

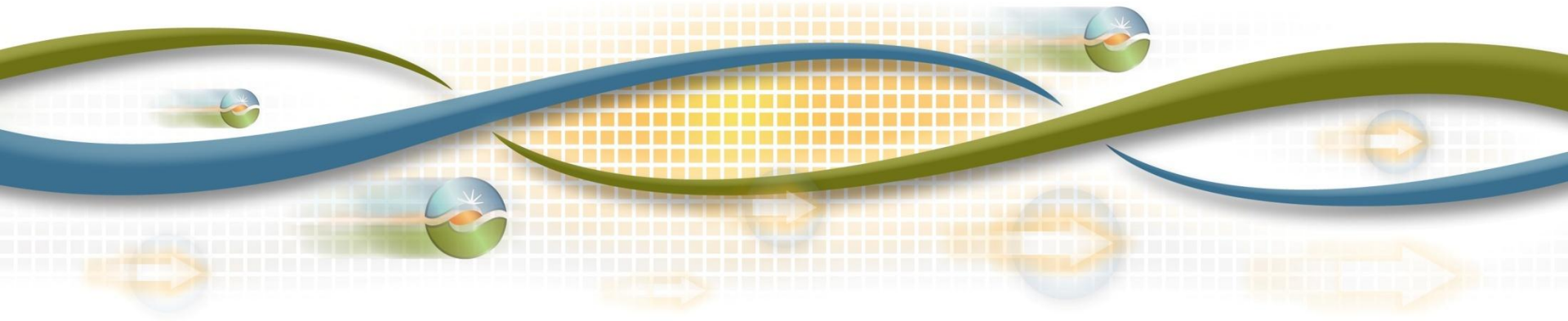


California ISO
Shaping a Renewed Future

Energy Imbalance Market, PacifiCorp Memorandum of Understanding, and Stakeholder Process

Stakeholder Conference Call

February 27, 2013



Purpose of Today's Meeting

- Introduce the EIM Concept
- Review the PacifiCorp MOU
- Clarify where we are at in the process
- Solicit feedback from Stakeholders
- Discuss the Stakeholder Process
- Identify the next steps

Agenda - 2/27/13

Time	Topic	Presenter
9:00 – 9:05	Introduction & Meeting Objective	Tom Cuccia
9:05 – 9:35	Explain Energy Imbalance Market Concept	Don Fuller
9:35 – 10:05	Review PacifiCorp Memorandum of Understanding	John Anders
10:05 – 10:20	Review the Stakeholder Process	Don Tretheway
10:20 – 10:30	Wrap-up & Next Steps	Tom Cuccia

EIM and MOU Background

- PUC-EIM group and EIM generally
- ISO proposal to the PUC-EIM
- Discussions with interested participants
- PacifiCorp MOU
- Introduce PacifiCorp

Energy imbalance market captures the benefits of the real-time market and 5-minute dispatches



What is “imbalance” and how does EIM help

- Balancing authorities (BA) start the hour with matched generation and forecasted load.
- Imbalances are load and generation deviations that occur within hour.
- Most BAs must procure extra reserves and dispatch manually to meet these imbalances.
- Five minute dispatch:
 - Finds least cost resources to solve imbalance,
 - Avoids congestion
 - Dispatches them automatically

Benefits of an Energy Imbalance Market

- Further enhances the ability to integrate renewable resources by dispatching every five minutes.
- Provides reliability and economic benefits to all participants.
 - Enhances reliability through real-time visibility across all balancing authorities
 - Captures benefits of geographical diversity of load and resources
 - Balances in real-time with least cost generation

California participants and new participants benefit.

- As balancing authorities join, annual benefits will accrue to both the new participant and the existing ISO participants

Benefit	Benefits New participant?	Benefits Existing ISO participants?
Reduced capacity and intra-hour reserves because of load and gen diversity, i.e. peaks and ramps at different times	yes	yes
More efficient dispatch across balancing authorities, esp. with renewable integration	yes	yes
More efficient 5 minute nodal dispatch	yes	Already benefit

ISO proposal uses existing market structure which allows for gradual expansion of the EIM.

- New participants pay their way through a front end charge based on their size and ongoing charges based on their participation.
- New EIM participants can join gradually, with ease of entry AND exit
- ISO can leverage existing market and energy management systems

PacifiCorp Memorandum of Understanding (MOU)

- Signed by CEOs Feb 12.
- Non-binding commitment to proceed with EIM
- Contemplates negotiation of an implementation agreement to be filed at FERC April 30.
- Presentation at March 20-21 ISO Governing Board meeting, seeking approval to:
 - Negotiate and file implementation agreement
 - Initiate stakeholder process to modify tariff for EIM
- Go-Live October 2014

MOU Principles

- Principles set the stage for the implementation agreement and stakeholder process
- 12 principles identified in the MOU, which address:
 - Compatibility with existing and emerging initiatives
 - Support for additional market participants
 - Implementation costs and ongoing charges
 - Governance framework
 - EIM market rules
 - Compliance with mandatory standards
- Pacificorp Comments

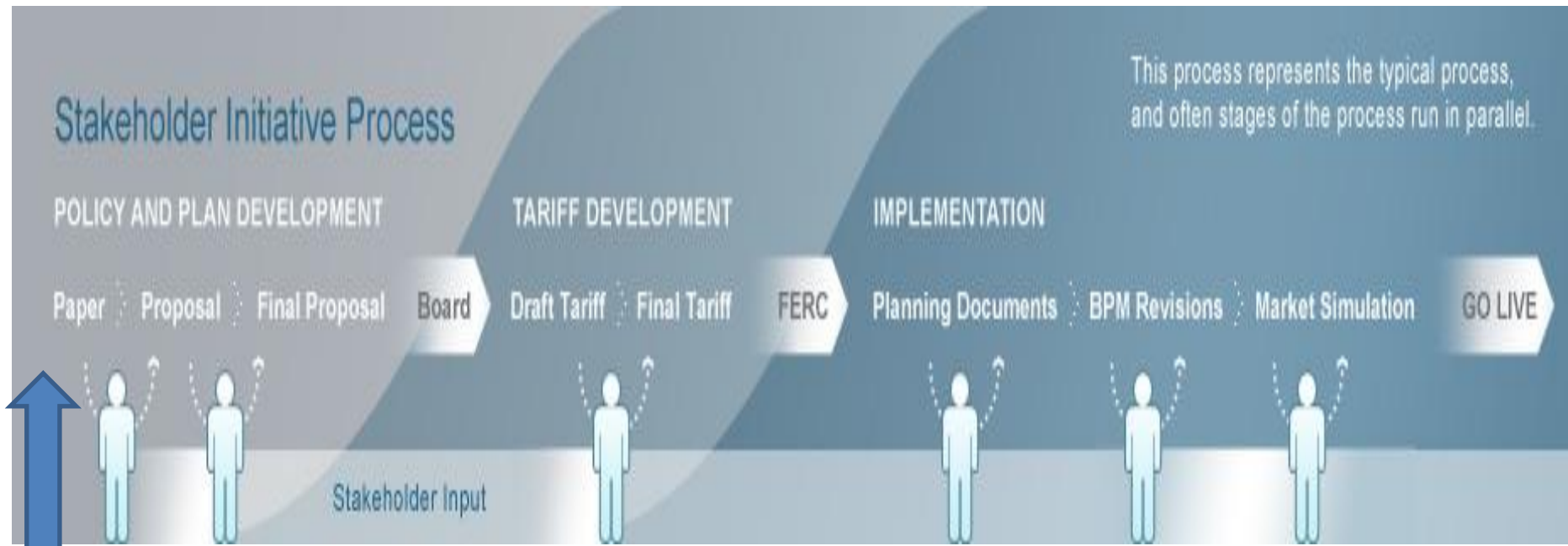
MOU Schedule

- Stakeholder process milestone schedule
 - March 20-21 board authorization
 - April stakeholder process starts
 - Sept-Dec 2013 ISO board approval of EIM market rules
 - Jan-Mar 2014 file EIM tariffs with FERC
 - October 2014 go live
- ISO-PacifiCorp project milestone schedule
 - Provides high level timeline for the parties

Topics to Address in Stakeholder Process

- New participant application windows
- What real time functionality is included?
- Requirements to support the EIM
- Provisions to mitigate leaning on EIM
- Compliance with NERC/WECC and state requirements
- EIM service agreements
- EIM oversight
- Other items based on Stakeholder input

ISO Stakeholder Initiative Process



Next Steps

- Board presentation March 20-21
- Launch stakeholder process in April with straw proposal and meeting
- Any comments can be submitted to:
 - EIM@caiso.com or
 - Don Tretheway at 916-608-5995
- Submission to ISO Governing Board Nov 2013
- File Tariff with FERC Jan 2014
- Implementation October 2014