WESTERN ENERGY IMBALANCE MARKET

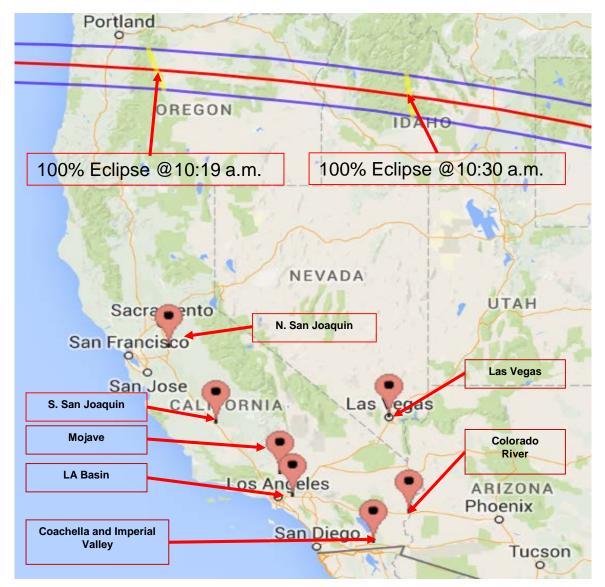
Briefing on ISO Preparations for Solar Eclipse

Deane Lyon Shift Manager

EIM Governing Body Meeting General Session July 13, 2017



How will the Aug. 21 eclipse affect the west?



WESTERN EIM | SC California ISO

EIM Participant solar resources as reported by Peak RC

Entity	Distribution MW	BES Connected MW
APS	350	500 (270)*
NVE	200	590
PAC	25	915
PSE	25	0
Total	600	2005 (1775)*

* APS 230 MW solar facility may be out of service for eclipse



Preparations for the eclipse

- ISO's Short-Term Forecasting group has advised EIM entities to account for the effects of the eclipse in their Variable Energy Resource (VER) schedule submittals
- Day-ahead market simulation completed results being evaluated
- Table-top exercises / training for real-time personnel
- Biweekly conference calls with EIM entity operations personnel to address issues or concerns leading up to the eclipse
- All EIM entities intend to keep EIM transfers fully operational during eclipse
- Calls will continue biweekly or as needed thereafter
- ISO Customer Service is scheduling a stakeholder meeting with EIM entities prior to the eclipse



ISO preparations - Short-Term Forecasting

Schedule	Task	
Ongoing	 Forecast Service Provider (FSP) renewable resource forecasts – Comparing their estimates with ours Collaboration with EIM FSPs 	
 1 week before the event & ongoing thereafter 	 Update VER & load forecast values based on forecast Communicate regulation requirements based on forecast Verify FSP resource specific forecasts transferred into ISO system and are reasonable 	
 Morning of event, no later than 0700 	 Verify FSP resource specific real-time forecasts transferred into ISO system and are reasonable 	

During the eclipse

Additional Regulation	SC interaction
 Use of Flexible Ramping Product 	 Coordination with Peak RC
 Special operating guideline 	Hydro generation flexibility
Use of EIM transfer capability	• Flex alerts*
 Market participant coordination 	 Pre-curtailment of renewables*
 Limit ramp rate on return of Solar* 	 Suspension of virtual bids*
 Manual operator intervention* 	• Day +2 conference bridge
 Gas supply coordination 	

ISO Forecast Service Providers will **produce a forecast accounting for the solar eclipse** that will automatically feed through the ISOs daily processes. The aggregate forecast for large scale solar will be available to the market participants, as well as public, through the OASIS applications.

* = Potential processes that may be used

Western eim

🍃 California ISO

Questions?

