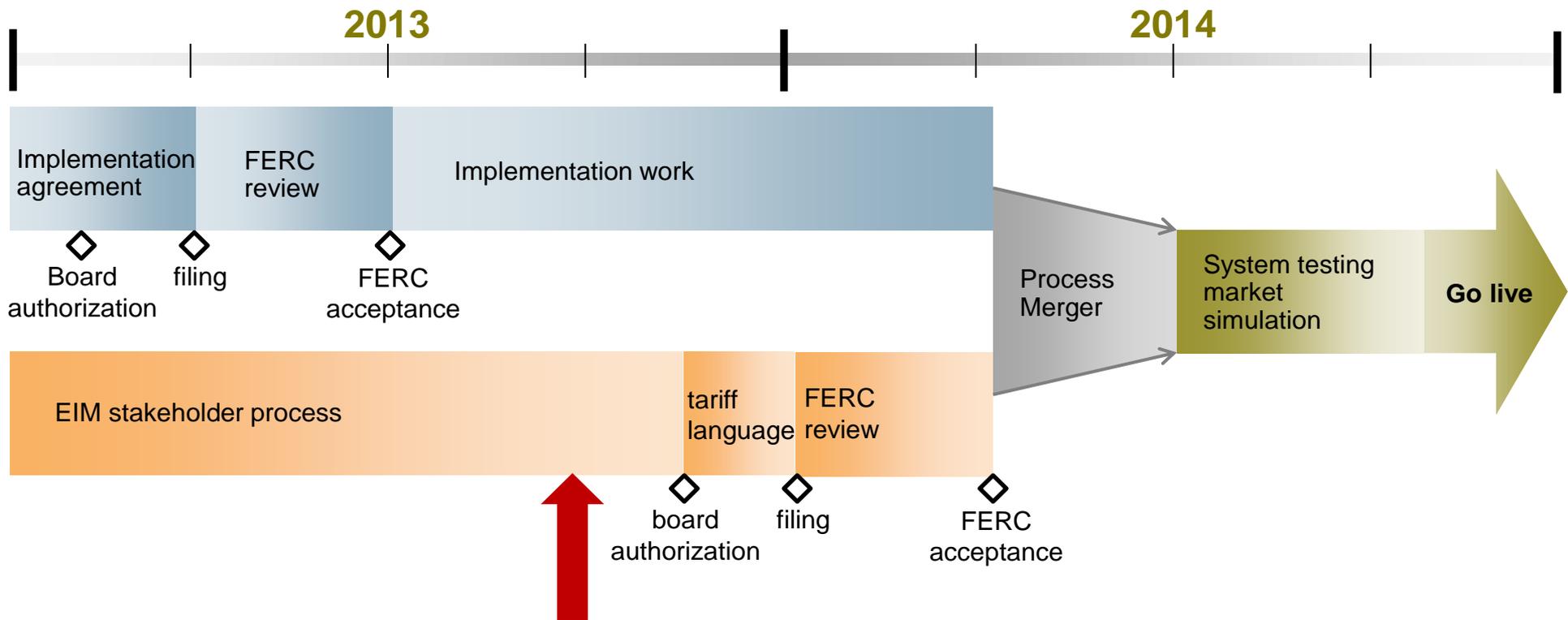


# Energy Imbalance Market

BPA Stakeholder Call – Meeting  
September 27, 2013

Mark Rothleder  
Vice President, Market Quality & Renewable Integration

# EIM stakeholder process is working in parallel with PacifiCorp implementation



# Comprehensive ISO Stakeholder Process engagement

- Launched April 2013
- Five stakeholder meetings in Folsom, Phoenix, Portland
  - Accompanied by proposal papers, revisions, and specific responses to stakeholder comments
- Six topic-focused technical workshops
- On-going (bi-weekly) BPA, PAC and ISO technical discussions
- Tariff stakeholder process
- EIM Governance stakeholder process
  - Proceeding separately toward Dec board decision
- PacifiCorp stakeholder process proceeding in parallel

# Scalable approach for implementing EIM

- EIM is automated sub-hourly economic optimization of loads and resources, including resources voluntarily bid into the EIM
- No critical mass required – each participant can enter EIM when ready
- Preserves participants' autonomy and current practices
  - Balancing authorities balance and provide their own ancillary services
  - Balancing authorities can trade bilaterally
  - Participants retain all physical scheduling rights
  - Flexible modes of participation are available

# Benefits of PacifiCorp-CAISO EIM

- **Interregional dispatch savings**, by realizing the efficiency of combined 5-minute dispatch and alleviate structural impediments currently preventing trade between the two systems accounting for GHG
- **Intraregional dispatch savings**, by enabling PacifiCorp generators to be dispatched more efficiently through the ISO's automated system (nodal dispatch software), including benefits from more efficient transmission utilization;
- **Reduced flexibility reserves**, by aggregating the two systems' load, wind, and solar variability and forecast errors; and
- **Reduced renewable energy curtailment**, by allowing BAs to export or reduce imports of renewable generation when it would otherwise need to be curtailed.

# PacifiCorp project implementation going well

- FERC order accepting PacifiCorp implementation agreement – June 28
- Completed data import and configuration for PacifiCorp SCADA system
- ISO now receives all PacifiCorp SCADA data via ICCP link into production EMS
- Built first version of the EMS network model for PacifiCorp West
- Completed initial mapping of data flow and system interfaces
- Started connectivity testing for metering systems
- Completed draft touch point mapping documentation for operations events, processes, and data flows

## Additional Information

- Draft Final Proposal, stakeholder comments and training can be found at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyImbalanceMarket.aspx>

- Further questions can be sent to Keoni Almeida at [kalmeida@caiso.com](mailto:kalmeida@caiso.com)