### WESTERN ENERGY IMBALANCE MARKET

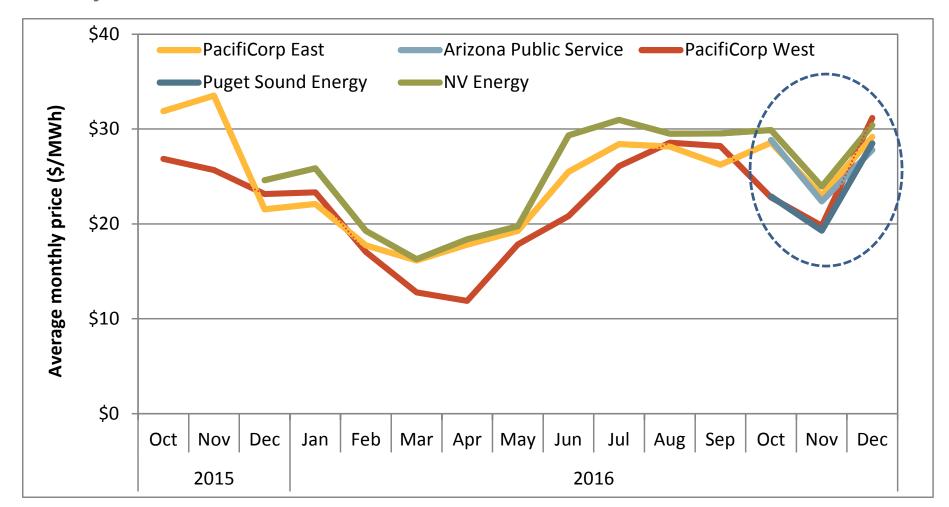
### Department of Market Monitoring Update

Eric Hildebrandt
Director, Department of Market Monitoring

EIM Governing Body Meeting General Session February 1, 2017

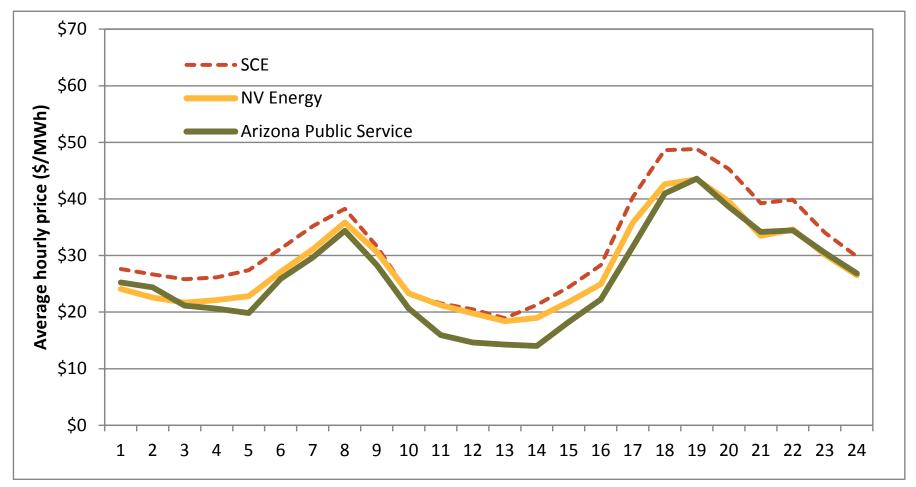


## Prices in new EIM areas tracking closely with other adjacent EIM areas





# Prices in APS area tracking closely with SCE area prices and net load

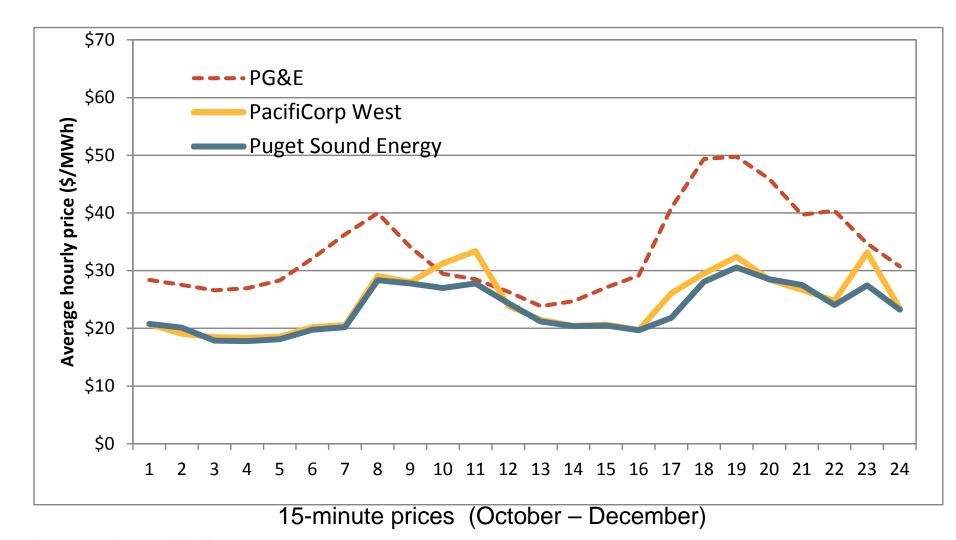


15-minute prices (October – December)





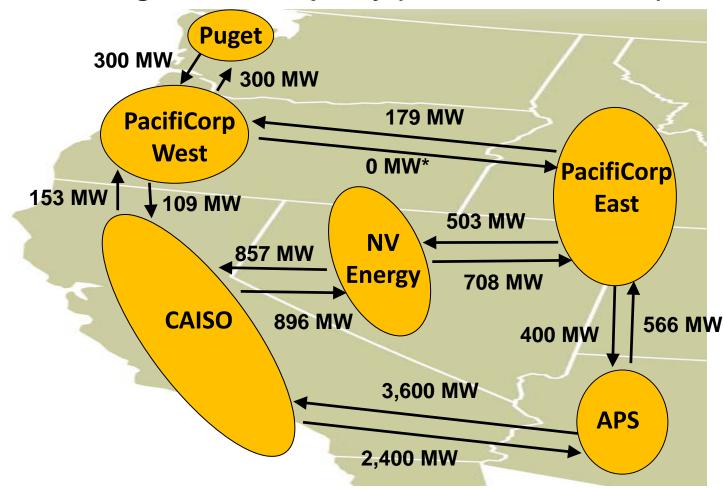
## Average prices in PSE area lower than PG&E area due to congestion and GHG costs





## Growth in EIM transfer capacity significantly increases market competiveness

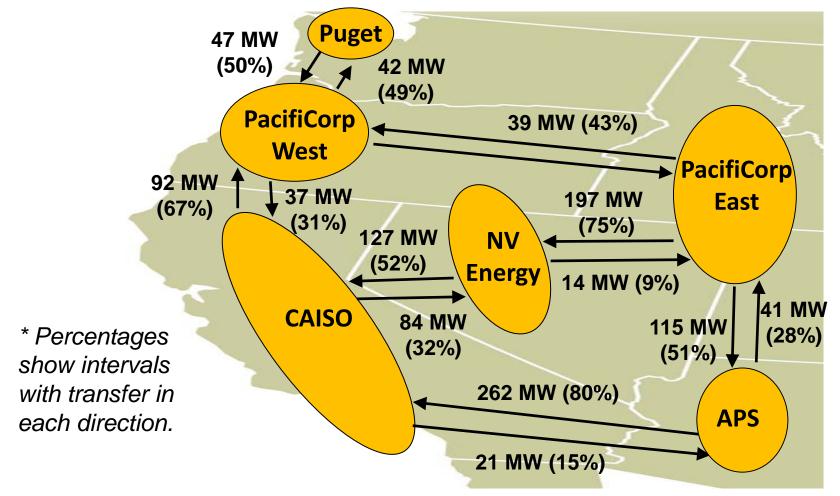
Total average transfer capacity (Oct 2016 – Jan 2017)\*





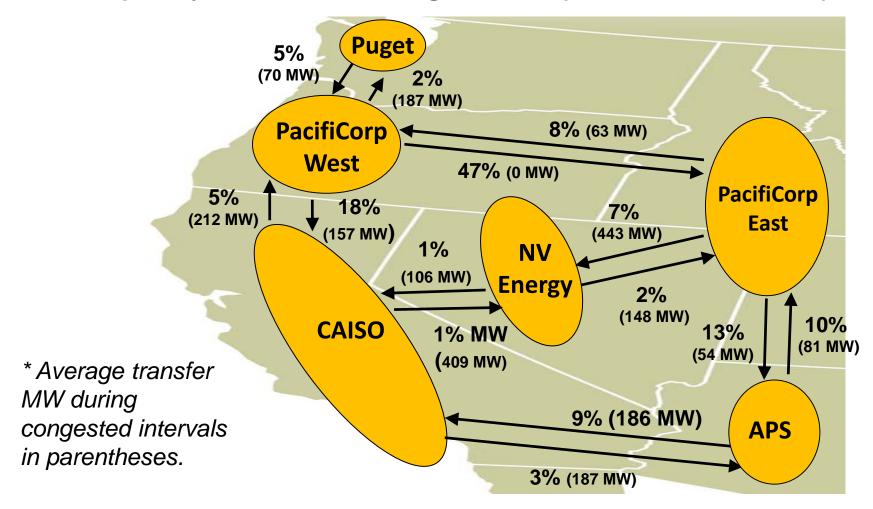
# EIM transfers usually out of APS into CAISO, while PSE transfers into and out of PacifiCorp West

Average final EIM transfers (Oct 2016 – Jan 2017)\*



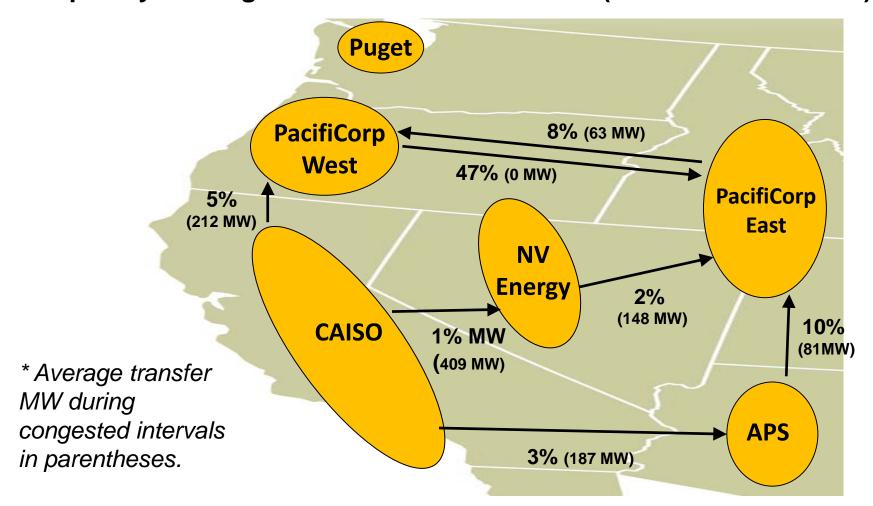
### Congestion into EIM areas continues to be infrequent

#### Frequency of 15-minute congestion in (Oct 2016 – Jan 2017)\*



### EIM areas rarely separated from CAISO by congestion

#### Frequency of congestion in 15-minute market (Oct 2016 – Jan 2017)\*



## EIM area prices separated from CAISO by congestion only a small percentage of intervals

#### **EIM transfers and congestion (October – January)**

	<u>Net exporter</u>		<u>Net importer</u>		Import congestion from ISO*	
EIM area	Frequency	Average MW	Frequency	Average MW	15-minute	5-minute
California ISO	19%	494	81%	-531		
PacifiCorp East	83%	399	17%	-191	1%	1%
PacifiCorp West	58%	123	42%	-121	5%	7%
NV Energy	30%	145	70%	-260	1%	0%
Puget Sound Energy	49%	107	50%	-95	1%	2%
Arizona Public Service	76%	257	24%	-134	1%	0%

