



California ISO

WESTERN ENERGY IMBALANCE MARKET (WEIM)

# Briefing on day-ahead market enhancements initiative

James Friedrich

Lead Policy Developer, Market and Infrastructure Policy

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# Day-ahead market enhancements address reliability needs given growing supply and demand uncertainty

- Growing dependence on weather-sensitive resources increases uncertainty and variability in net load
  - System operators have to manage a wide range of possible outcomes, creating operational risk
- System operators are relying on out-of-market actions to reserve additional supply in the day-ahead market to manage this reliability risk
- A new day-ahead market product is needed that procures “imbalance reserves” to cover net load uncertainty

# The imbalance reserve product targets uncertainty and unlocks significant regional market benefits for EDAM

- Larger market footprint allows for more efficient selection of flexible resources to serve as imbalance reserves
- Geographic diversity reduces the day-ahead imbalance reserves each EDAM BAA needs to procure to meet their individual uncertainty needs
- Builds confidence in EDAM transfers through a reliable day-ahead market solution

## Final proposal addresses several issues raised by stakeholders

- Resource adequacy (RA) contract settlement issues with the new imbalance reserve product
- Whether to account for energy costs in imbalance reserve procurement
- Applying a demand curve to imbalance reserve procurement

## Proposal includes measures to accommodate RA contracts and imbalance reserve settlement concerns

- RA contracts ultimately determine how revenue generated from new market products is settled between counterparties
- ISO will provide relevant settlement information in a regularly issued report to support contracting parties
  - e.g., a breakdown of the imbalance reserve marginal price by capacity vs opportunity cost
- A “one size fits all” automated settlement solution to support a myriad of contractual settlements was not feasible

# Accounting for energy costs in imbalance reserve procurement

- Explored rules to distinguish between low and high energy cost resources providing imbalance reserves; potential for inefficient market outcomes
- Final proposal does not include provisions to account for energy cost, but monitoring in place to address if needed

## Proposal includes an imbalance reserve demand curve to mitigate pricing impacts

- Explored various penalty price structures for imbalance reserves
- Reduces procurement as prices increase
- Cost/value tradeoff to determine if uncertainty requirements are met or not
- Final proposal procures imbalance reserves based on a demand curve

# Stakeholders support the need for an imbalance reserve product but certain lingering concerns remain

- Stakeholder process will continue to allow for more discussion on several key design elements:
  - Granularity of imbalance reserve procurement (nodal/zonal) that assures sufficient deliverability; related market power mitigation issues
  - Impact of imbalance reserves on congestion revenue rights
  - Energy storage modeling
- Management has deferred seeking a joint authority decision to provide additional time to address remaining issues