

# Day-Ahead Market Enhancements WPTF Position

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# Outline

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1. Position Overview
2. Position on DAME Elements
3. WPTF Request –
  - A. Extend DAME initiative process by three months to meaningfully consider stakeholder feedback on benefits of the zonal framework



# Topic 1

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## POSITION OVERVIEW

# DAME

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- **Problem Statement:** High levels of operator load bias in RUC due to forecasted renewable and demand uncertainty and DA to RT ramping schedule granularity is leading to inefficient price signals, unit commitment, and market uplift, and is increasing the volatility of intertie export schedules between the IFM, RUC, and RTM
- **Goal of DAME:** To procure capacity in the IFM and RUC that would not otherwise be committed in day-ahead in order to get a more efficient IFM and RUC solution across the CAISO and EDAM without significant operator intervention
  - To move commitment of long-start resources from RUC to the IFM
  - To increase sub-hourly ramping capability in real-time by increasing number of resources with economic offers
  - To efficiently schedule physical resources, including intertie imports and exports in the IFM
- **Goal of DAME for EDAM:** Modify RUC process to create diversity benefits in EDAM by realizing off-setting uncertainty and allowing inter-regional commitment



# WPTF Position Overview

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1. WPTF is supportive of a well-designed day-ahead upward imbalance product and the goals of DAME
2. DAME is severable from EDAM and can be developed and staged over time to maximize benefits and minimize risk\*
3. The current DAME design is unnecessarily complex and introduces market and implementation risk for unknown benefit
4. Most stakeholders support the policy in concept but are not supportive of the details – multiple parties will protest at FERC, including WPTF
5. We ask the CAISO to start with a simplified approach that recognizes the new products are reserve products and must not increase market risk and costs without commensurate benefits

\*Any rule changes vital for EDAM on day 1 can be taken to GB and Board in March and added to EDAM filing at FERC



# Areas of Greatest Concern for WPTF

## Nodal Procurement

- Day-ahead test to mitigate the potential for needed capacity to be stranded behind transmission constraints in real-time
- Generates nodal IR prices with congestion
- Relies on untested, significantly-delayed nodal FRP design
- Uses inappropriate and unreasonable assumptions for forecasting uncertainty to procure imbalance reserves that are untested for EDAM and CAISO areas

## Downward Products

- Will increase cost with no demonstrated need for product
- CAISO's own analysis shows no need for downward products for reliability or market efficiency

## Stakeholder Process

- CAISO stakeholder process lacked robustness and lacked responsiveness to stakeholder ideas and concerns



# Topic 2

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POSITION ON AREAS OF CONCERN

# Nodal Procurement Overview

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- **Goal:** Ensure imbalance reserves and reliability capacity products are deliverable in real-time
- **Design:** Test for deliverability through deployment scenarios that assume 100% of uncertainty materializes and is proportional across resource class (i.e., solar on the coast has equal uncertainty to solar in Bakersfield)
- **WPTF Analysis:**
  - Complexity of market design and implementation features that come along with nodal procurement are highly likely to be disruptive to the market for little to no benefit, especially at onset of EDAM
  - Implementation risk associated with nodal procurement could jeopardize timely EDAM implementation
  - Predicting real-time congestion patterns in the day-ahead is challenging and using a grossly simplified forecasting technique for uncertainty is unlikely to be successful and has a high chance of increasing costs with no benefits





# Considerations for EDAM

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- DAME should be modified to begin with a simplified, but statistically robust version of DAME to be implemented concurrent with EDAM
- Zonal proposal still captures the full benefits as estimated by Energy Strategies EDAM benefits report
- As proposed, DAME requires deployment scenarios that are extremely technologically complex
  - CAISO has been trying to implement deployment scenarios for the Flexible Ramping Product (FRP) for 2 years now, risks EDAM implementation
- These scenarios are also unrealistic and will lead to unnecessary and inefficient procurement of additional capacity in the day-ahead market
  - The increased cost for procuring unreasonably high levels of uncertainty at unrealistic locations in day-ahead may not achieve goal of policy but rather disrupt EDAM and bilateral markets by increasing risk premiums



# Downward products

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- **Goal:** Ensure the real-time market has access to sufficient economic bids that enable resources to be dispatched below day-ahead schedules
- **Design:** Imbalance reserve down and reliability capacity down designs mirror the up products
- **WPTF Analysis:** CAISO staff failed to appropriately justify the need for downward products, and thus the downward products add to costs with no commensurate benefits
  - Operators adjust RUC bias in the upward direction
  - High levels of renewable and natural gas economic offers in the real-time mean that the CAISO can simply dispatch these resources downward in the real-time market if needed – there is no need to pay an additional amount in advance for this downward flexibility
  - No other ISO has proposed downward products
  - No CAISO analysis supports need for downward products in day-ahead at this time



# Stakeholder process

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- **Goal:** To well-vet tariff changes in a public setting prior seeking GB, Board, and FERC approval
- **Design:** CAISO stakeholder process, non-voting design
- **WPTF Analysis:** CAISO staff failed to appropriately stakeholder the DAME proposal (this is unusual for the CAISO, and we believe specific to this initiative)
  - Stakeholder alternatives and concerns routinely dismissed even when CAISO's own analysis supported the stakeholder position
  - Pros and cons of stakeholder proposals, often extensively researched, never presented or given discussion time during meetings
  - Failure to provide substantive (or any) responses to reasonable questions by stakeholders
  - Multiple design changes after Draft Final Proposal with no opportunity for consideration, analysis, or comment



# Example of failure to respond to stakeholders

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- [Vistra](#) (response #4) proposed alternative to nodal structure
  - Vistra provided research of other ISO day-ahead uncertainty products including SPP, MISO, ISO-NE, NYISO, and PJM
  - Proposed a sophisticated zonal requirement in upward direction only framework based on this research
  - WPTF also commented that a zonal framework could also be designed to account for not just transmission and BA transfer constraints, but also differences in uncertainty across zones
- [NV Energy](#) (response #3) raised questions regarding EDAM Benefits study and interaction with existing OATT framework
  - NV Energy noted that ideally the study would have broken out the potential benefits by BAA, rather than showing only footprint wide results, and considered the potential costs to participants
  - Highlighted a seams issue with ancillary service like products under the existing OATT framework that should be considered

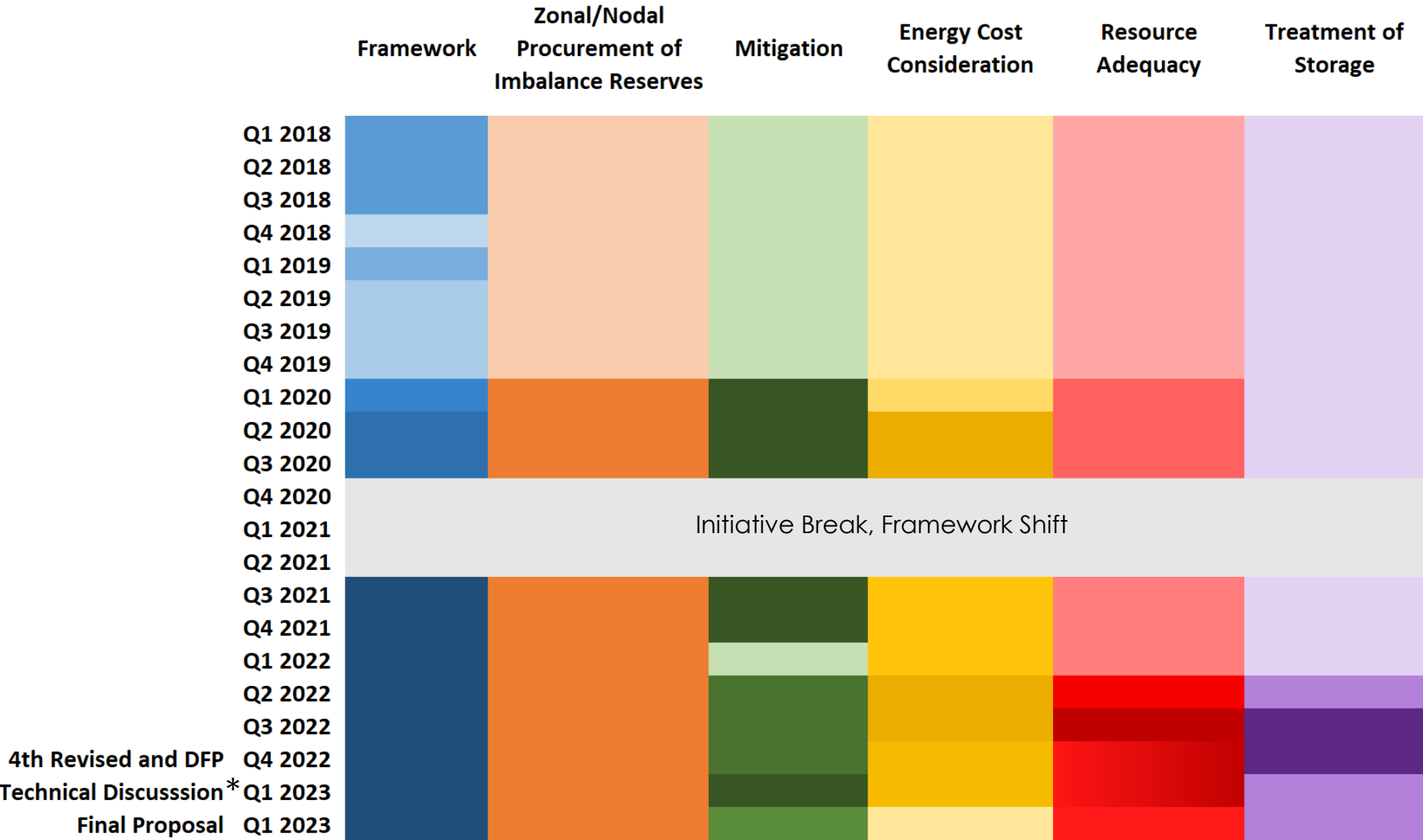


# Changes after Draft Final Proposal

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- CAISO included new elements and made a significant change to the proposal during Jan 4 technical workshop, and in the Final Proposal after all opportunities for stakeholder feedback occurred that were solely due to CAISO idea and not in response to stakeholder comments
  - No longer proposing to adjust state of charge formulation to account for use of imbalance reserve products in real-time with no justification
  - Removed reliability capacity down must-offer obligation with no explanation
  - First time formally proposed options for demand curve or stepped penalty prices, still not finalized, and did not allow stakeholder comment despite this being key to pricing and active participation from stakeholders on this topic like NV Energy in prior iterations!
  - Removed energy bid eligibility cap for IR (okay, in response to stakeholder comments)





\*Demand curve options proposed for first time in Technical Discussion paper.

# Topic 3

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WPTF REQUEST

# WPTF Request

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- Ask the Governing Body to reject DAME and instruct the CAISO to move forward with an expedited stakeholder process to consider a zonal framework with upward product only
- Simplified approach will have broad support
  - Many stakeholders have advocated for these simplifications and to design IR like AS, with sophisticated zonal methodology, and better treatment for storage resources
  - Simplified approach also lowers risk to EDAM participants and EDAM implementation





# Appendix

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# Treatment of Storage

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- **Goal:** Allow storage to provide IR consistent with real-time energy ramping capability
- **Design:** Storage awarded IR without considering IR deployment impact on state-of-charge
- **WPTF Analysis:**
  - It is important that storage resources be awarded IR consistent with their feasible real-time time ramping capability
  - Allowing storage to provide IR without including a state-of-charge constraint that considers IR deployment will over-estimate storage resource's capability
  - Over 10,000 MW of storage will be online at the end of 2023

“This proposal notes that this could jeopardize the ability for storage resources to deliver day-ahead schedules because of differences in state of charge between the two markets and could ultimately threaten reliability. This policy does not directly address this concern.” – CAISO Final Proposal, page 51



# Local Market Power Mitigation (LMPM)

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- **Goal:** Mitigate for the potential of resource owners exerting market power due to nodal procurement and high imbalance reserve offer prices
- **Design:** Apply existing local market power mitigation approach used for energy on imbalance reserves
- **Analysis:** Mitigation based on LMPM approach is unnecessary since its only needed because the CAISO is also proposing nodal procurement
  - Under a zonal approach, CAISO can simply retain the proposed bid cap and stepped penalty prices as means for mitigation, similar to the other ancillary services
  - By design, it will over mitigate resources which introduces significant market risk and inefficiencies



# Local Market Power Mitigation (LMPM): Additional Analysis

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- Mixing elements of energy and capacity
- Mitigating for market power when market power does not exist introduces market risk and inefficiencies
  - Mitigation will be based on unrealistic scenarios that assume 100% deployment of imbalance reserves, contributing to higher levels of congestion and constraints tested for market power
  - Thus, by definition, CAISO market will be over-mitigating based on erroneous congestion
- Complex mitigation design is unnecessary
  - CAISO has shown that mitigating energy offers indirectly mitigates for market power in imbalance reserves and reliability capacity
  - Bid cap of \$247/MW and stepped penalty prices are effective mitigation tools



# Eligibility Criteria Energy Bid Cap

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- **Goal:** To prevent awarding IR to resources with high real-time energy offers over resource with lower energy offers
- **Design:** Resources with day-ahead energy offers above a daily calculated offer price will be ineligible to be scheduled for imbalance reserves
- **Analysis:** *Concern is not rooted in basic market principles or theory;* Proposal distorts market price signals with no practical benefit gained by the market
  - Regardless of IR award, all RA resources must offer into real time, and all resources may change their energy offers between IFM and real time
  - As designed, the energy bid cap is so high that it is only likely to be impactful during system-wide events or high gas price periods
  - This will create artificial scarcity in imbalance reserves



# ~~Eligibility criteria bid cap: Additional analysis~~

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- ~~• Applying the day-ahead energy offer criteria will distort market prices
  - ~~– Higher cost resources willing and able to provide imbalance reserves can only do so if they don't fully reflect energy costs in market~~
  - ~~– Deeming higher cost resources ineligible will cut supply stack short, creating artificial scarcity conditions and pricing in imbalance reserves~~~~

