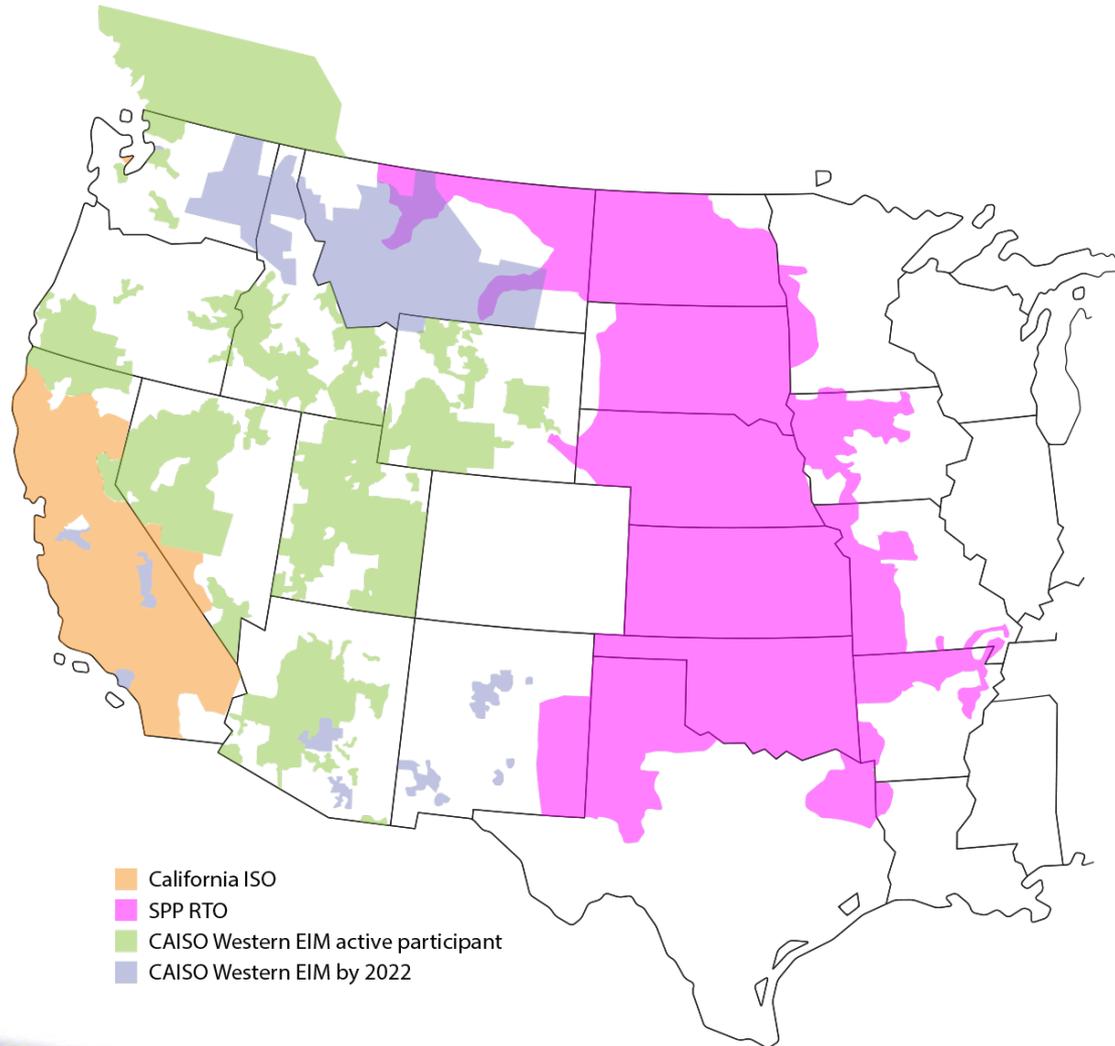


Energy Imbalance Markets in the West

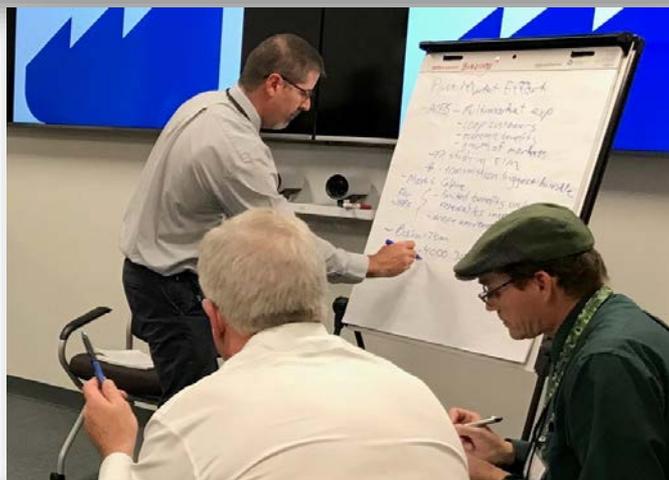
July 15 | Phoenix, AZ

Jim Kendrick
VP of Power Marketing

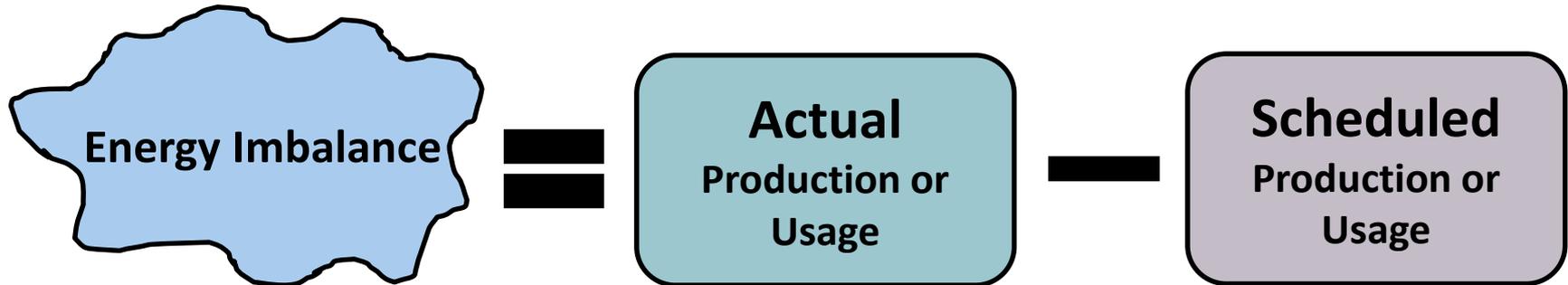
Markets are here



Markets in the West Workshop, April 9-10



Energy Imbalance & Energy Imbalance Markets



Today: WAPA handles imbalance for its balancing authorities

- We use either hydro or bilateral agreements to handle EI
- EI calculated and priced hourly
- Region settles and bills each customer

Future: Market Operator handles imbalance

- Market Operator optimizes market resources to supply EI
- EI calculated and Locational Marginal priced sub-hourly
- Market Operator does some or all settlement and billing

Why is WAPA interested in EIM/EIS?

Ensure reliable delivery of our hydropower while adjusting to a changing energy mix

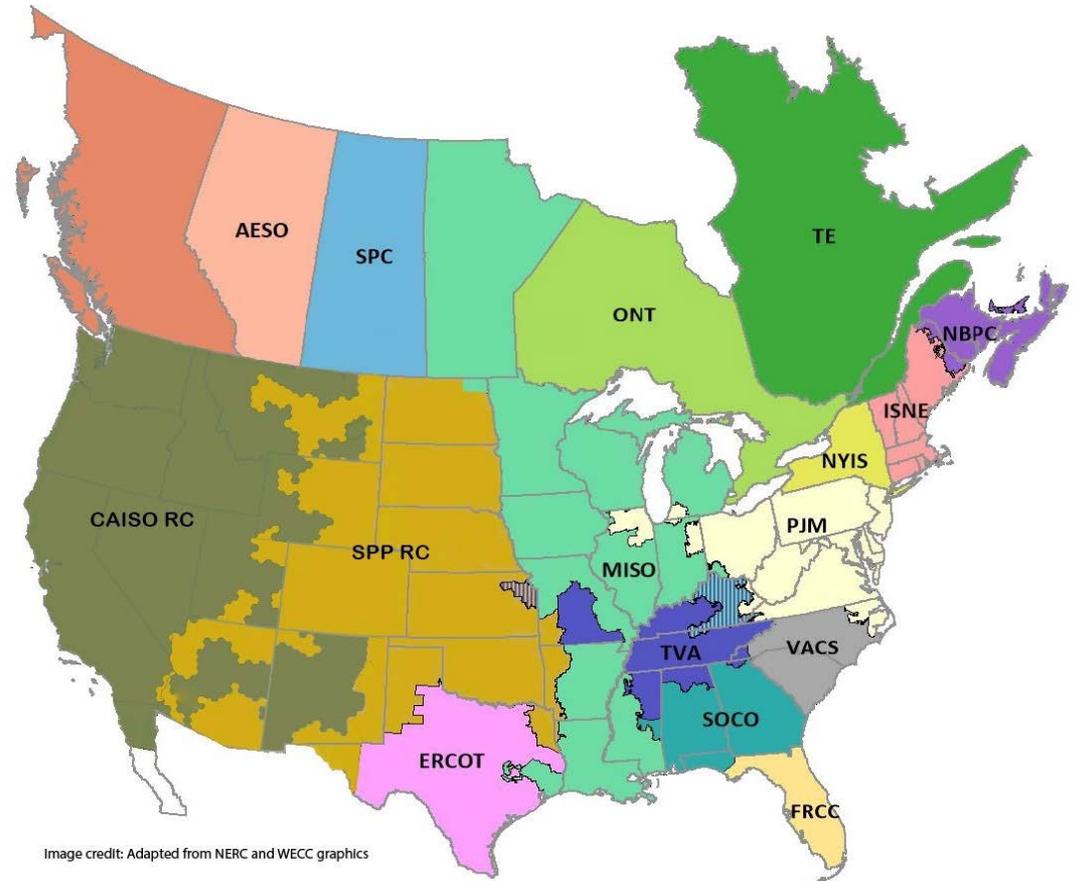
- Respond to customer feedback requesting WAPA to lead organized market discussions
- Address WAPA balancing authority limitations
- Facilitate integration of variable resources
- Enable participants who want to optimize their resources

Energy Imbalance Options

- WAPA reviewed CAISO's EIM in 2013
- WAPA received WEIS proposal from SPP last month
 - Need to ensure reliable delivery of our hydropower in a changing energy landscape.
 - We are NOT joining a full market; we are looking at participation in an energy imbalance service.
 - Focus on longer-term solutions to meet our needs in a rapidly changing environment.
 - We will engage with stakeholders and document our decisions.
- WAPA's considering CAISO's EIM as well
 - Especially for Sierra Nevada

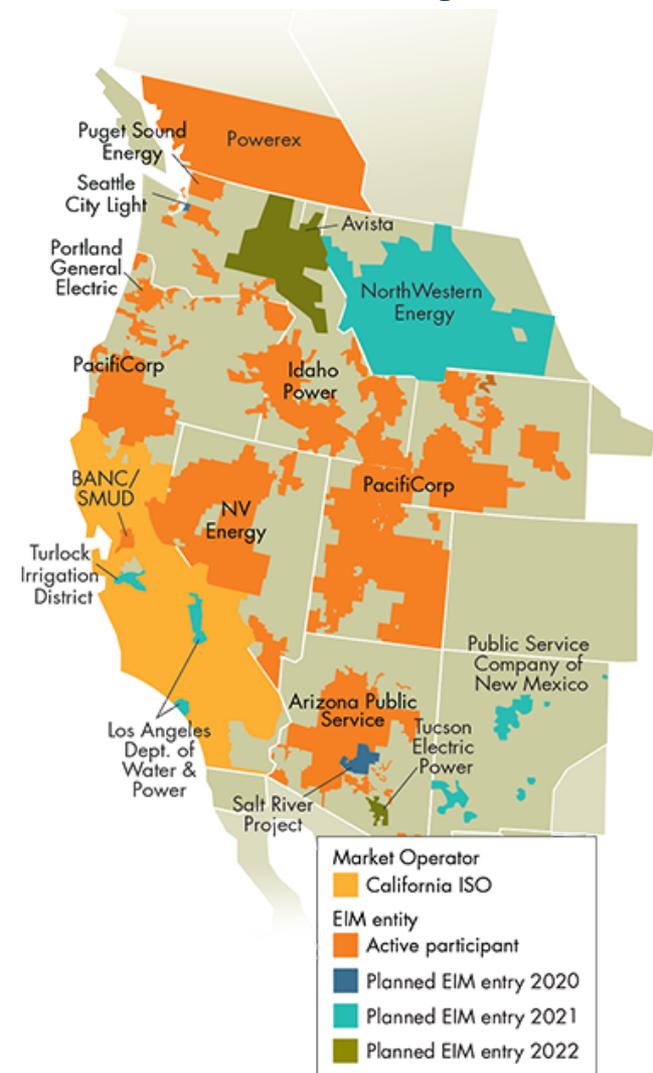
SPP Reliability Coordinator

- PEAK RC terminating RC services
- Parallel RC operations October and November
- SPP RC takes over Dec. 3, 2019
- Enables SPP to readily add market



California ISO EIM (Western EIM)

- BANC became active participant this year
- SN's sub-BA within BANC is evaluating options



SPP Western Energy Imbalance Service (WEIS)

June 17, 2019

SPP proposes Western Energy Imbalance Service Market to bring cost savings and grid modernization to the west

Southwest Power Pool (SPP) has announced to western utilities its proposal for the Western Energy Imbalance Service market (WEIS) it intends to launch in December 2020. The wholesale electricity market will balance generation and load regionally and in real time. SPP's previous energy imbalance market went live in 2007 and provided participants with \$103 million in benefits in its first year of operation.

[READ MORE](#)

SPP WEIS proposal

- Two meetings in spring 2019 on high-level design of WEIS
- SPP proposed market “go-live” Dec. 1, 2020
 - One year after RC “go-live”
- Additional market participants may be added at approximate 6-month intervals after go-live



Possible impacts to BA EI service

- Potential changes to Schedule 4 and 9 of OATT or BA contracts
 - EI ancillary rate changes would involve a *Federal Register* notice process and customer meeting
- Depending on implementation, this could entail a cost change of BA administration

Next Steps for DSW

- Review transmission capability
- Discuss today:
 - Joint Non-Disclosure Agreement for a study of energy imbalance options
 - Initial ideas for the study scope
 - Options for continued customer coordination

Feedback desired

Send comments or concerns to:

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Hoover Dam