



California ISO

# Utah Public Service Commission briefing

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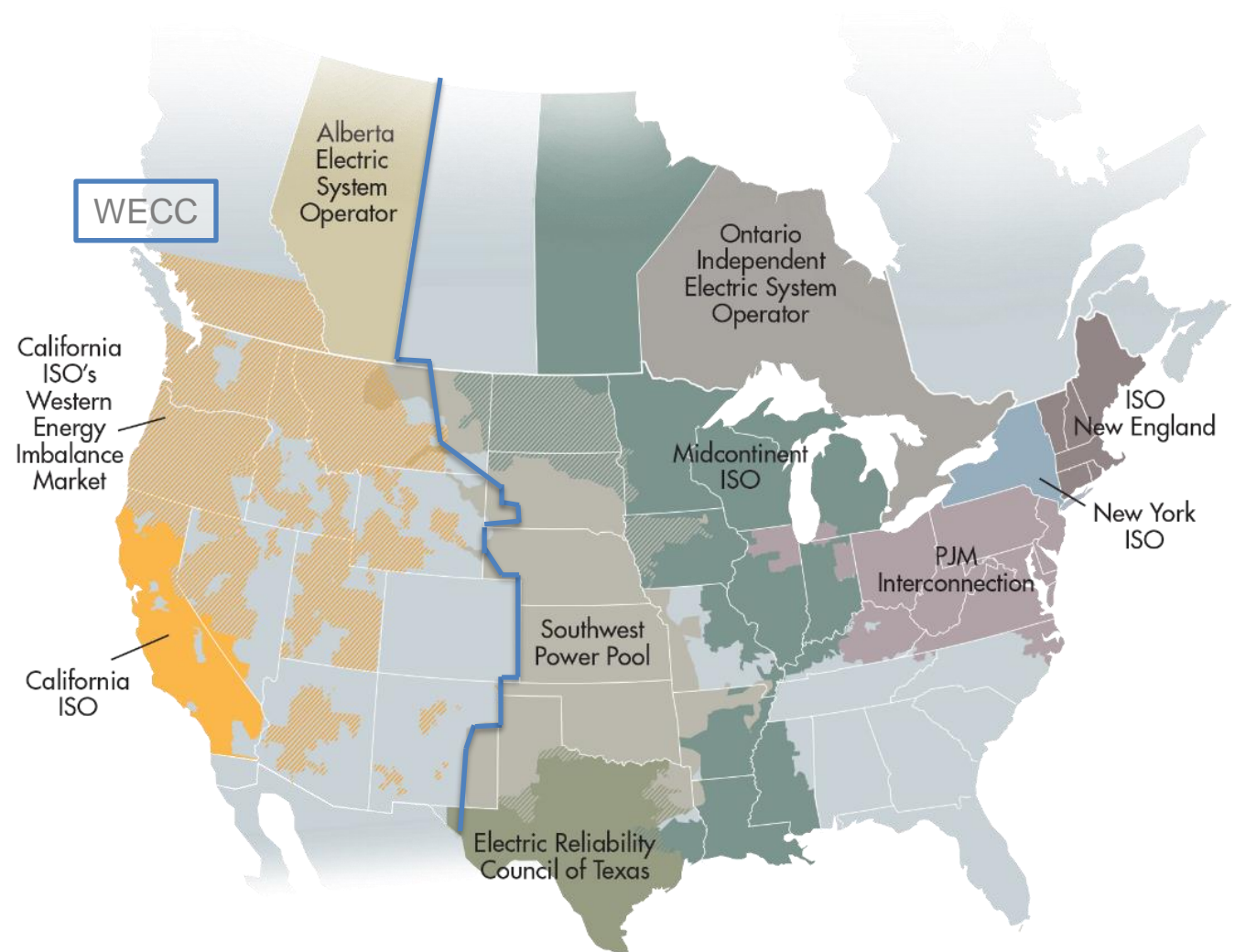
June 13, 2025

# Agenda for today

- I. Introductions
- II. General overview of CAISO and its core responsibilities
- III. Western Energy Markets (WEM)
  - a) Western Energy Imbalance Market (WEIM)
  - b) Extended Day-Ahead Market (EDAM)
  - c) GHG emissions accounting
  - d) EDAM Congestion Revenue Allocation
  - e) WEM governance

# CAISO core responsibilities and functions in California and across the West

- Performs **balancing area** functions and operates wholesale electric market within its area.
- Operates the **Western Energy Imbalance Market (WEIM)** – real time market across the West.
- Serves as **Reliability Coordinator (RC West)** across the Western interconnection.



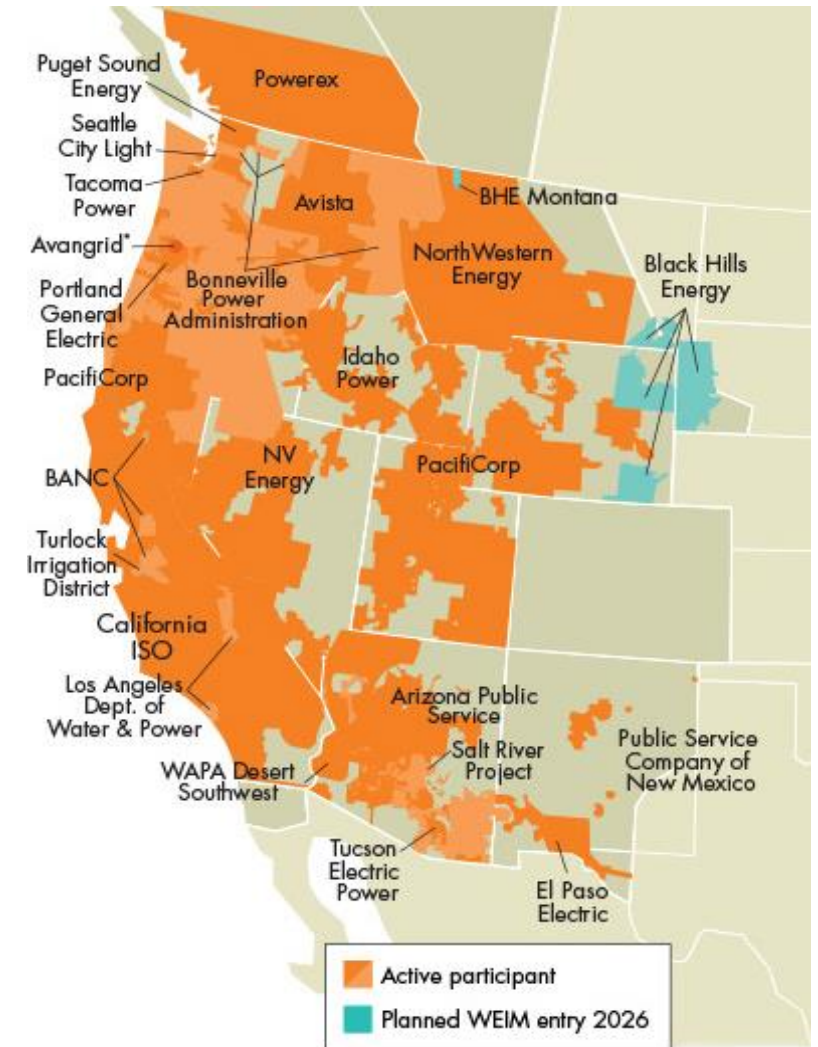
# Western Energy Imbalance Market (WEIM): economic, reliability and environmental benefits from the West's existing real-time market

- A **voluntary** market that provides a sub-hourly economic dispatch of resources for balancing supply and demand every five minutes.
- Allows utilities to **efficiently manage imbalances** between generation and load, honoring transmission and reliability constraints.
- **Benefits** accrue to all participating utilities and provide cost reductions for retail customers.

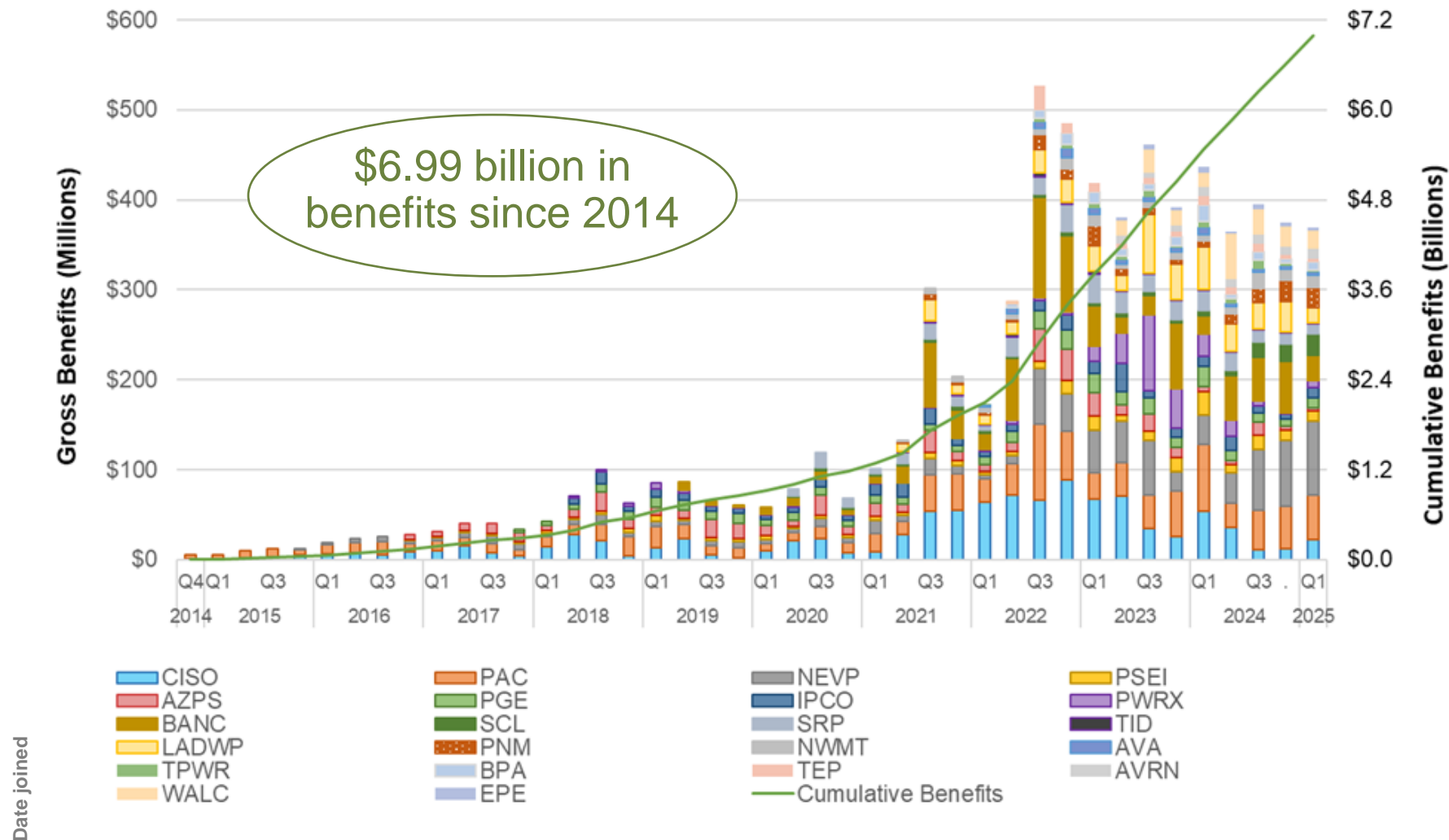
**Eleven**  
Western states

**80%** of demand  
in the West

**66%** of benefits  
accrued to BAs  
outside of CA



# WEIM delivering significant value to market participants and consumers

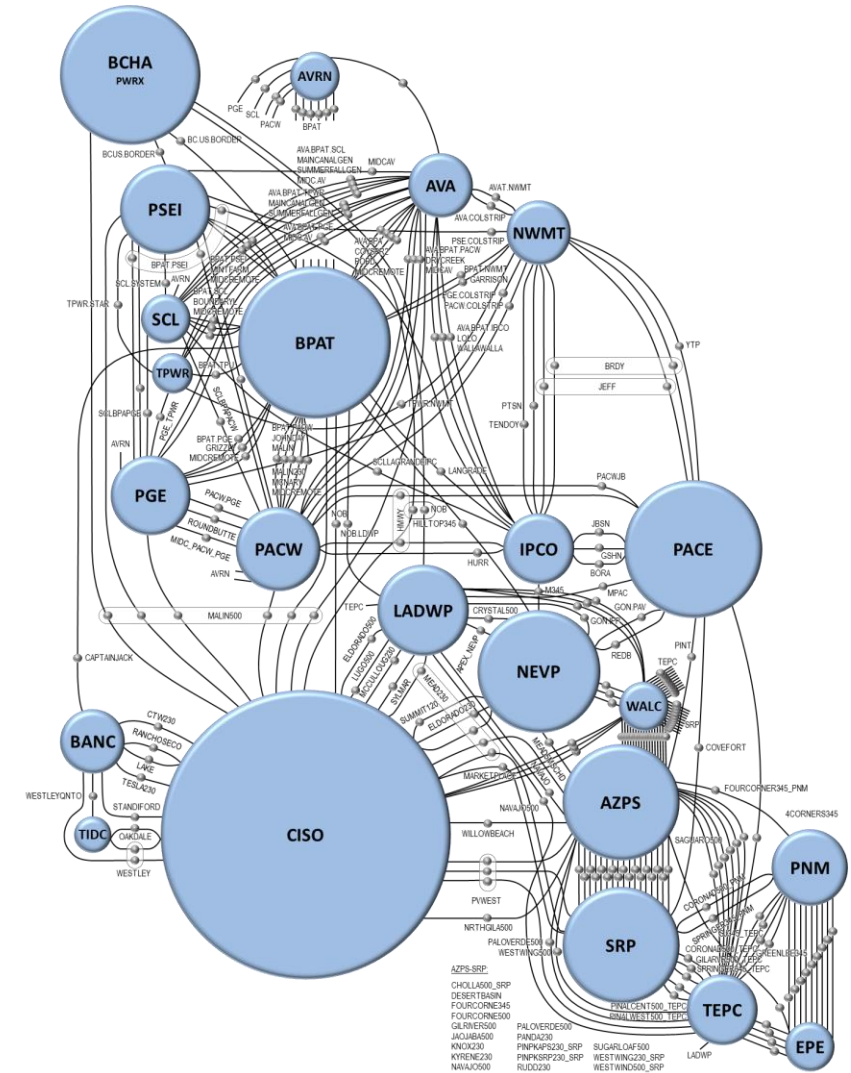
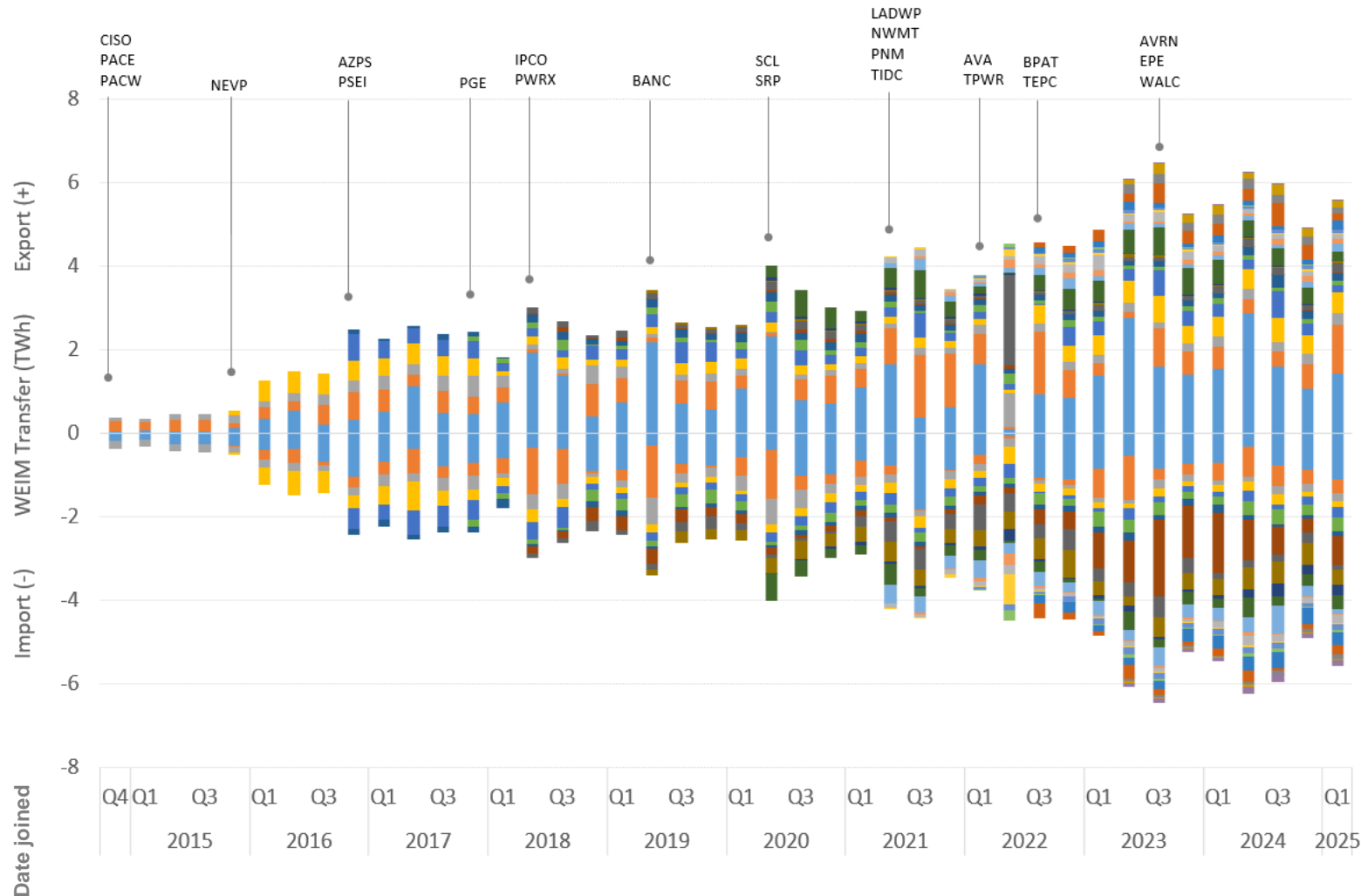


Cumulative economic benefits:

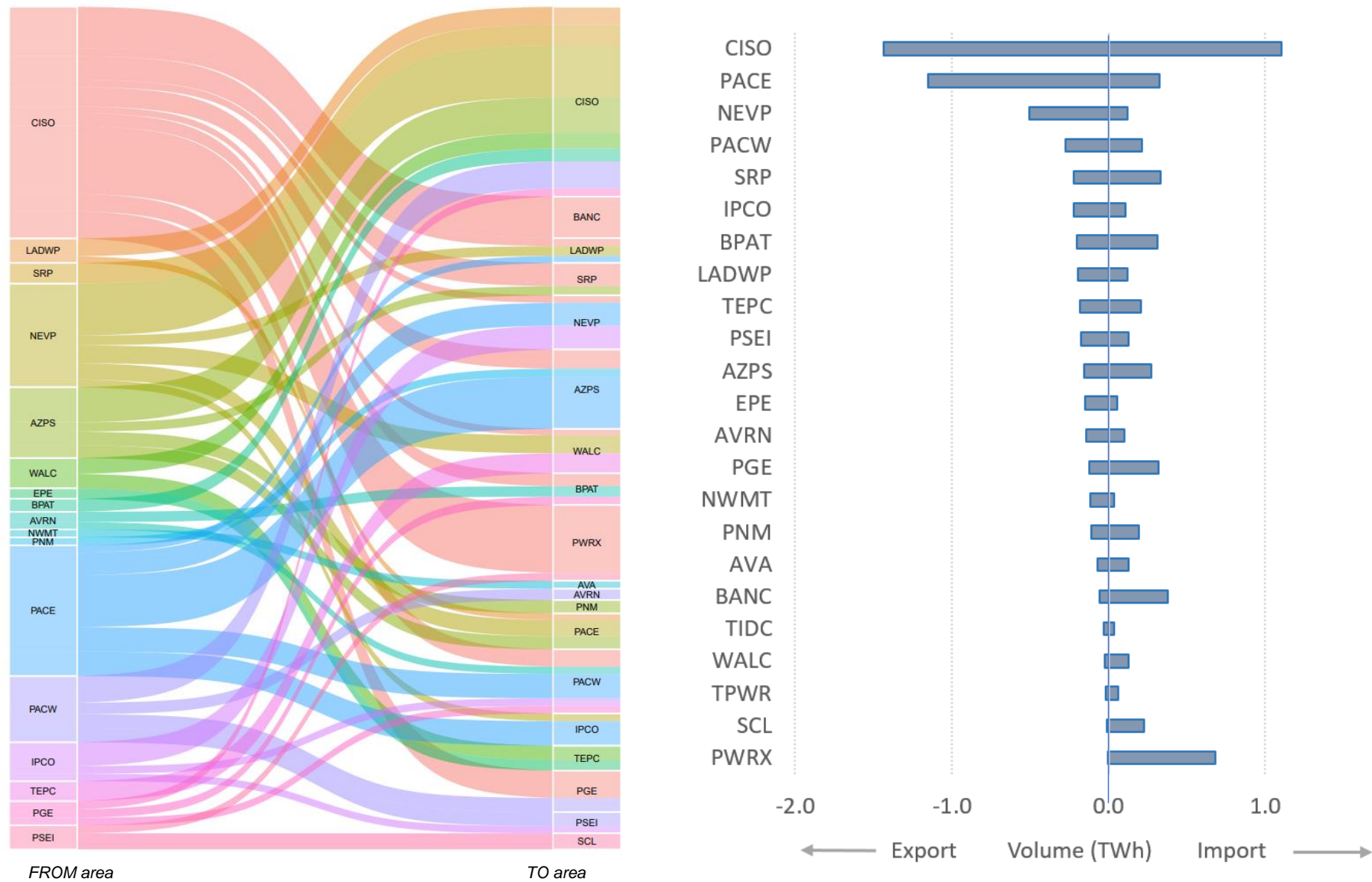
- **PacifiCorp**  
Joined November 2014  
\$988.23 M



# WEIM expansion increases the volume of economic transfers



# WEIM supporting robust volume of energy transfers in Q1 2025



# EDAM: a voluntary day-ahead market that builds upon benefits afforded through the WEIM

## Economic

- Optimized resource commitment across a wide footprint
- Production cost savings in serving demand with the least cost supply
- Studied incremental benefits of a Western day ahead market range upward of \$543M to \$1.2B annually

## Reliability

- Increased awareness - visibility of resources and grid conditions across footprint
- Improved operational confidence – positioning supply to meet changing conditions and uncertainty
- Reduced emergency declarations by positioning footprint confidently in day-ahead timeframe

## Environmental

- Shared surplus clean energy in day-ahead timeframe across footprint
- Reduction in curtailments of low-emitting resources
- Supports the diversity of all state's regulatory environmental policies

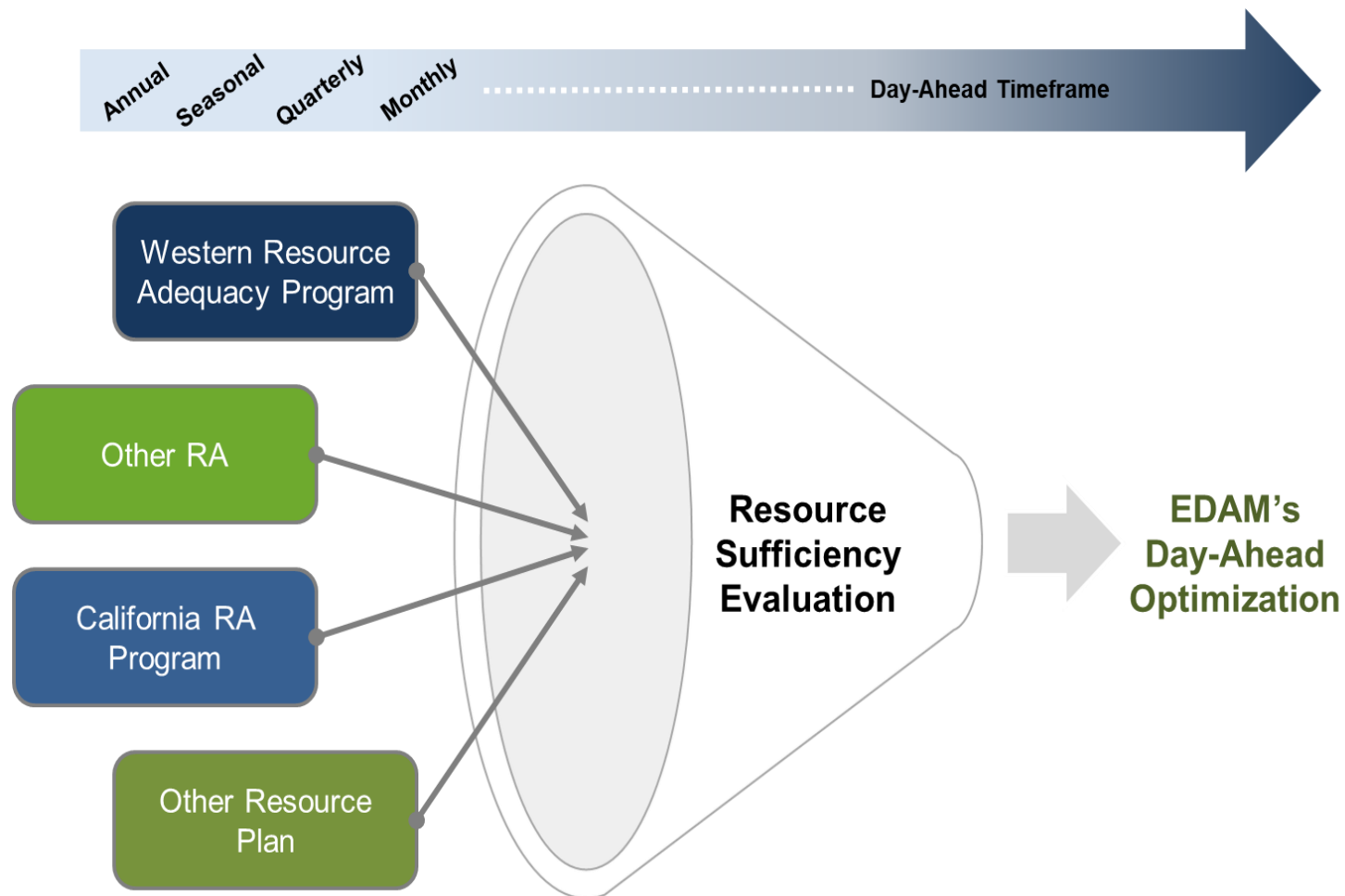


## Important EDAM structure and participation elements

- Voluntary participation at balancing authority area level
- No exit fees; 6 month exit notification requirement
- Ability to leverage existing systems and functionality
- Maximize transmission to support transfers between EDAM areas, while supporting existing OATT transmission rights
- Support transmission provider recovery of historical transmission revenues
- Daily resource sufficiency evaluation compatible with different resource adequacy and resource planning programs; no pre-requisite to participate in Western Resource Adequacy Program (WRAP)
- BAs retain key responsibilities for resource planning, transmission planning and reliability operation functions

# The EDAM resource sufficiency evaluation is a universal adapter for different Resource Adequacy programs

- Each balancing area offers sufficient supply into the market to meet its **next day** forecasted obligations.
  - Evaluation across all 24 hours
- Day-ahead evaluation tests that have sufficient bids to meet:
  - Load forecast
  - Uncertainty
  - Ancillary services



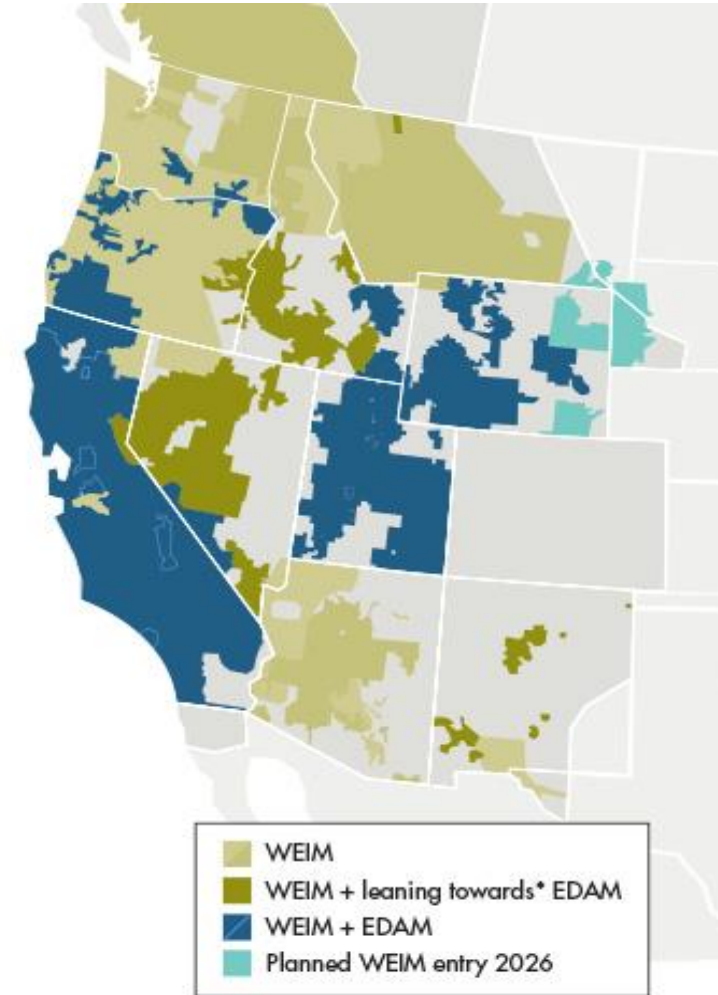
# Maximizing mutual gains: the impact of a coordinated Extended Day-Ahead Market (EDAM)

## Executed EDAM Implementation Agreements:

- PacifiCorp (2026)
- Portland General Electric (2026)
- Balancing Authority of Northern California (2027)
- Los Angeles Department of Water and Power (2027)
- Turlock Irrigation District (2027)
- Imperial Irrigation District (2028)

## Publicly Indicated Leaning Towards EDAM:

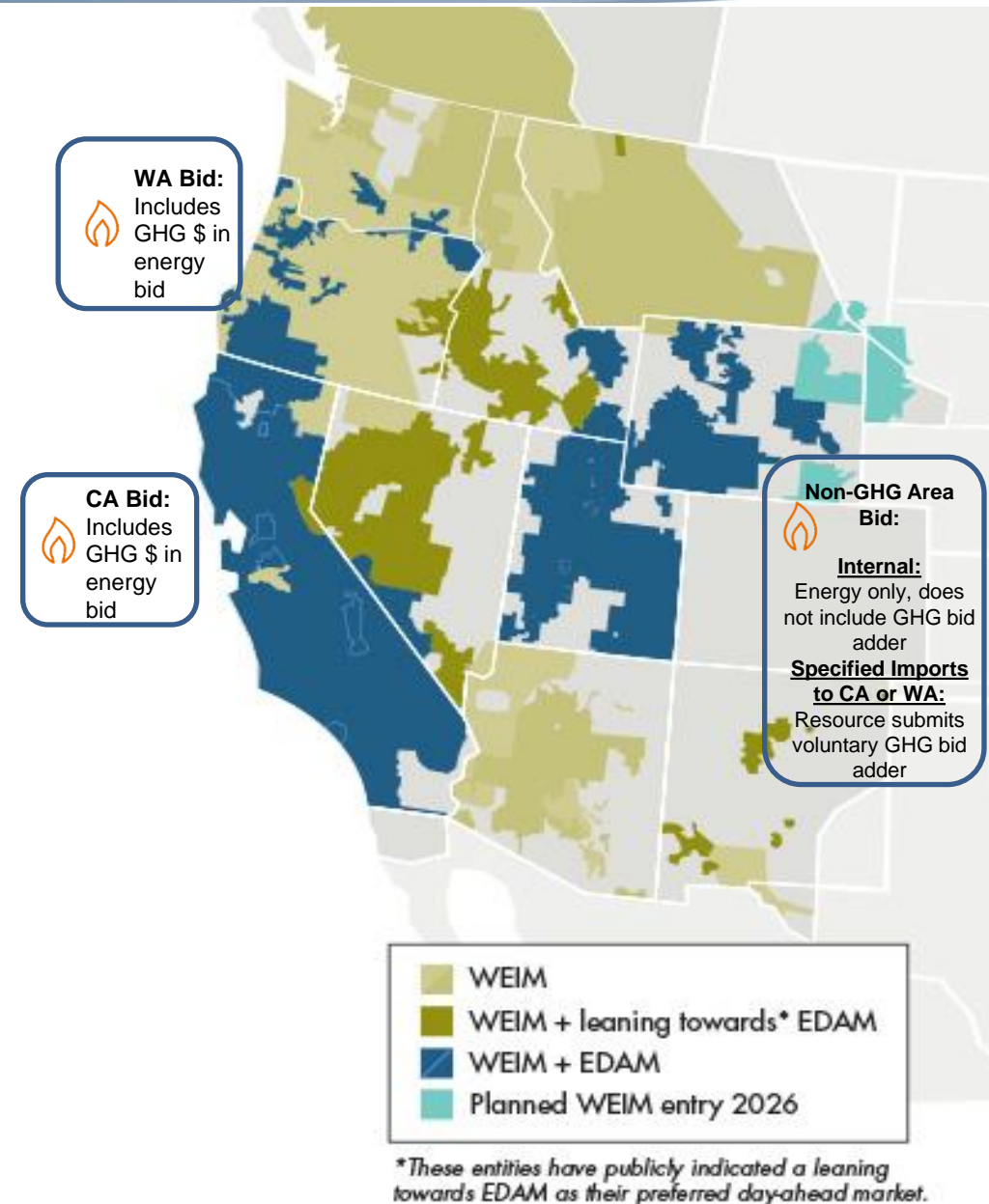
- Idaho Power Company
- NV Energy
- PowerWatch (formerly BHE Montana)
- PNM
- Arizona G&T Coops / WAPA-DSW



*\*These entities have publicly indicated a leaning towards EDAM as their preferred day-ahead market.*

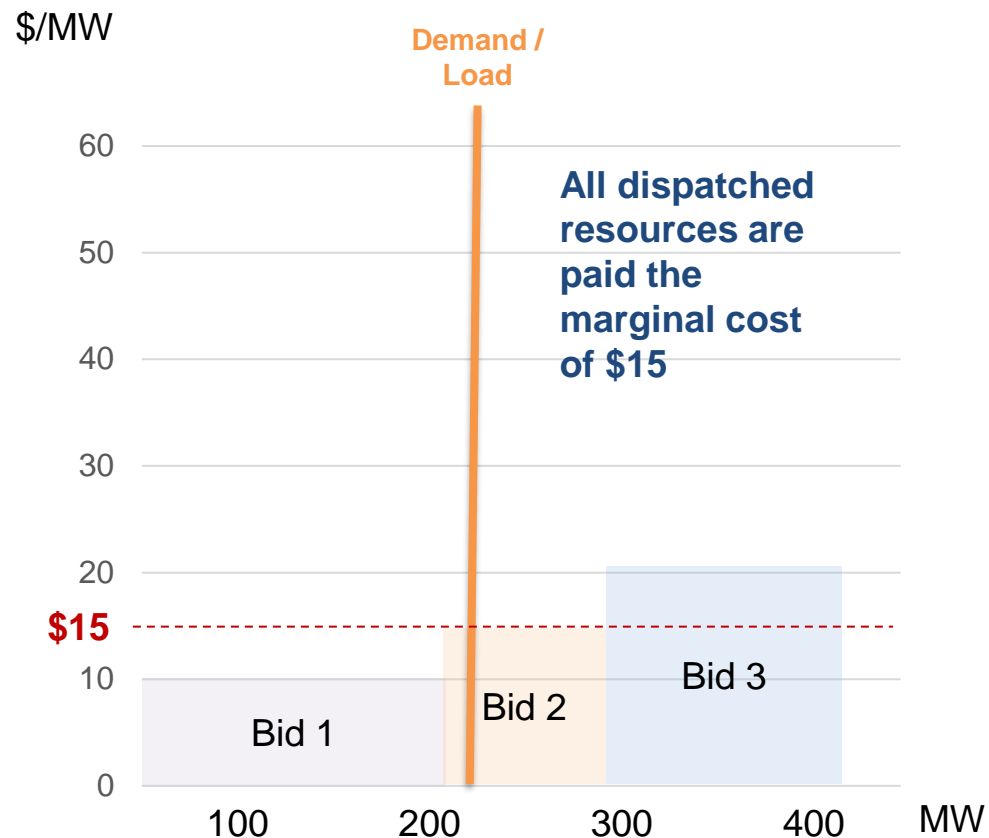
# GHG design in the WEIM and EDAM

- A GHG bid adder framework, to reflect GHG pricing, has been in place since 2014 in the WEIM (will go-live for WA in 2026)
- EDAM extends the existing WEIM framework so that resources can **voluntarily elect** whether to be committed and dispatched to serve load in multiple greenhouse gas areas (Washington and California in 2026)
- Non-GHG regulation areas dispatch and prices do not reflect GHG costs
- Provision of data and metrics to support utilities evaluation of compliance with state or regulatory programs

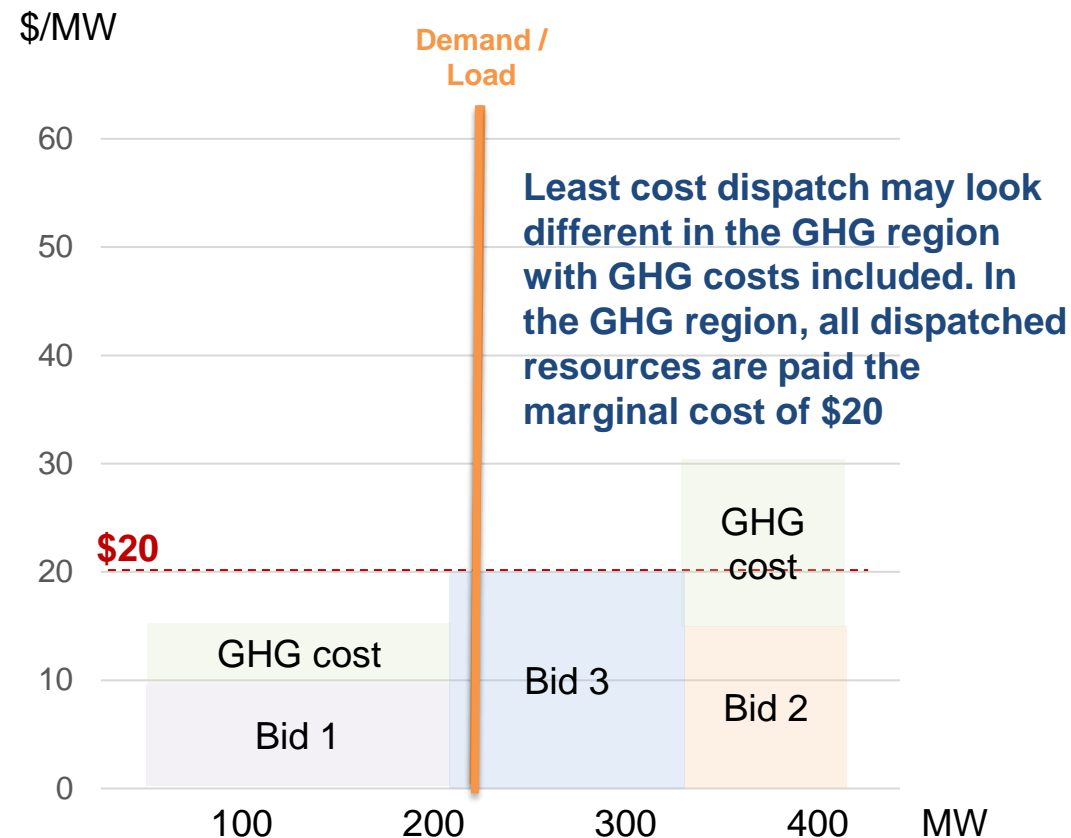


# GHG Design: GHG Region Load Pays for GHG Compliance Costs

## Non-GHG Region Bid Stack



## GHG Regulation Area Bid Stack



**Load is settled at the weighted average cost of all the generation that contribute to serving that load.**



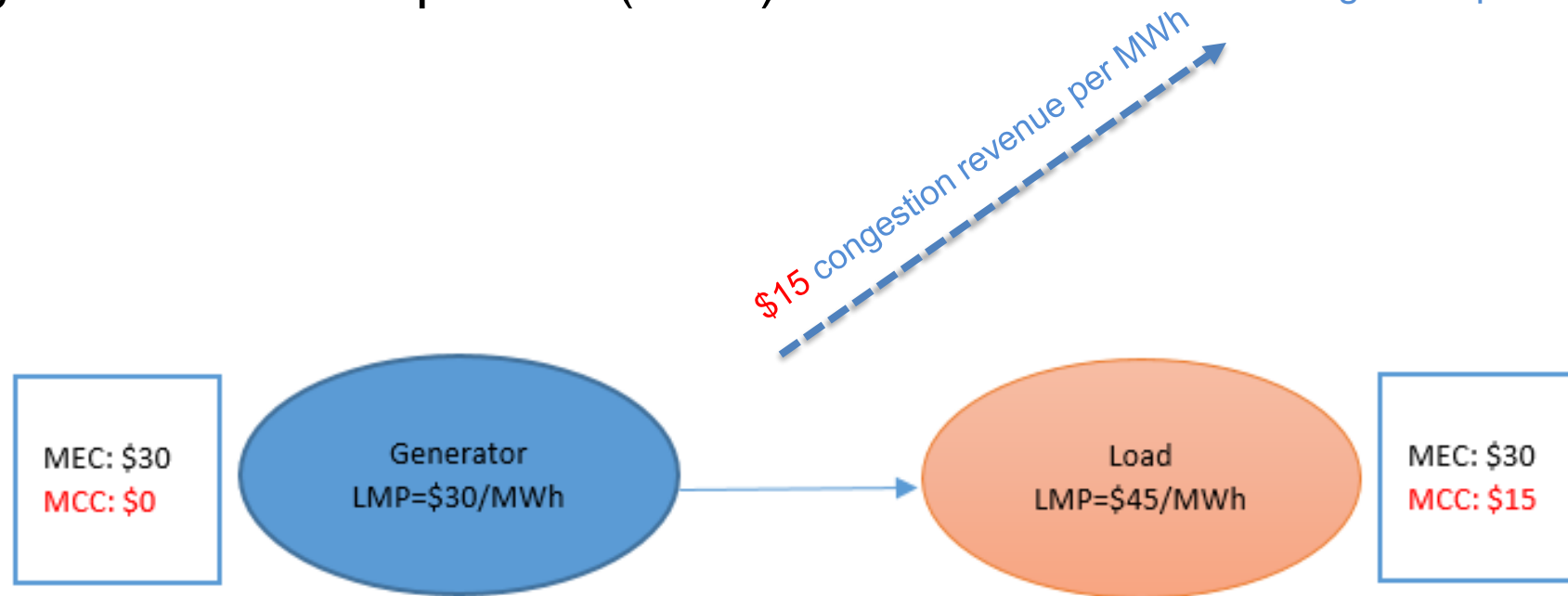
# Congestion Revenue Allocation: background

- In December 2023, the FERC approved the EDAM policy design which included provisions related to congestion revenue allocation accruing across the system between EDAM balancing areas.
- PacifiCorp, as the first EDAM participant, developed revisions to its Open Access Transmission Tariff (OATT) to support EDAM go-live May 2026.
  - PacifiCorp filed its OATT revision in January 2025.
- As part of the FERC proceeding on the PacifiCorp OATT revisions, concerns were raised about the EDAM mechanism for allocation of congestion revenues between participating balancing areas.
  - Seeking to mitigate congestion cost exposure for transmission customers exercising their firm OATT transmission rights.
- In response to the concerns, the ISO committed to launching an expedited stakeholder initiative to evaluate potential transitional mechanisms for allocation of congestion revenues.

# What is Congestion Revenue?

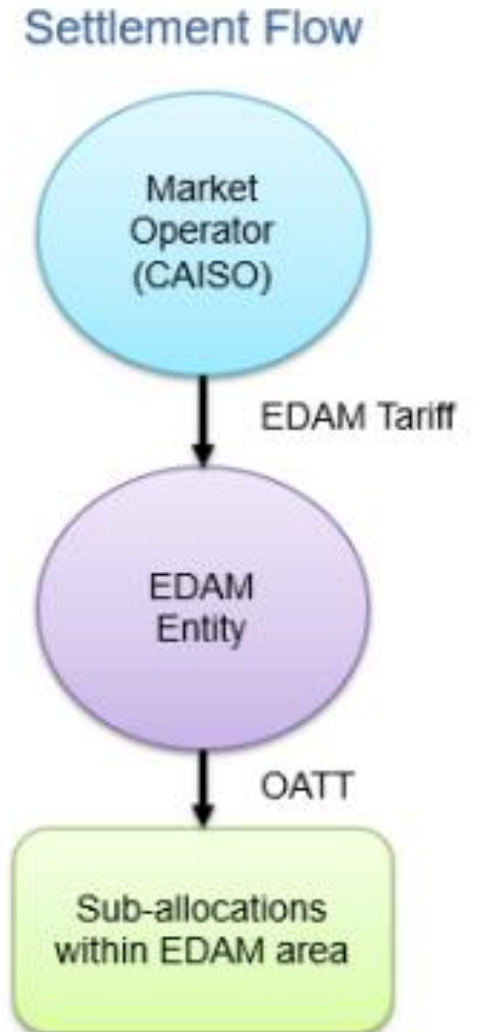
- Locational Marginal Price (LMP) components:
  - Marginal energy component (MEC)
  - Marginal congestion component (MCC)
  - Marginal losses component (MLC)

Congestion revenue is the money accrued when energy transactions are settled at congestion prices (MCC)



# Congestion Revenue Allocation in EDAM

- Congestion revenues in EDAM are allocated to the EDAM entity to further sub-allocate under the terms of their OATT.
  - Same deference as provided in WEIM today
- Under the current EDAM design, all congestion revenues are allocated to the balancing area where the transmission constraint is located.
- Undertaking an expedited initiative to consider enhancements that allocate revenues to the EDAM entity to enable additional congestion cost protections for transmission customers exercising firm transmission rights.



## *EDAM Congestion Revenue Enhancements Initiative*

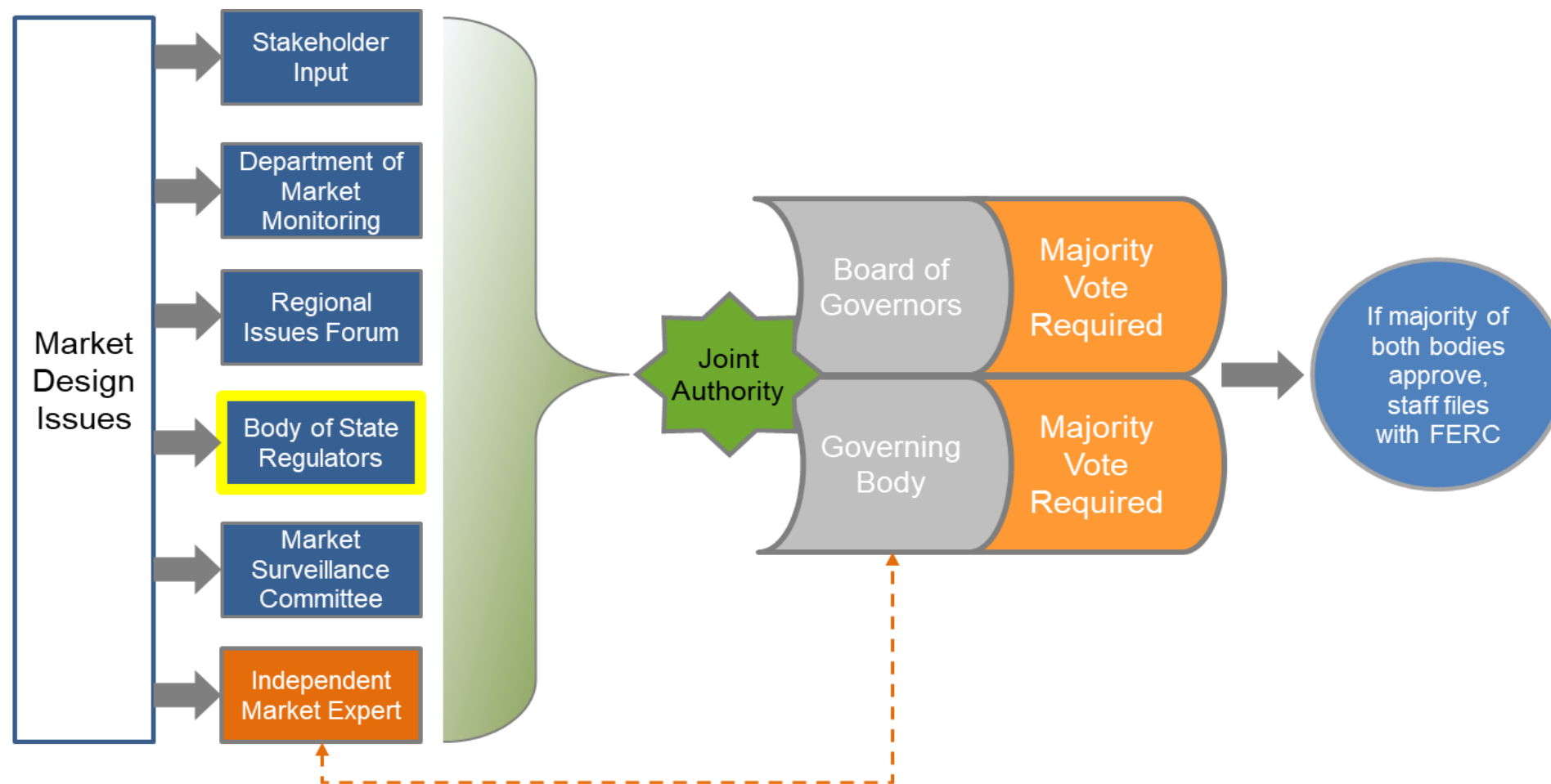
- The ISO proposes a targeted change to the design which would re-allocate additional congestion revenues to the EDAM entity for the exercise of eligible firm OATT transmission rights.
- The EDAM entity will be allocated parallel flow congestion revenues that affect the exercise of eligible firm PTP and NITS transmission rights.
- This design will enable the EDAM entity to provide greater, more complete, congestion cost protection (congestion hedge) to transmission customers exercising their firm transmission rights through the market.
- The ISO will re-initiate a stakeholder process prior to EDAM launch (2026) to consider further design enhancements informed by market operational experience.

## Initiative Next Steps

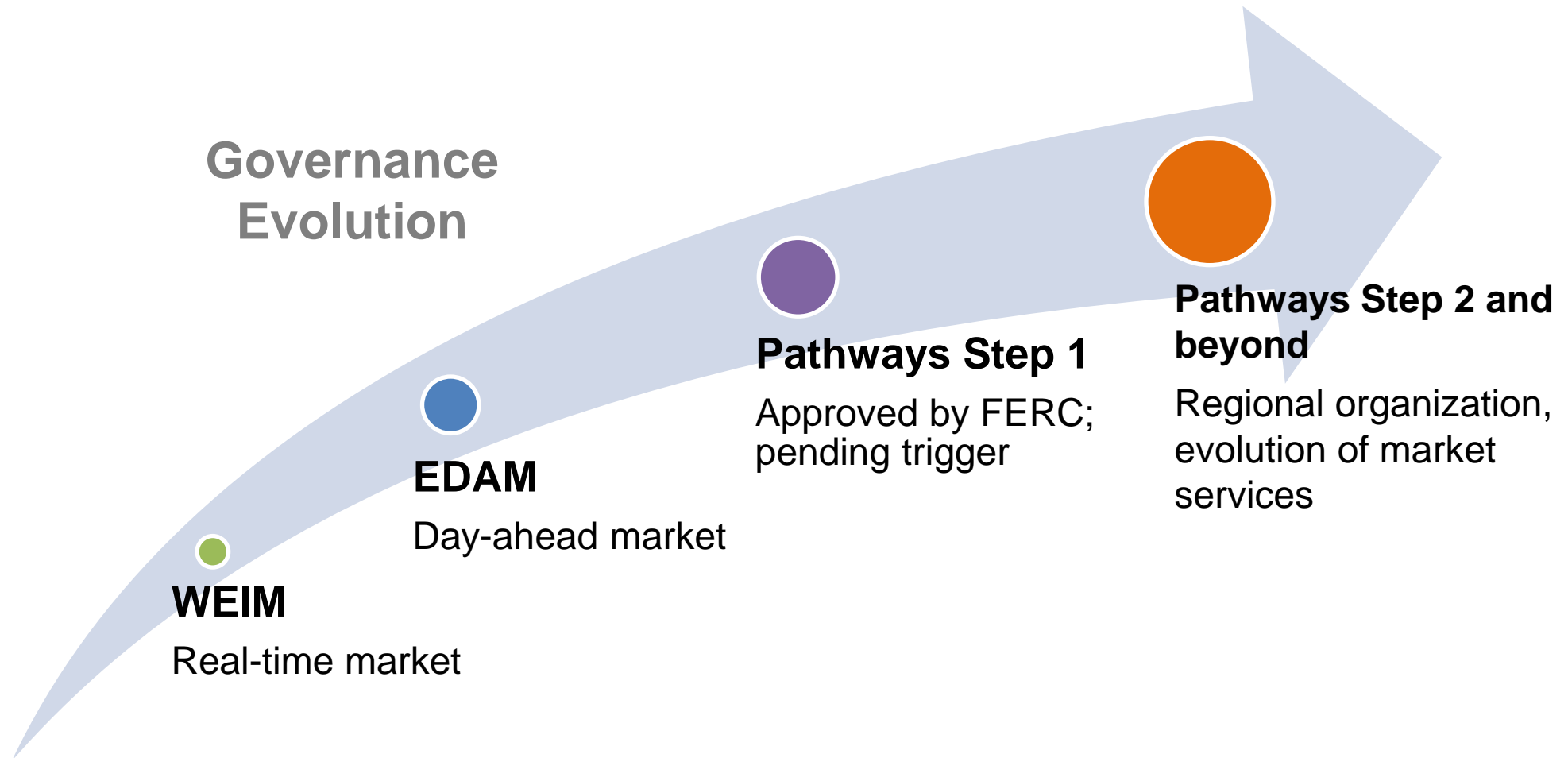
- Final proposal published on **June 6<sup>th</sup>, 2025**.
  - Informed by multiple iterations of proposals and stakeholder comments
- Joint-authority decision presented to ISO Board of Governors and Western Energy Markets (WEM) Governing Body on **June 19<sup>th</sup>, 2025**.
- If approved, FERC filing targeted by the end of June.
- Supports EDAM implementation in May 2026.



# Governance today: shared authority over regional markets between the ISO Board and WEM Governing Body



# As the western market expands, its governance structure evolves



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