



# Briefing on western energy imbalance market and benefits

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Board of Governors Meeting

General Session

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# EIM Update

## Future implementations:

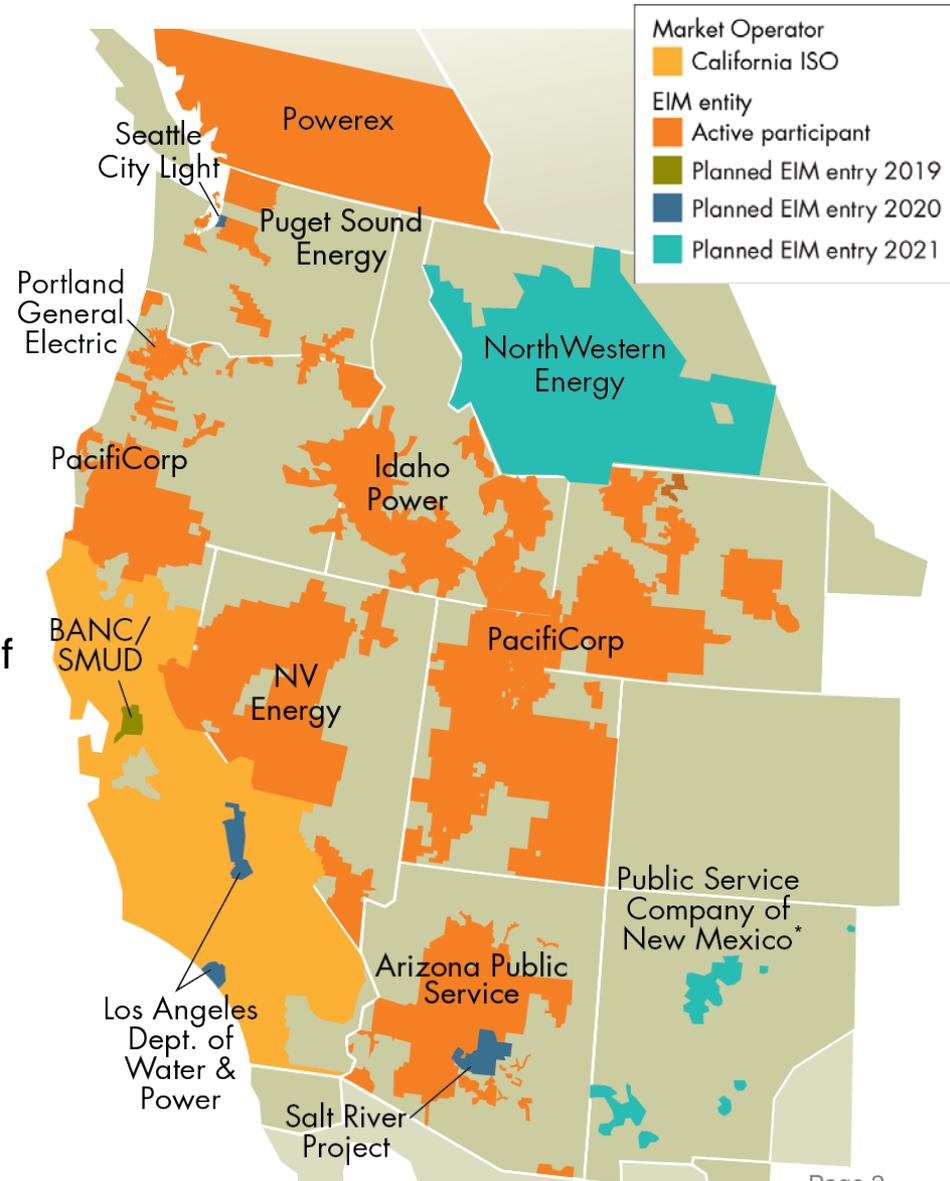
- April 2019 – BANC/SMUD
- April 2020 – LADWP, Seattle City Light, and Salt River Project
- April 2021 – Public Service Company of New Mexico & NorthWestern Energy

## Bonneville Power Authority:

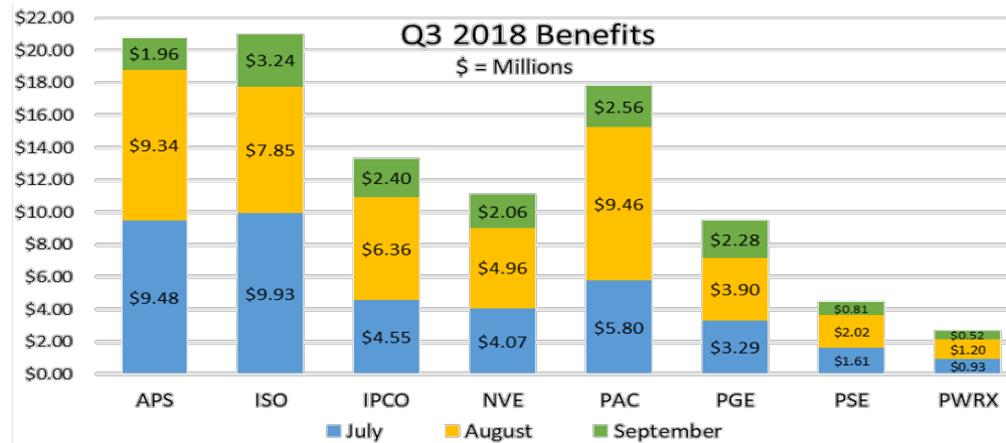
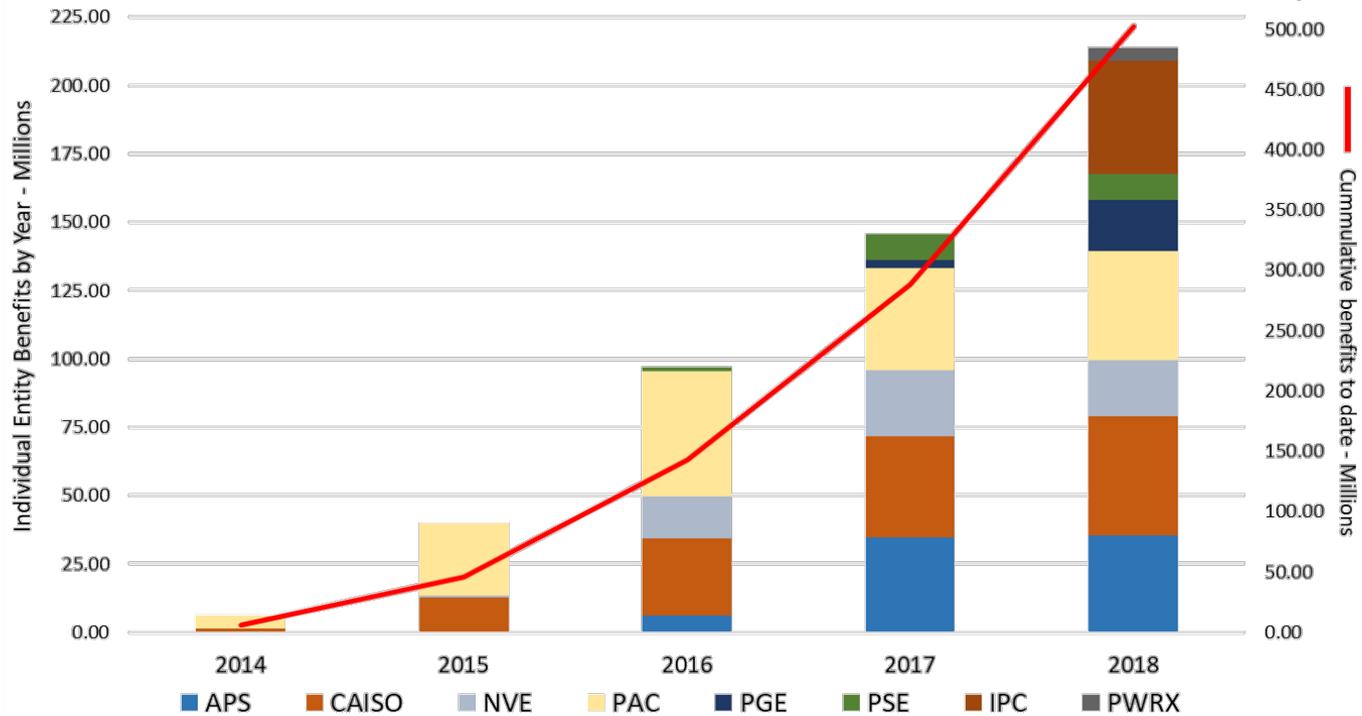
- MOU signed to continue consideration of EIM participation
- BPA stakeholder process in progress
- Expected entry 2022

## FERC:

- GHG enhancement implemented on November 1<sup>st</sup>



# Gross economic benefits since start of EIM = \$502.31M

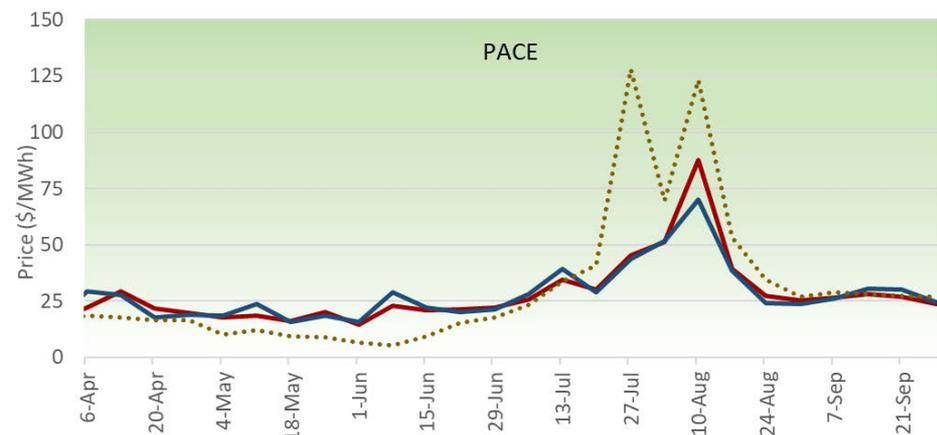
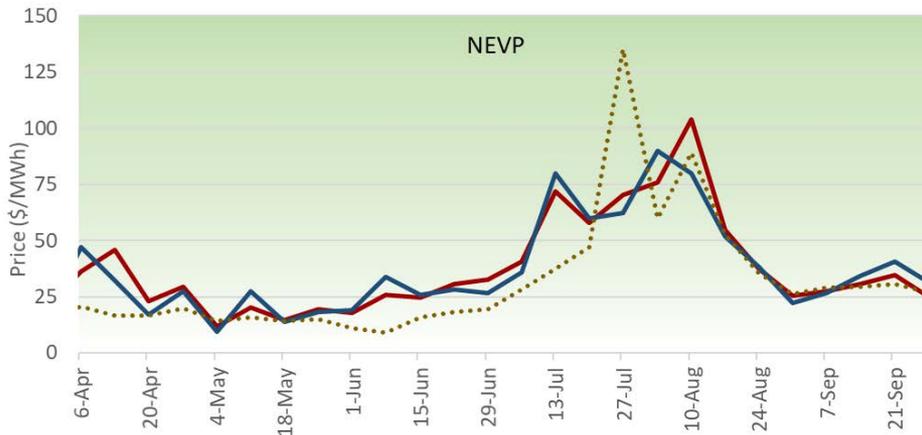
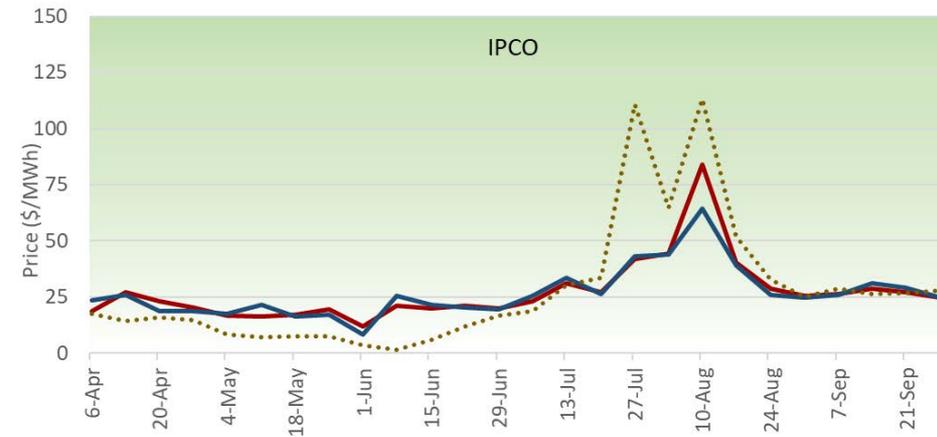
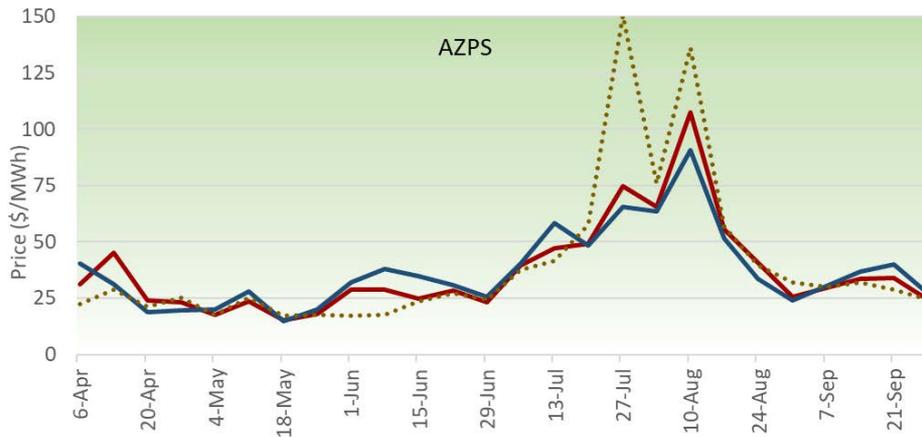


# Flexible ramping procurement diversity savings for 3<sup>rd</sup> quarter, 2018

	July		August		September	
Direction	Up	Down	Up	Down	Up	Down
Average MW saving	864	877	807	845	741	798
Estimated savings	\$196,410	\$0	\$479,924	\$0	\$109,523	\$0
Sum of BAA requirements	1,757	1,754	1,722	1,758	1,652	1,714
Diversity Benefit	49%	50%	47%	48%	45%	47%

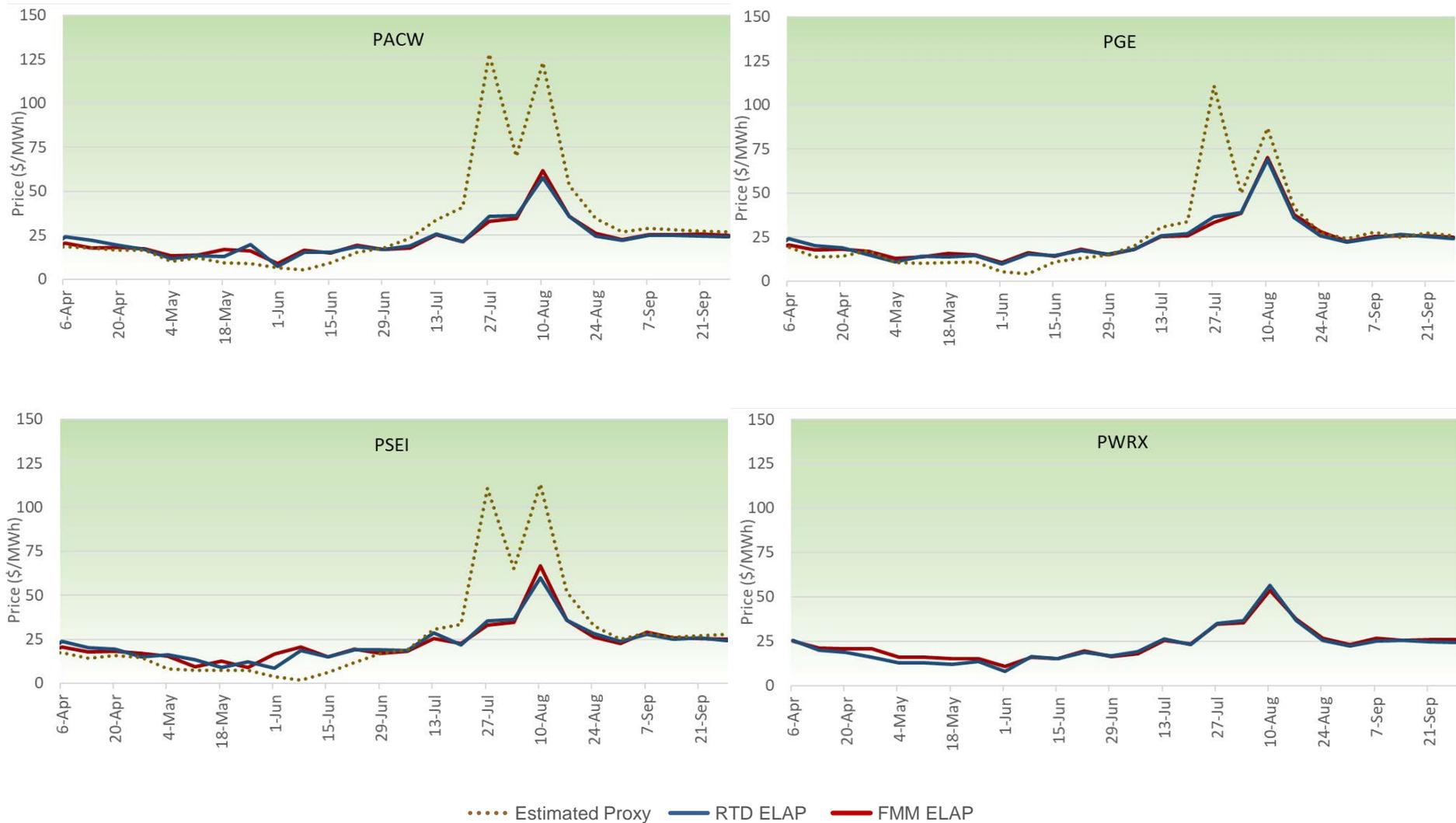
The percentage of savings is the average MW savings divided by the sum of the four individual BAA requirements.

# Weekly average prices in EIM areas

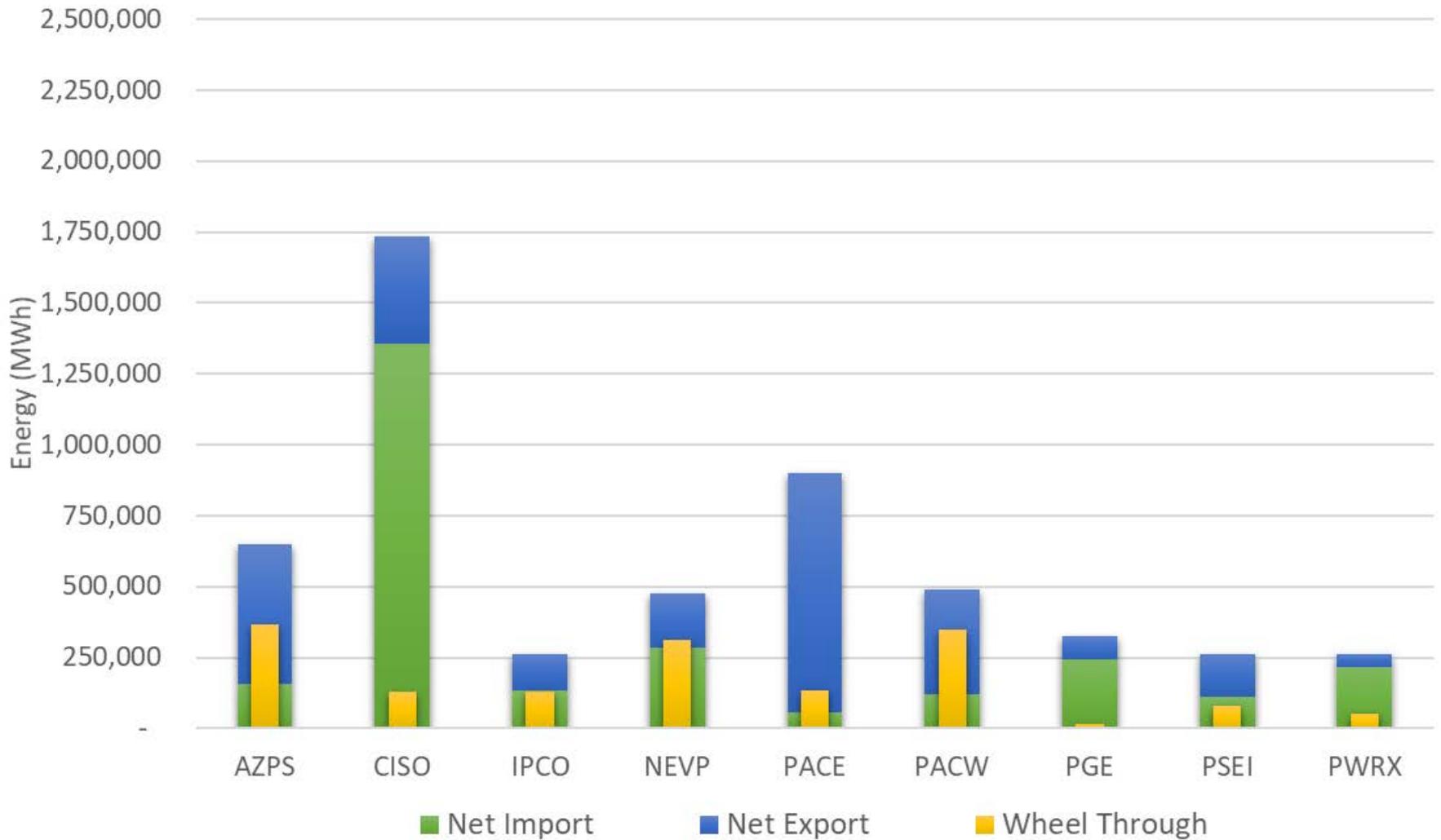


..... Estimated Proxy    — RTD ELAP    — FMM ELAP

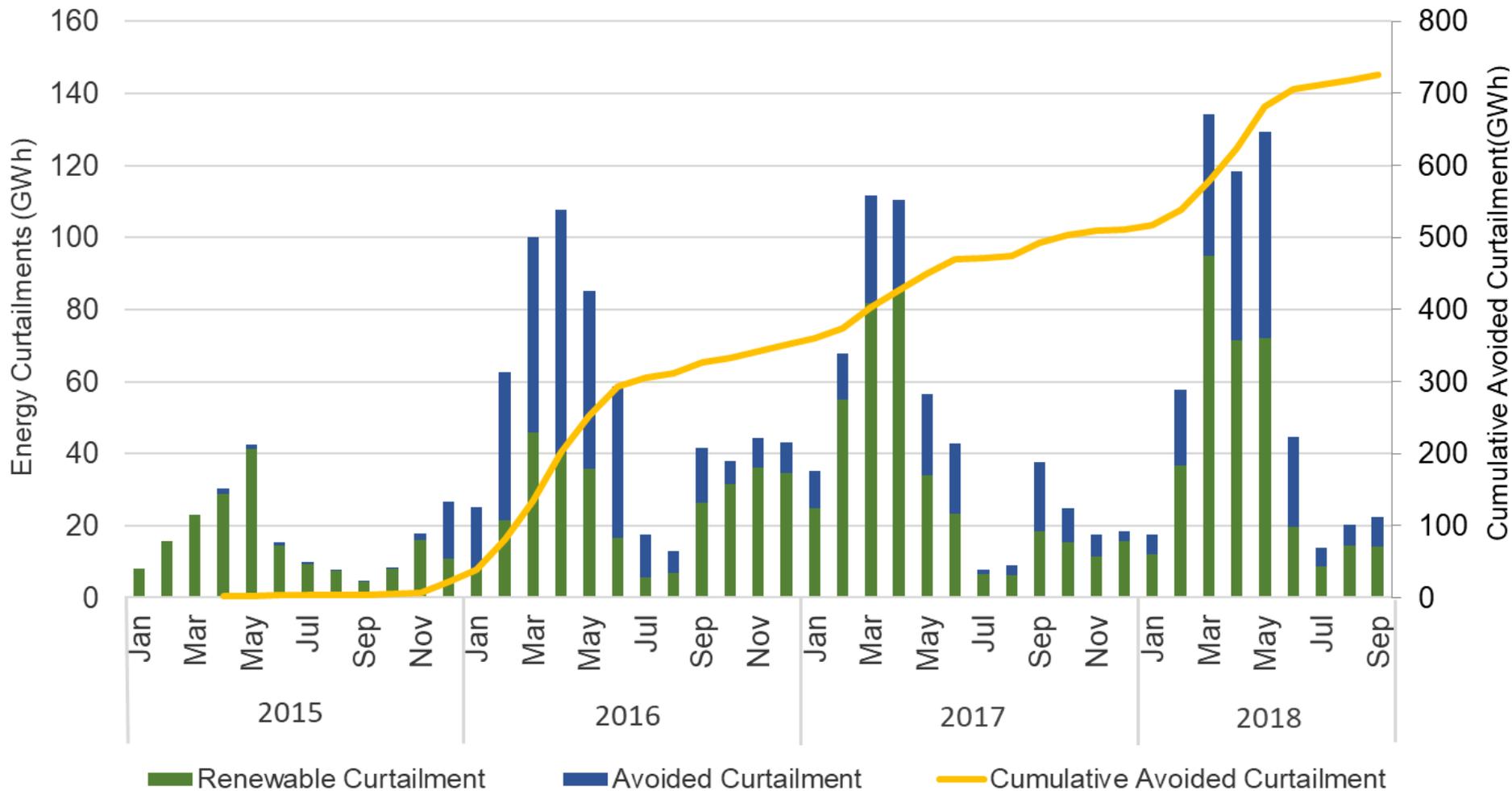
# Weekly average prices in EIM areas



# Estimated wheel through transfers in Q3, 2018



# Energy imbalance market helps avoid curtailment



# Robust energy transfers in 3<sup>rd</sup> quarter, 2018

