

AEPCO-CAWCD-SPPA-WAPA DSW Market Study Update #3
April 28, 2021

Study Participants & Objective

Arizona Electric Power Cooperative (AEPCO), Central Arizona Water Conservation District (CAWCD), Southwest Public Power Agency (SPPA) and the Western Area Power Administration's Desert Southwest Region (WAPA DSW) are collaborating to examine the prospects of participating in either the California Independent System Operator's Energy Imbalance Market (CAISO EIM) or the Southwest Power Pool's Western Energy Imbalance Service (SPP WEIS).

Benefits Analysis

- Conducted by Energy & Environmental Economics (E3)
- A representative future year: Calendar 2024
- Data originally developed by WECC's Transmission Expansion Planning Policy Committee (TEPPC)
- Base Condition Analysis
 - BAU: All four study participants do not join a market (Business As Usual)
 - EIM: All four study participants join CAISO's EIM
 - WEIS: All four study participants join SPP's WEIS
- WECC-wide production cost analysis
 - Day Ahead
 - Hour Ahead
 - Real Time
- Real Time Analysis: 5-minute time increments
 - For each future condition, WECC wide production cost was calculated for 105,408 discrete periods of time
- "Zonal" representation of generation, transmission, and loads

Estimated Annual Benefits

| | AEPCO | CAWCD | SPPA | WAPA DSW | Total |
|------|-------------|-----------|-----------|-----------|-------------|
| EIM | \$1,780,910 | \$(8,371) | \$501,936 | \$468,212 | \$2,742,687 |
| WEIS | \$790,828 | \$173,649 | \$108,419 | \$369,490 | \$1,442,385 |

No accounting of initial implementation cost or ongoing annual cost is included within these estimated annual benefit numbers.

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Cost Analysis

- Conducted by Utilicast
- Identified initial implementation costs & annual ongoing costs
- The principal costs associated with joining EIM or WEIS are: 1) labor, 2) information technology, 3) initial market fees and 4) annual market fees.
- As the BA and sub-BA operators, WAPA DSW and AEPCO would experience these costs directly and then pass these expenses on to others within their areas (including CAWCD and SPPA) through rates.

Estimated Initial Implementation Costs

| | AEPCO | WAPA DSW | Total |
|------|-------------|--------------|--------------|
| EIM | \$4,005,470 | \$14,882,418 | \$18,887,888 |
| WEIS | \$5,375,610 | \$12,857,504 | \$18,233,114 |

Estimated Annual Ongoing Costs

| | AEPCO | WAPA DSW | Total |
|------|-------------|-------------|-------------|
| EIM | \$335,000 | \$2,117,000 | \$2,452,000 |
| WEIS | \$1,095,000 | \$2,124,000 | \$3,219,000 |

The costs are shown in total for comparative purposes, the amount incurred for any given year is dependent on WAPA DSW and AEPCO's individual financing and rate structures.

Next Steps

Sensitivity analyses are being conducted in association with the benefits assessment. Upon completion, the ACSW Market Study effort will reach conclusion, after which each study participant expects to make a decision regarding market participation in collaboration with their stakeholders/customers, as appropriate.

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