Western Interconnection.
- WPTF looks forward to working with CAISO and other stakeholders in advancing these goals.



Catalog & Roadmap Schedule: Next Steps

- **April 3:** Stakeholder prioritization survey open
- **April 29:** Stakeholder prioritization survey closed
- **May:** Prioritization survey results
 - Survey submissions published
 - Updated 2025 Roadmap schedule published for current/existing policy initiatives
- **June:** Policy Initiatives Catalog published

QUESTIONS?

Resources

- Visit webpage for more information: [2025 Catalog & Roadmap webpage](#)
- View 2024 submissions, presentations, and draft/final products on the [2024 Catalog & Roadmap webpage](#)
 - [Final 2024 Roadmap](#) and [Final 2024 Catalog](#)
- Questions? Please contact Alyssa Krag-Arnold at akragarnold@caiso.com or ISO Stakeholder Affairs: isostakeholderaffairs@caiso.com



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