

# Exhibit to Agenda Item #1

Authorize the Chief Executive Officer and General Manager to negotiate and execute all agreements necessary to facilitate SMUD's participation in the **California Independent System Operator Corporation (CAISO) Extended Day-Ahead Market (EDAM)**.

Board Energy Resources & Customer Services Committee and Special SMUD Board of Directors Meeting

Tuesday, August 15, 2023, immediately following the Finance & Audit Committee Meeting scheduled to begin at 6:00 p.m.

Auditorium, SMUD Headquarters Building

# Agenda

- Current Structure: Bi-lateral Markets, Balancing Areas, and Western Energy Imbalance Market (WEIM)
- What is the CAISO's Extended Day Ahead Market (EDAM)?
- EDAM and SMUD's Zero Carbon Plan alignment
- Key components of EDAM
- Key EDAM benefits for SMUD and customers
- Recommendation and timelines

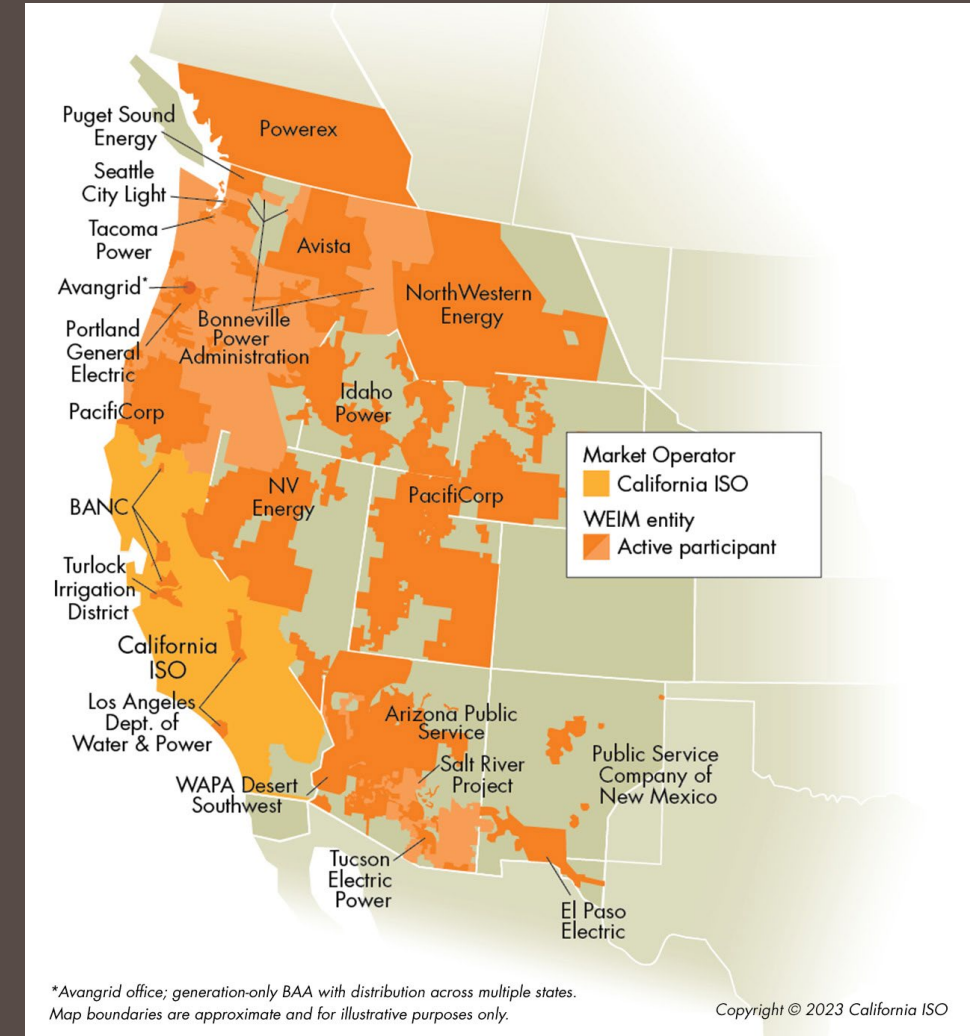
# Current Structure

## Bi-Lateral Market

- Energy markets in the Western Interconnect - from the Rocky Mountains west including parts of Canada and Mexico
- Transactions from next hour to years' long Power Purchase Agreements (PPAs)
- **SMUD's current primary market for Day-Ahead activity through several years ahead**

## CAISO Western Energy Imbalance Market

- Automatically finds low-cost energy to serve real-time consumer demand across the west
- Enhances grid reliability, generates cost savings for its participants, improves the integration of renewable energy
- **SMUD's primary Realtime Energy Market**
  - SMUD went live in April of 2019
  - Remainder of Balancing Authority of Northern California (BANC) joining in March of 2021



# What is the Extended Day-Ahead Market?

- Extends the real-time WEIM model to the day-ahead timeframe
- EDAM balancing areas retain resource planning, transmission planning and reliability functions
- Voluntary participation framework, like WEIM that provides for ease of entry and exit
- EDAM allows for incremental economic, reliability, and environmental benefits

# EDAM and Zero Carbon Plan Alignment

*By promoting decarbonization, reliable operations and economic efficiency, EDAM aids SMUD in achieving ZCP goals*

Three critical components of EDAM design:

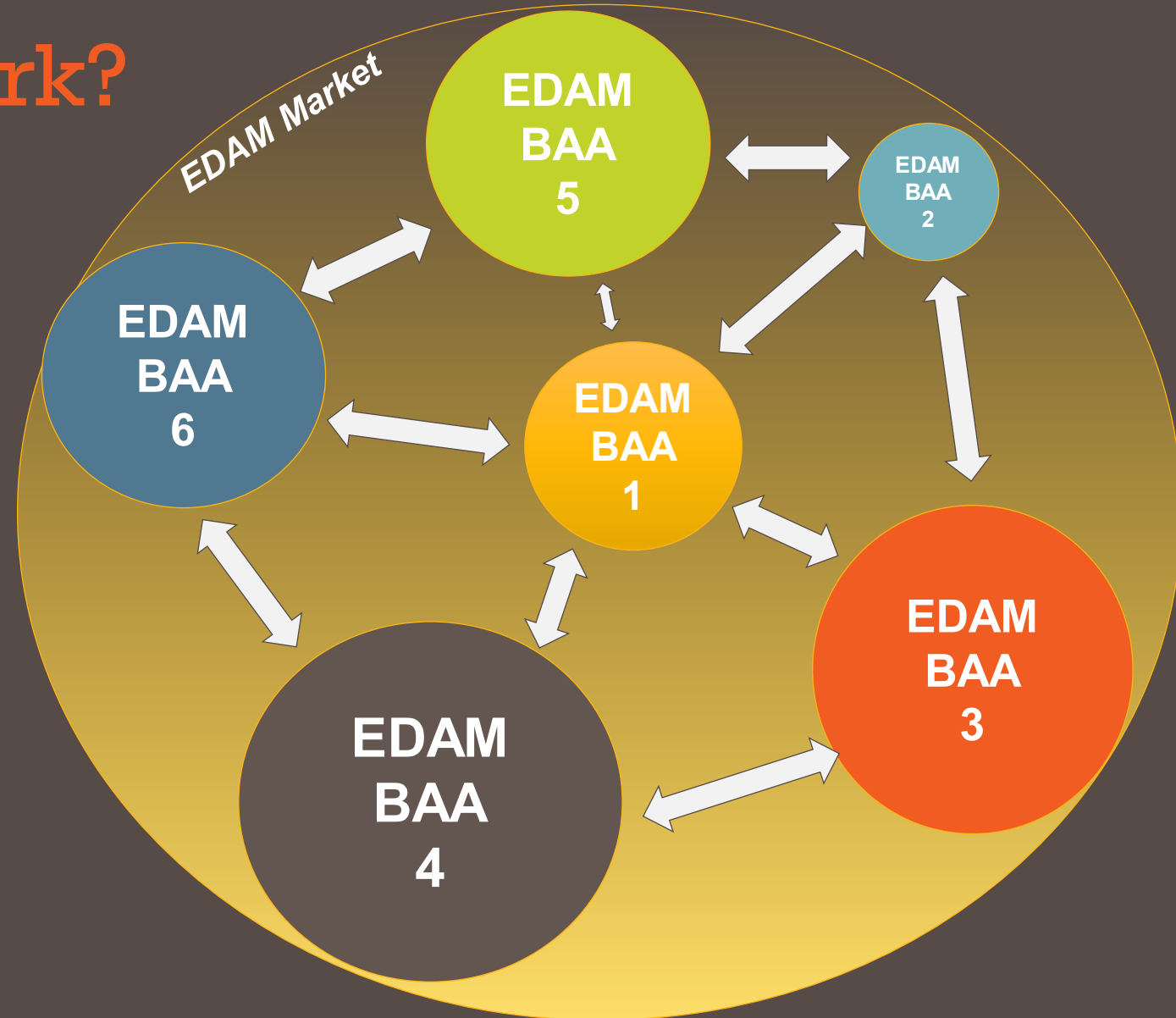
- Decarbonization – provides broader access to regional renewables
- Reliable operations – delivers regional diversity to time of day, fuel mix and weather conditions
- Economic impact – provides economic redispatch allowing for the lowest possible cost in serving load

Regional markets in the West have more momentum than ever in history. Few, if any, utilities in the West will exist outside of some form of an organized market.

# How does EDAM work?

Like WEIM, EDAM efficiently optimizes and transfers energy across market footprint, but in the day-ahead timeframe

\*Subject to transfer capability and ramping constraints\*



# EDAM Key Components:

**Self-Determination** allows participants to make decisions that reflect their individual environmental and economic goals

**Voluntary nature** of market results in low cost and ease of entry as well as low exit threshold

**Resource sufficiency** requirements ensure participants are fully resourced to serve their load prior to market participation

**Greenhouse gas** accounting methodologies/practices are not dictated by EDAM market

**Transmission costs** no longer charged on exports and replaced with new “market usage charge” expected to be fraction of prior charges, facilitating the most efficient use of resources

# Key EDAM Benefits for SMUD and customers from Brattle study:

## Operational Benefits and Costs

Study estimates an initial annual net value of up to \$5M and a one-time implementation cost of \$3.5M

## Supports local and regional decarbonization efforts

Participation in EDAM results in fewer renewable curtailments for both CAISO and SMUD

## Transparency in Operations

Economic benefits will lower the cost to serve our customer loads and reduce rate impacts



# Staff recommends SMUD move forward with Extended Day-Ahead Market participation

- To the extent practicable, staff recommends full BANC/SMUD participation in EDAM go-live in Spring or Fall 2025 as part of the “first mover” group of entities
- Staff requests Board of Directors to authorize CEO and General Manager or Delegate to negotiate and execute all agreements necessary to facilitate SMUD’s participation in EDAM