

# WESTERN ENERGY IMBALANCE MARKET

## Department of Market Monitoring Update

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EIM Governing Body Meeting

General Session

July 13, 2017

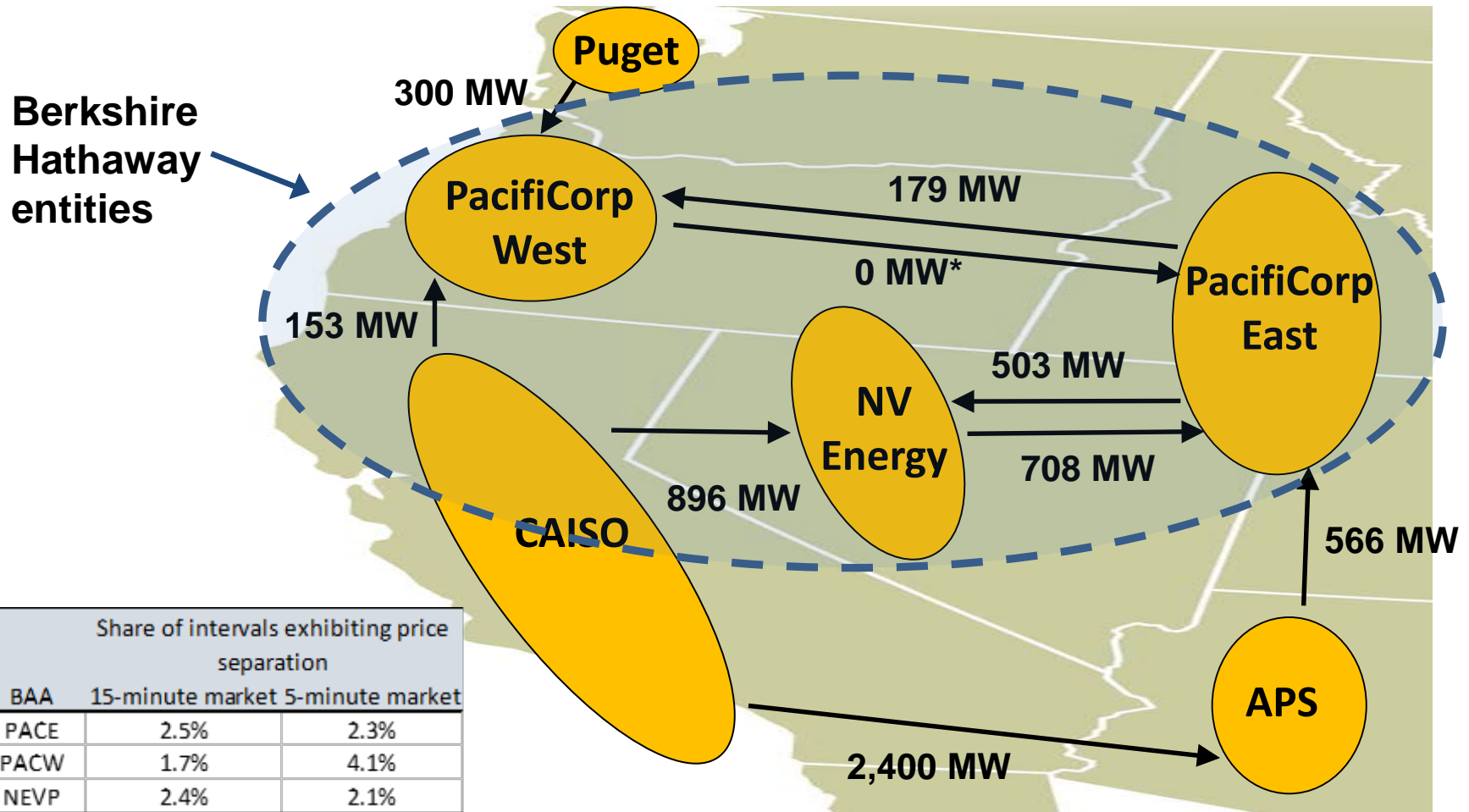


# DMM actively supporting market-based rates for EIM participants

- Several EIM participants subject to special bidding limits imposed by FERC
  - Berkshire Hathaway entities (PacifiCorp, NV Energy) and APS
  - Must submit energy bids at or below cost-based Default Energy Bids (DEBs) all hours
  - DEBs intended for use only when ISO's automated market power mitigation provisions triggered
- New EIM participants must apply for market-based rates
- Analysis by DMM supports finding that special FERC bidding limits no longer needed:
  - EIM areas area structurally competitive almost all intervals
  - ISO rules effectively mitigate market power when an EIM area is not structurally competitive

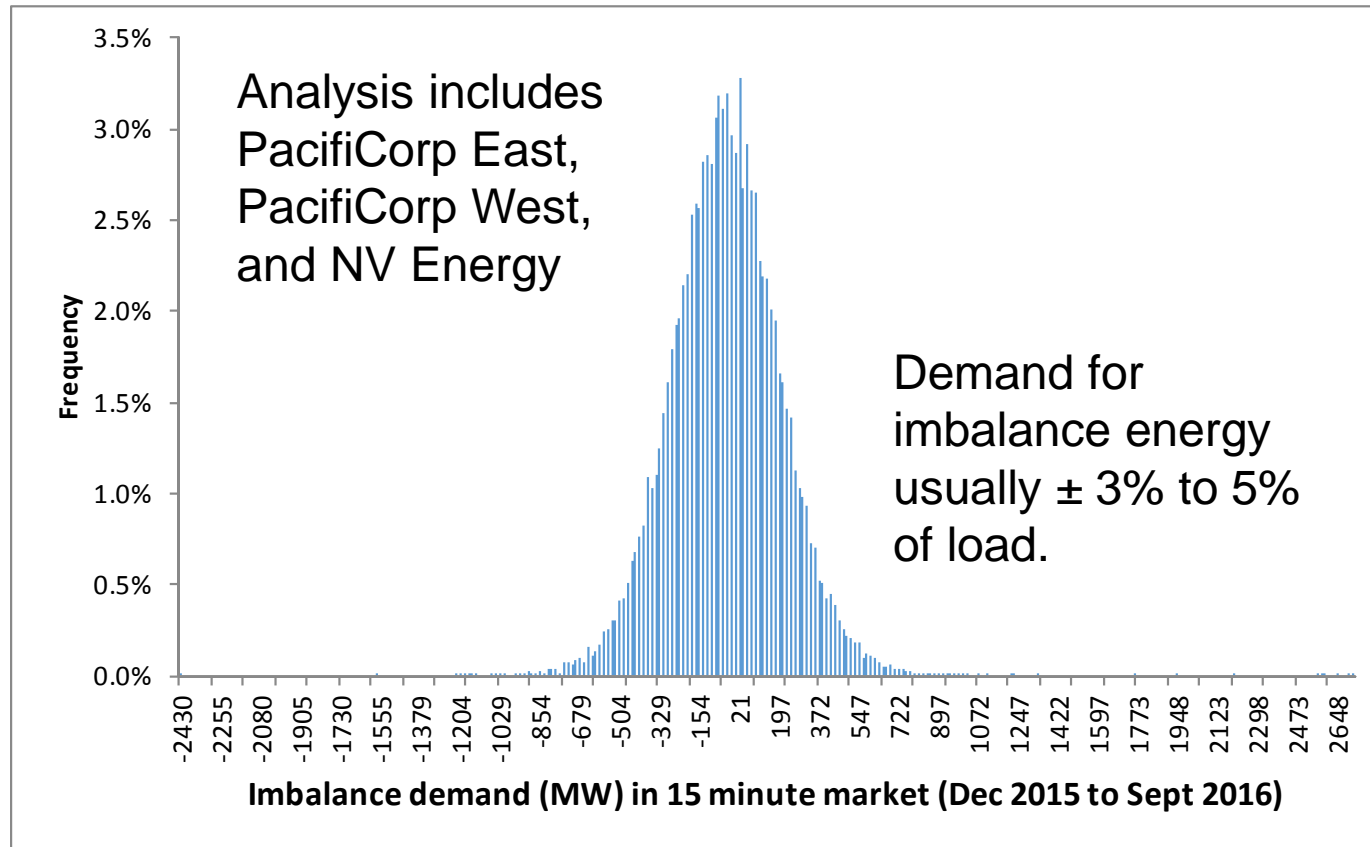
# Growth in EIM transfer capacity has significantly increased market competitiveness

Total average transfer capacity (Oct 2016 – Jan 2017)



Share of intervals exhibiting price separation		
BAA	15-minute market	5-minute market
PACE	2.5%	2.3%
PACW	1.7%	4.1%
NEVP	2.4%	2.1%

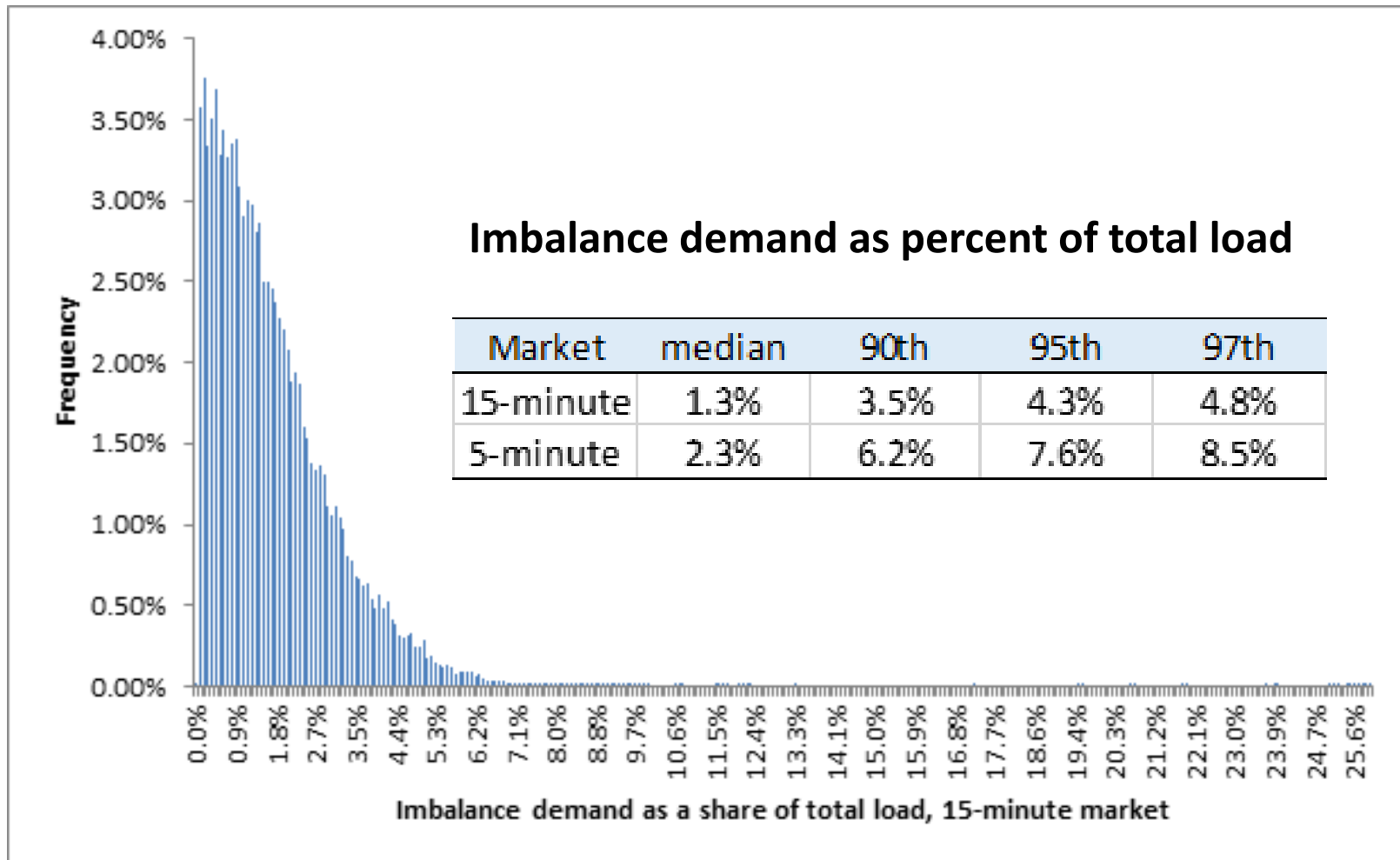
# Demand for imbalance energy in combined Berkshire Hathaway balancing areas



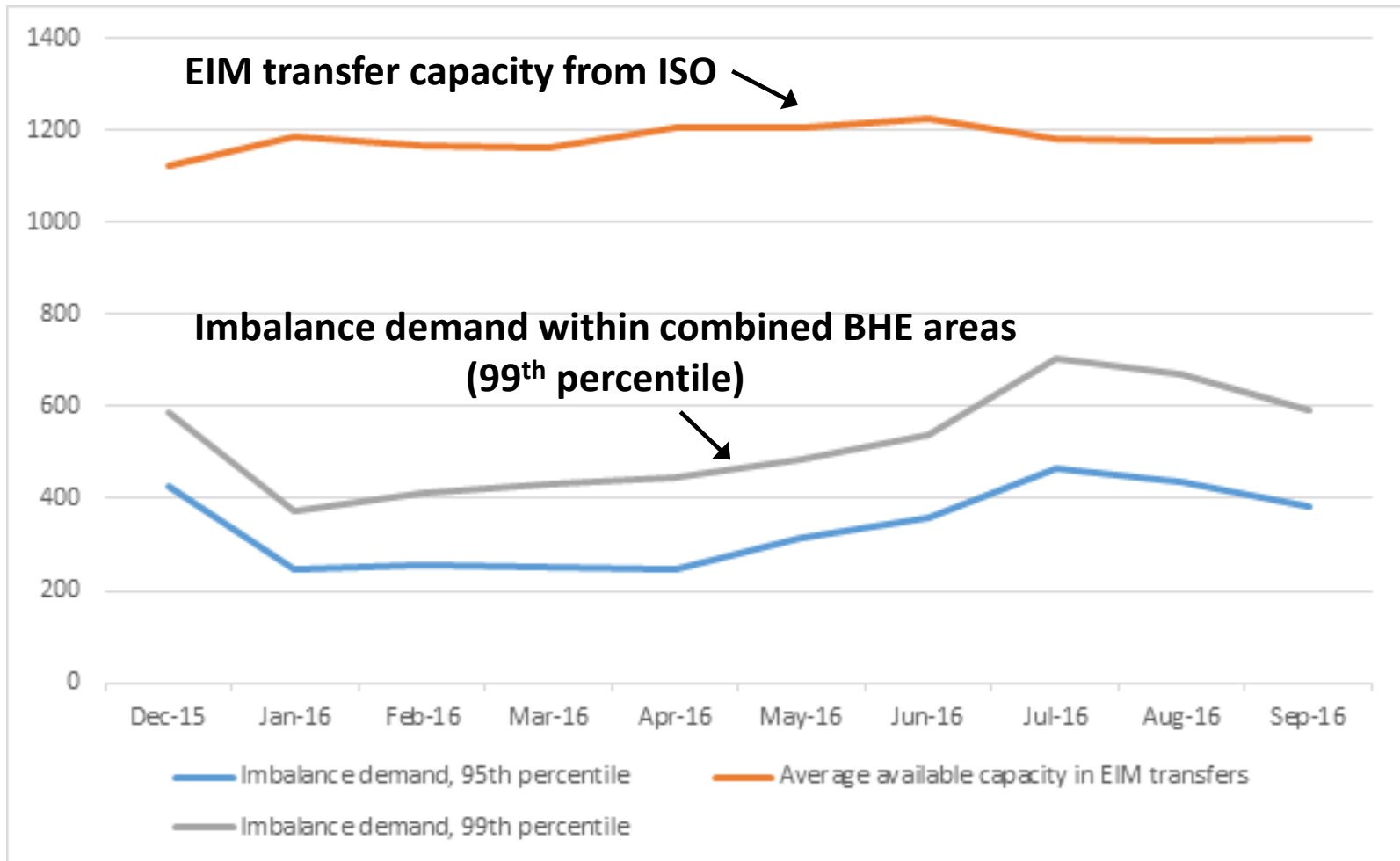
*Structural competitiveness of the energy imbalance market: Analysis of market power of the Berkshire Hathaway entities, June 29, 2017, Department of Market Monitoring,*

<http://www.caiso.com/Documents/AnalysisofMarketPoweroftheBerkshireHathawayEntities.pdf>

# Demand for imbalance energy in combined Berkshire Hathaway balancing areas as percent of total load



# Transfer capacity from ISO exceeds imbalance demand by large margin almost all intervals



# Berkshire Hathaway entities are potentially pivotal very small portion of intervals

Share of intervals with imbalance demand greater than transfer capacity		
	15-minute market	5-minute market
Dec-15	0.3%	1.8%
Jan-16	0.0%	2.6%
Feb-16	0.0%	0.3%
Mar-16	0.0%	2.0%
Apr-16	0.0%	3.0%
May-16	0.0%	1.8%
Jun-16	0.0%	2.8%
Jul-16	0.2%	1.6%
Aug-16	0.0%	1.6%
Sep-16	0.3%	0.3%
	0.1%	1.8%

Automated bid mitigation procedures effectively mitigate structural market power in these intervals.

# Improvements to automated real-time bid mitigation procedures have been successfully implemented

- Bid mitigation triggered only when EIM areas are projected to be separated from rest of system by congestion
- Improvements have been implemented to reduce intervals when congestion not correctly projected in real-time
- Reduction in *under-mitigation* in 2017:
  - Reduced from 17% to 1.5% in 15-minute market (Jan-June)
  - Reduced from 40% to 9% in 5-minute market (May-June)
- Automated bid mitigation procedures effectively mitigate market power during small portion of intervals when EIM areas not structurally competitive