

Energy Imbalance Market

RIF Meeting
December 3, 2019
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- Balancing Authority of Northern California (BANC) Overview
- BANC EIM Phased Approach
- MID Overview
- Decision Drivers
- Challenges

About BANC

- Joint Powers Agency formed by its members (Modesto Irrigation District, City of Redding, City of Roseville, SMUD, Trinity PUD, City of Shasta Lake)
- Became Operational on May 1, 2011
- ~5000 MW Peak Load BA
- Provides BAA services
- Serves as EIM Entity for CAISO EIM participation within the BANC BAA



- BAA Participants
 - BANC Members
 - WAPA SNR

- Operates with two sub-BA areas
 - SMUD sub-BA (SMUD only)
 - WAPA SNR sub-BA (WAPA SNR + remaining BANC members)

- Phase 1: SMUD Implementation
 - SMUD has been operating in the EIM since April 3, 2019
 - Staffed an EIM real-time scheduling desk
 - Estimated pay-back in two years
- Phase 2: MID, Redding, Roseville, and Western Area Power Administration (WAPA)
 - Go live April 2021
 - Plan to leverage SMUD systems and staff to reduce overall costs
 - Conducted a gap analysis for each utility

- Established in 1887
- Electricity, Water for Agricultural Use, Treated Water to City of Modesto for Domestic Use
- Electric service began in 1923
- Electric Accounts: 128,903
- All time peak of 700 MW
- Maximum Generation: ~475 MW

EIM Gap Analysis

- No major gaps identified
- Notable gaps include:
 - Procure software for submitting market bids and other information, settlements, meter data collection and submittal, and post-market analysis
 - Complete existing generator meter upgrade projects and connections to fiber optics
 - Sign up for a solar forecasting service

- Ensure access to robust resource pool as entities increasingly join EIM and transact less often in hour-ahead markets
- Maintain reliable operations with integration of increasing quantities of variable resources
- Expanded opportunities for market sales and purchases with expected modest financial benefits to MID customers
- Estimated gross benefits of ~\$2 million annually
- Implementation costs of ~\$3 million
- Estimated pay-back in 3 years

Phase 2 Challenges

- Coordination of efforts
- Transmission access
- Determining internal/external services for each participant
- Allocation of costs

Questions?