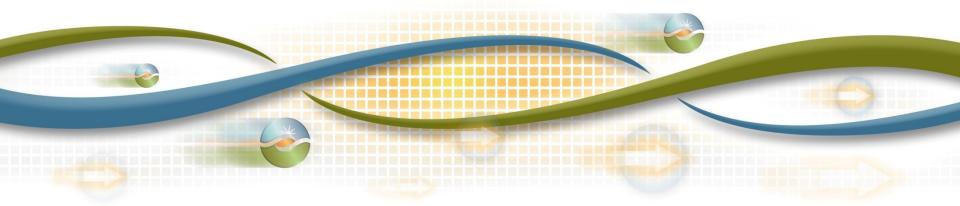


# Briefing on energy imbalance market deployment

> Mark Rothleder, VP, Market Quality and Renewable Integration

EIM Transitional Committee meeting General Session December 19, 2014



# EIM Implementation Update (1)

- December 1 FERC approved temporary waiver:
  - Price based on marginal bid instead of ISO relaxation parameters starting November 14.
  - Filed first 30-day report to FERC pursuant to FERC approval of waiver
- 3,150 MW of participating resources added
- Enhance tools to increase visibility of situational awareness of balancing and ramping capability.
- Completed training on process to inform market of response to outage events.
- Added resources deviation displays

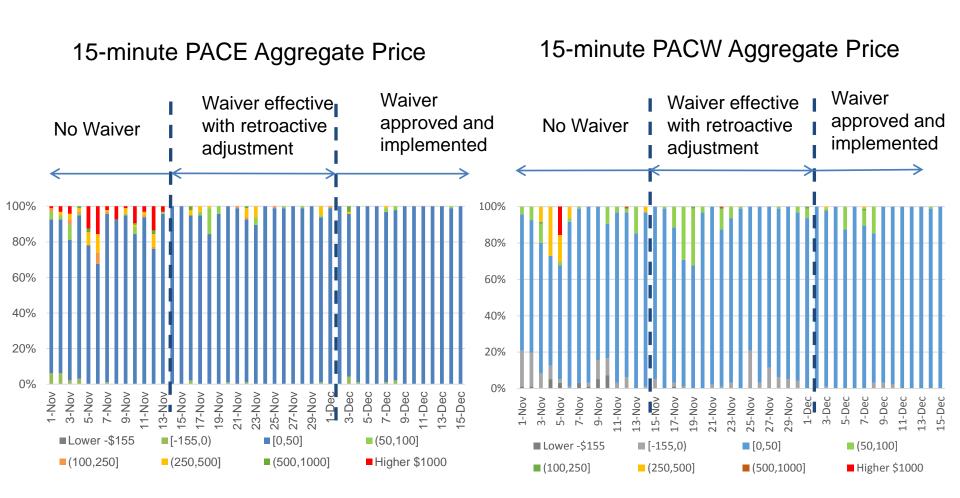


# EIM Implementation Update (2)

- Pricing performance improves with reduction of price excursions.
- Bi-directional 15-minute transfers continue:
  - Transfers from PacifiCorp to ISO reduced during period of COI north to south congestion.
- 5-minute transfers active between PACE and PACW.
- Continue to test 5-minute transfer capability across COI.



# 15-Minute price frequency in PACE and PACW

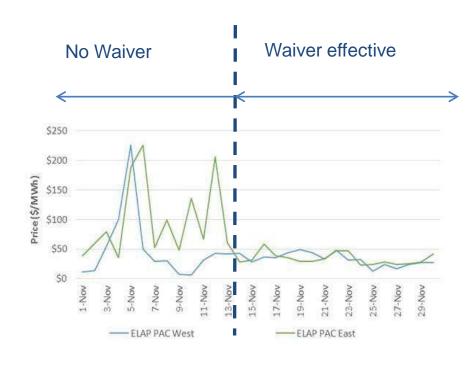


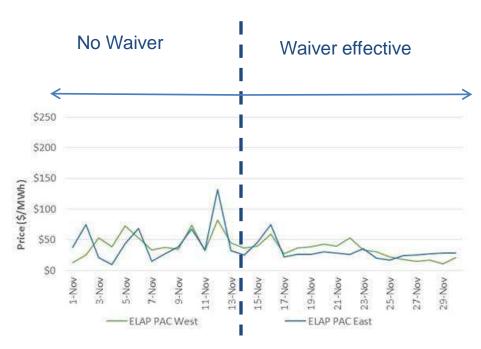


#### Prices stabilized after November 14

#### 15-minute PACE Aggregate Price

#### 5-minute PACW Aggregate Price

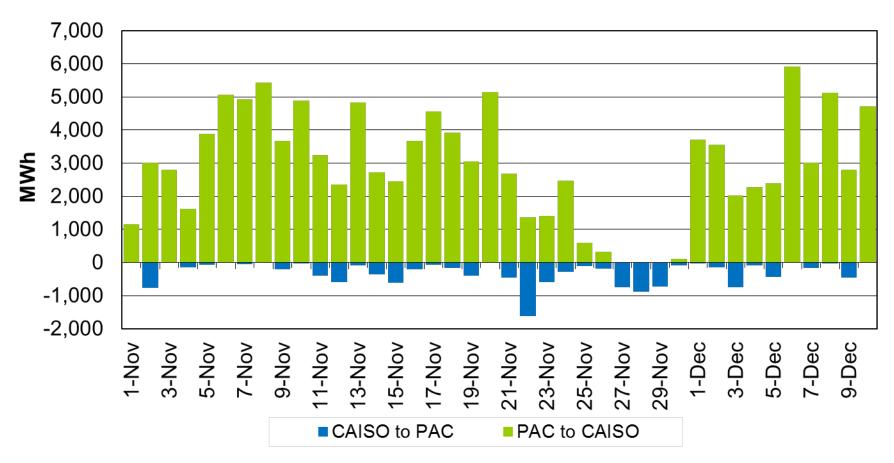






### 15-minute transfers between PacifiCorp and ISO

(+) PacifiCorp to ISO / (-) ISO to PacifiCorp





# Questions

