

WESTERN ENERGY IMBALANCE MARKET

Briefing on western energy imbalance market benefits

Mark Rothleder

Vice President, Market Policy & Performance

EIM Governing Body Meeting

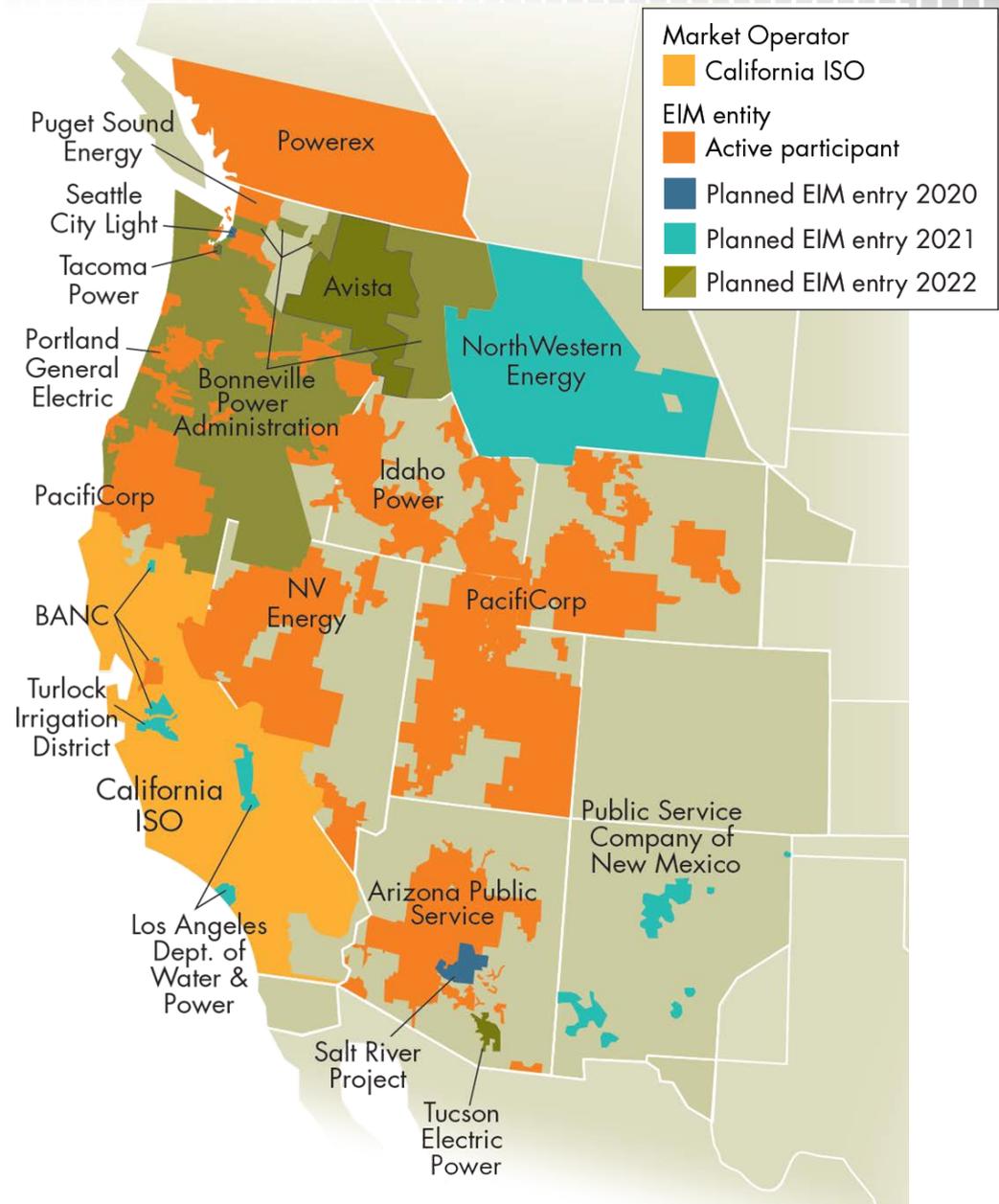
General Session

March 12, 2020



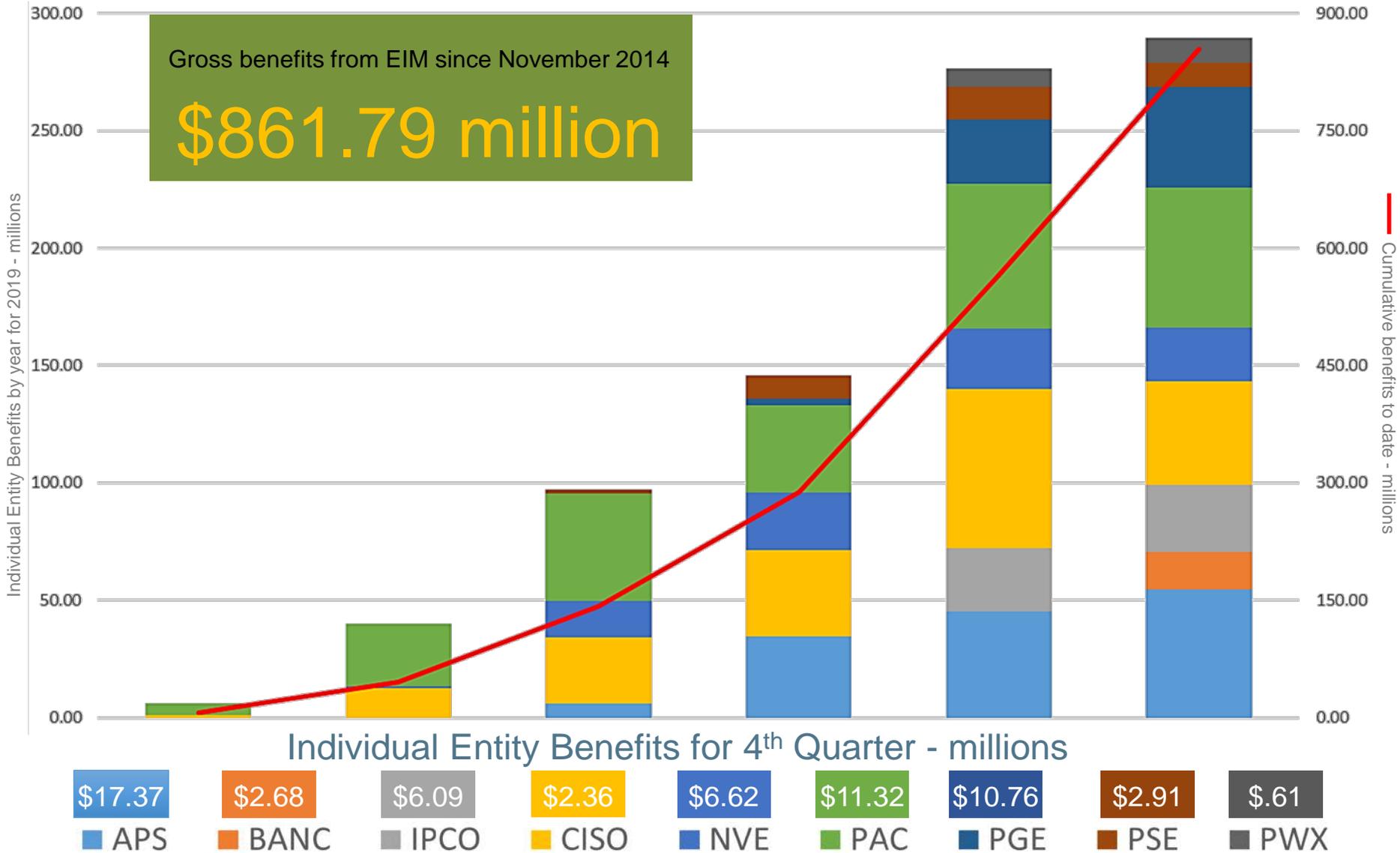
EIM Update

- Preparations are currently underway for Seattle City Light and Salt River Project's Go-Live date of April 1. Both entities have completed 100% of their readiness criteria and certification letters have been filed with FERC. Additional contingency plans are in place if necessary due to COVID19.
- 2021 – BANC Phase 2, LADWP, NorthWestern Energy, Public Service Company of New Mexico & Turlock Irrigation District
- 2022 – Avista, Bonneville Power Administration, Tacoma Power & Tucson Electric Power



\$60.72 million gross economic benefits – 2019 4th Qtr.

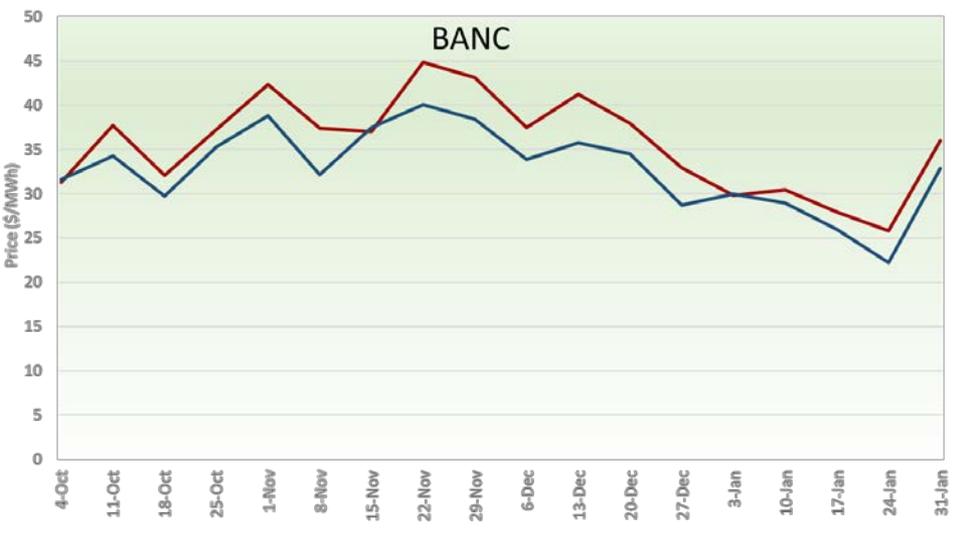
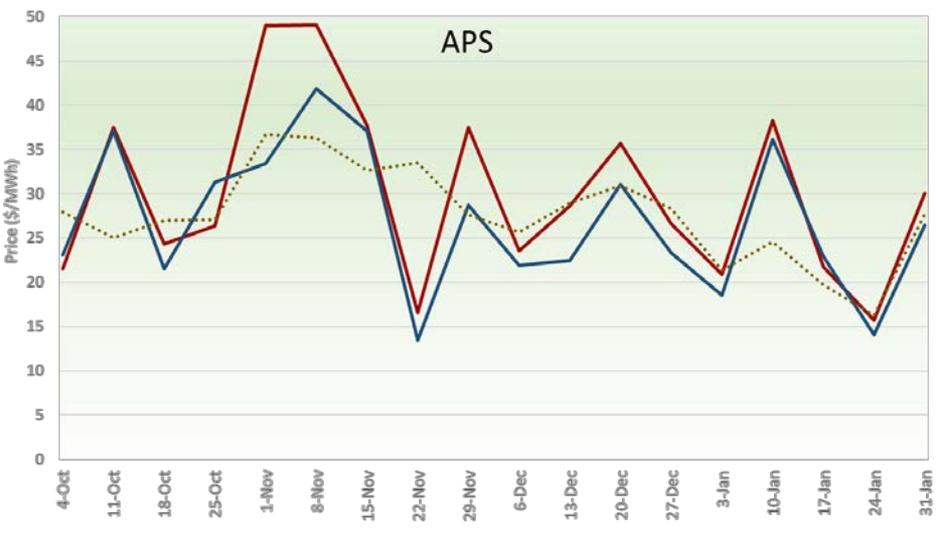
Gross benefits from EIM since November 2014
\$861.79 million



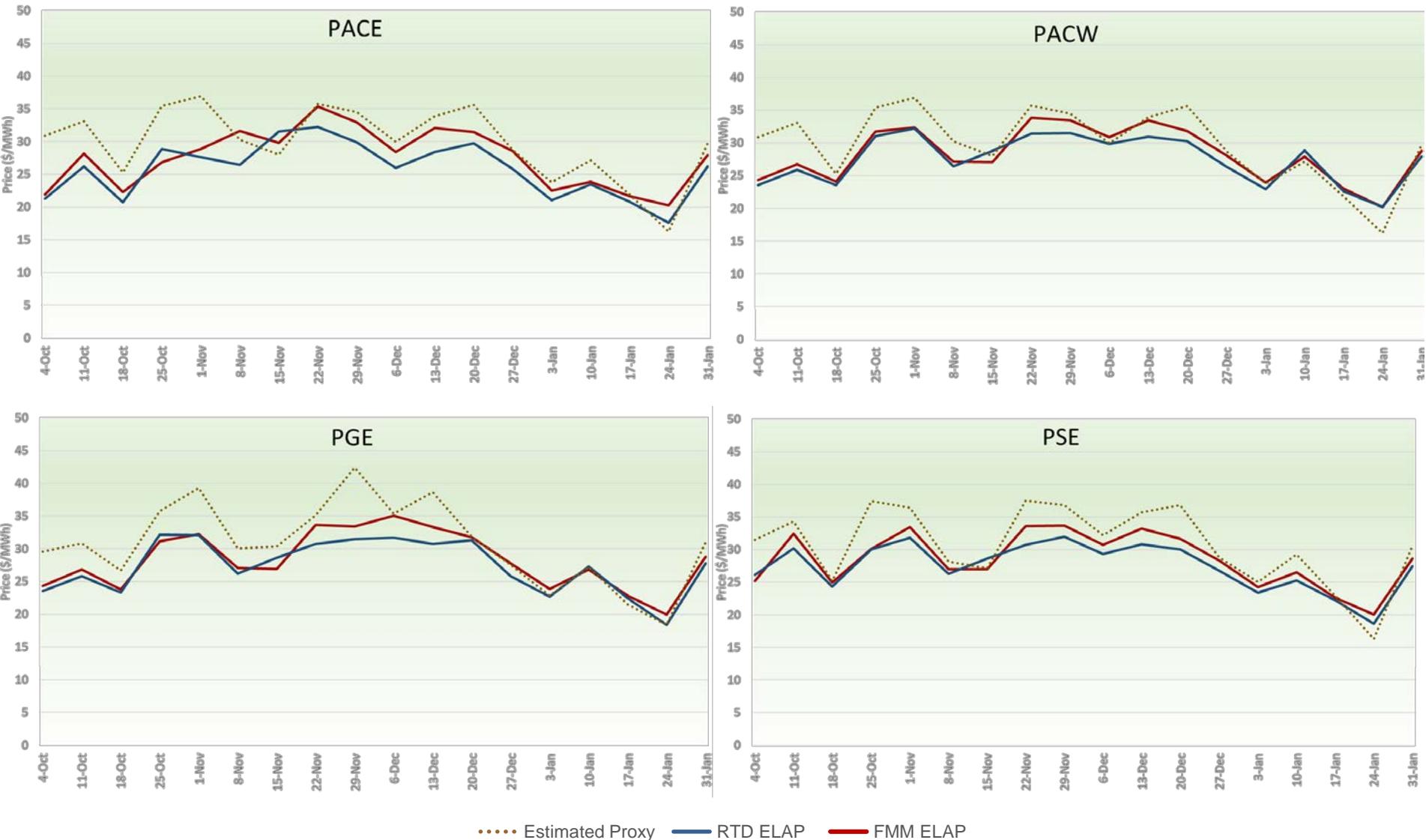
Flexible ramping procurement diversity savings for 4th Quarter, 2019

	October		November		December	
Direction	Up	Down	Up	Down	Up	Down
Average MW saving	808	813	770	772	686	735
Sum of BAA requirements	1,712	1,663	1,615	1,670	1,576	1,681
Diversity Benefit	47%	49%	48%	46%	44%	44%
Estimated Savings	\$335,112	\$0	\$542,883	\$0	\$167,292	\$0

Weekly average prices in EIM areas

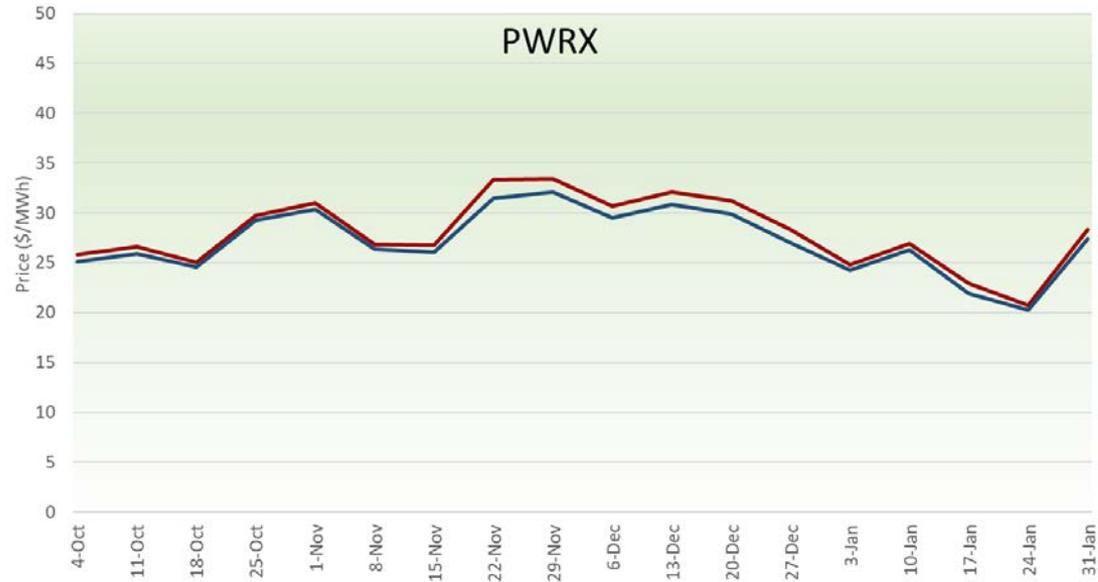


Weekly average prices in EIM areas

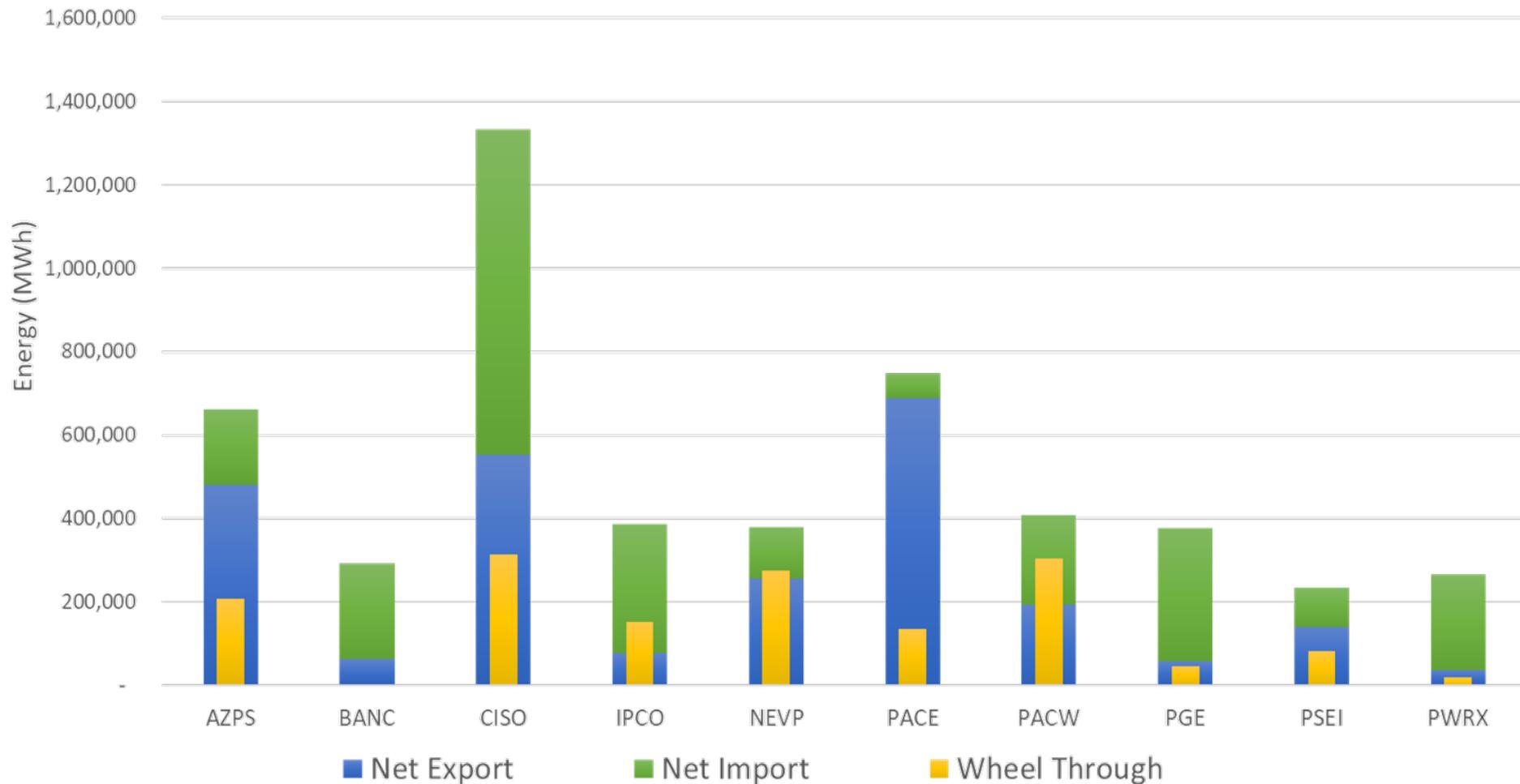


..... Estimated Proxy — RTD ELAP — FMM ELAP

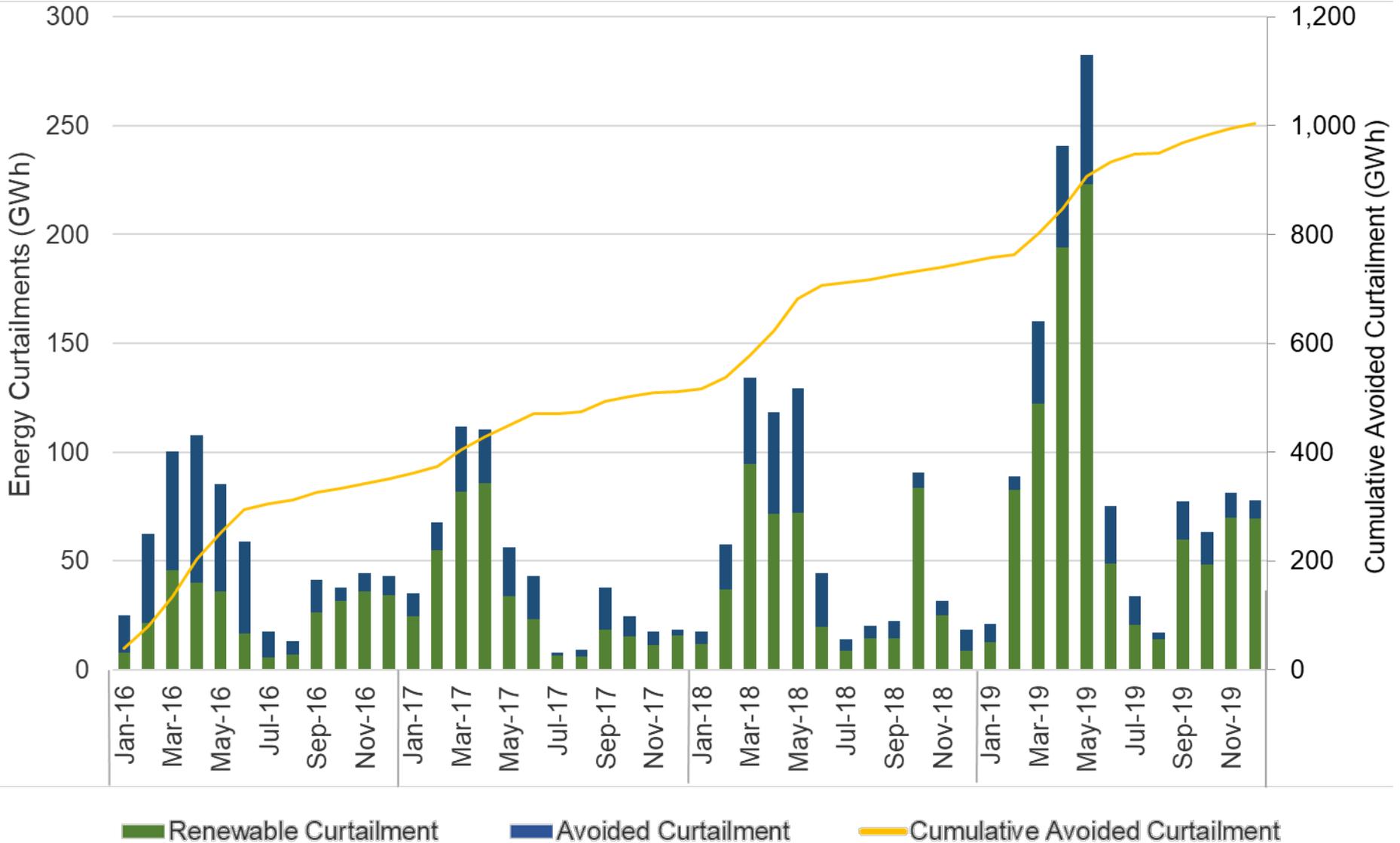
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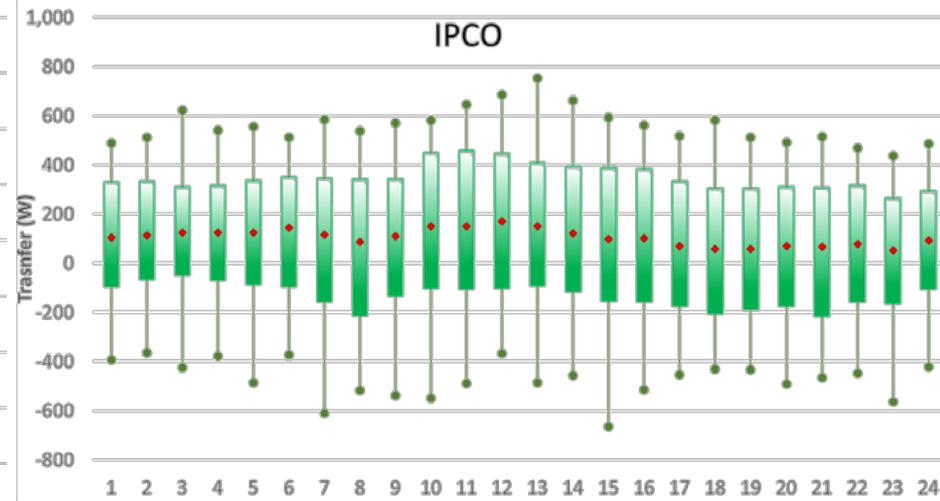
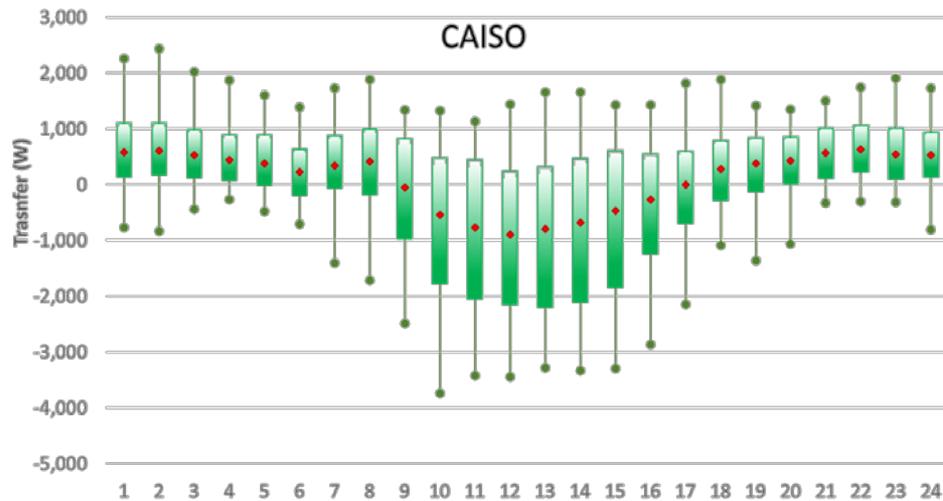
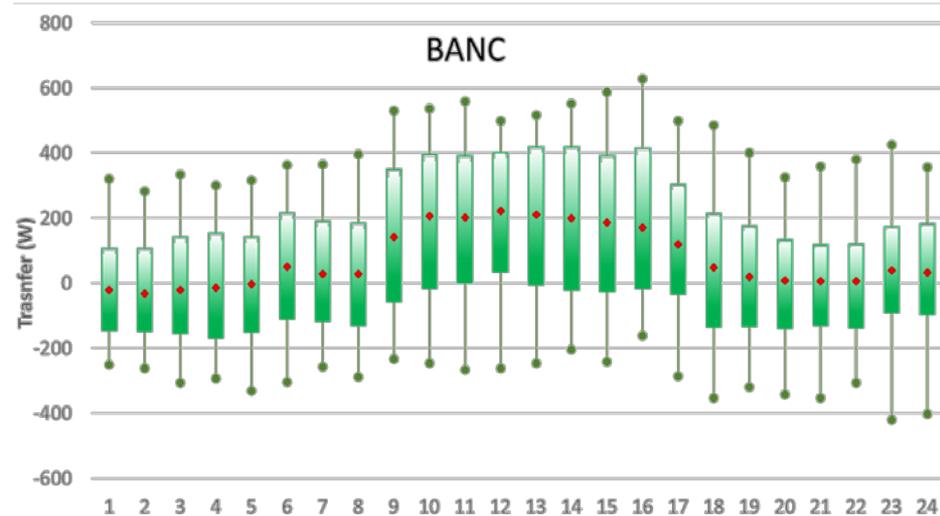
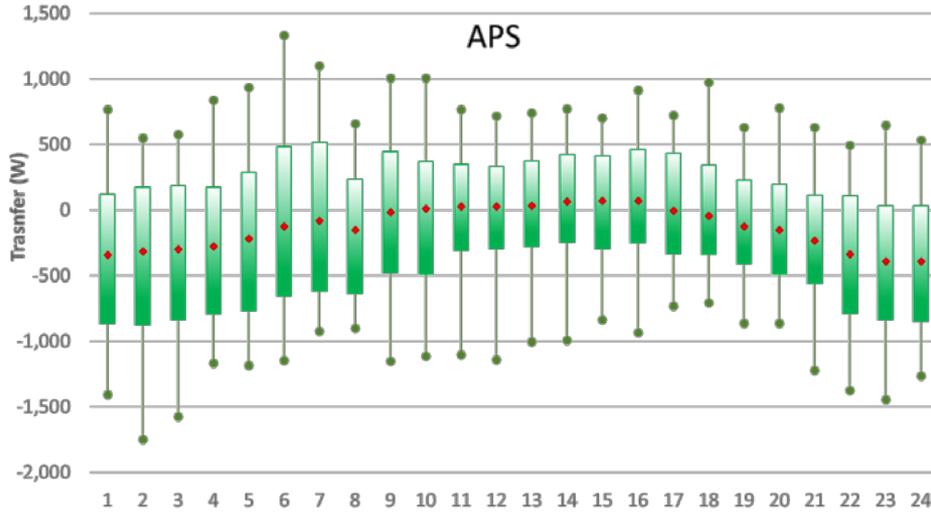
Estimated wheel through transfers in Q4, 2019



Energy imbalance market helps avoid curtailment



Robust energy transfers in 4th quarter, 2019



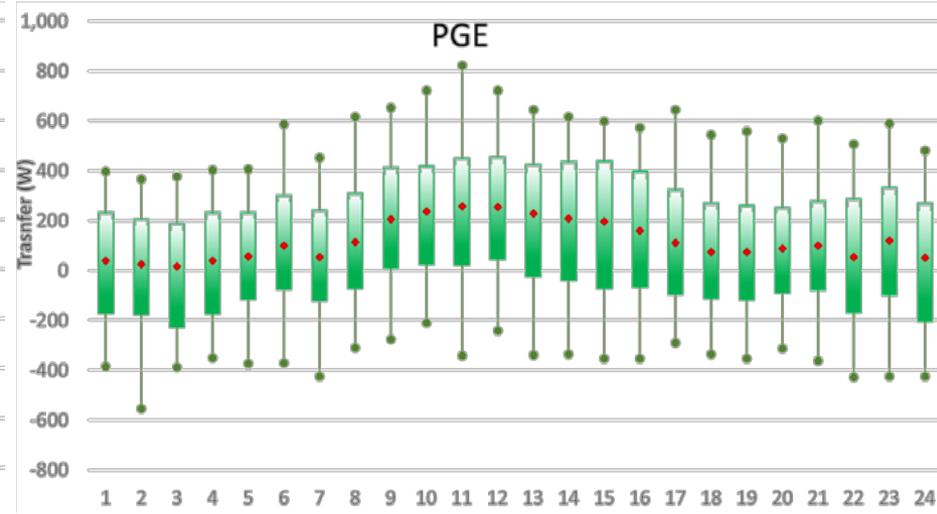
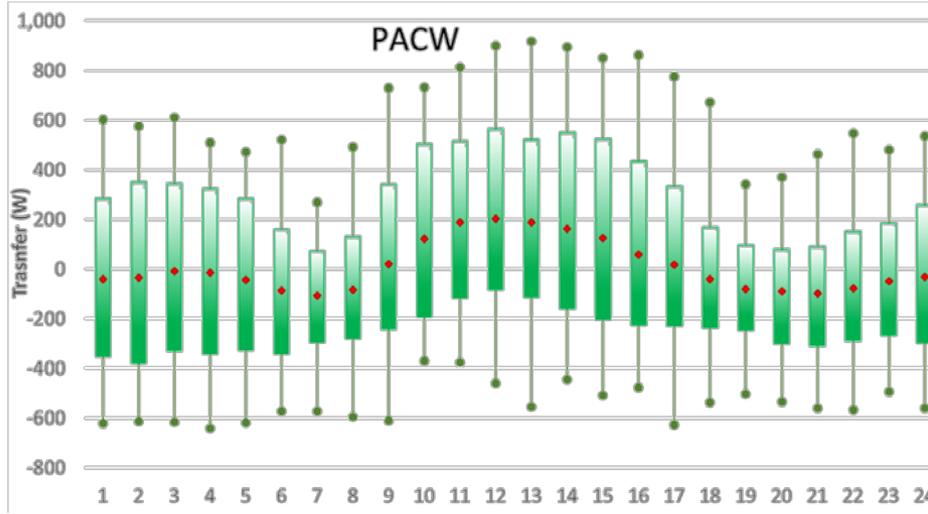
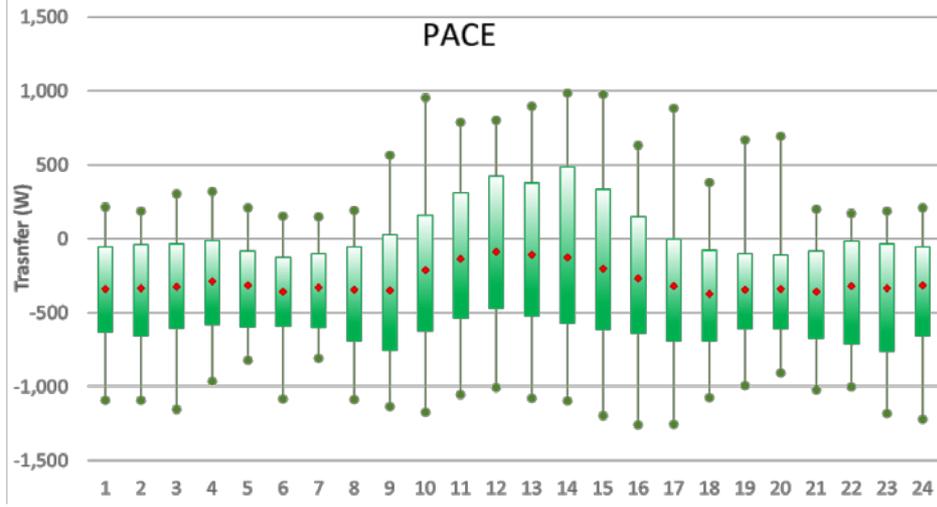
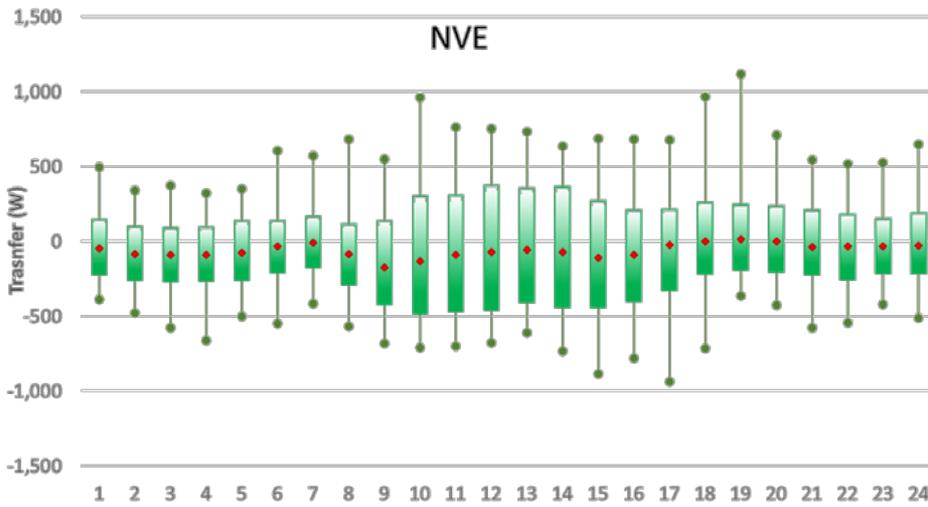
Transfer Axis: (+) Import (-) Export

10th to 90th percentile

Tails are max and min

Simple averages

Robust energy transfers in 4th quarter, 2019



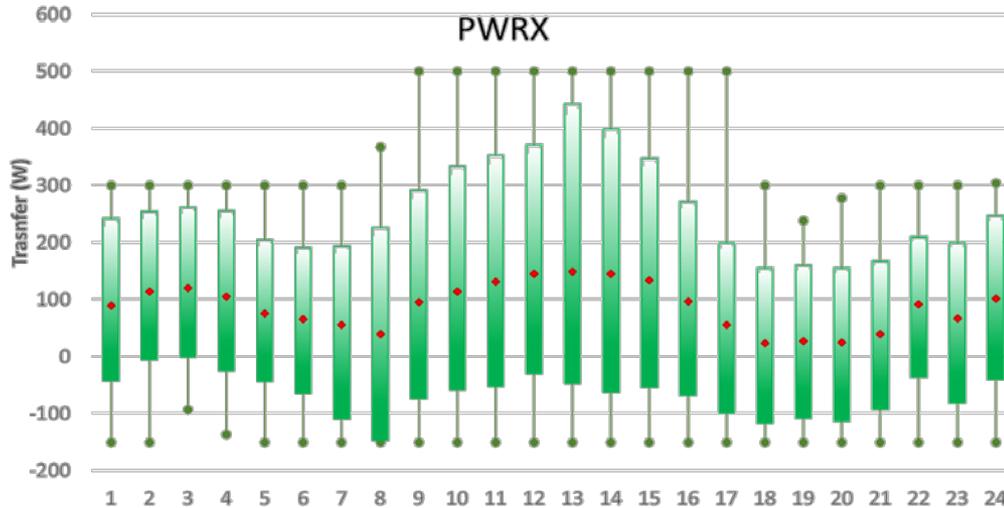
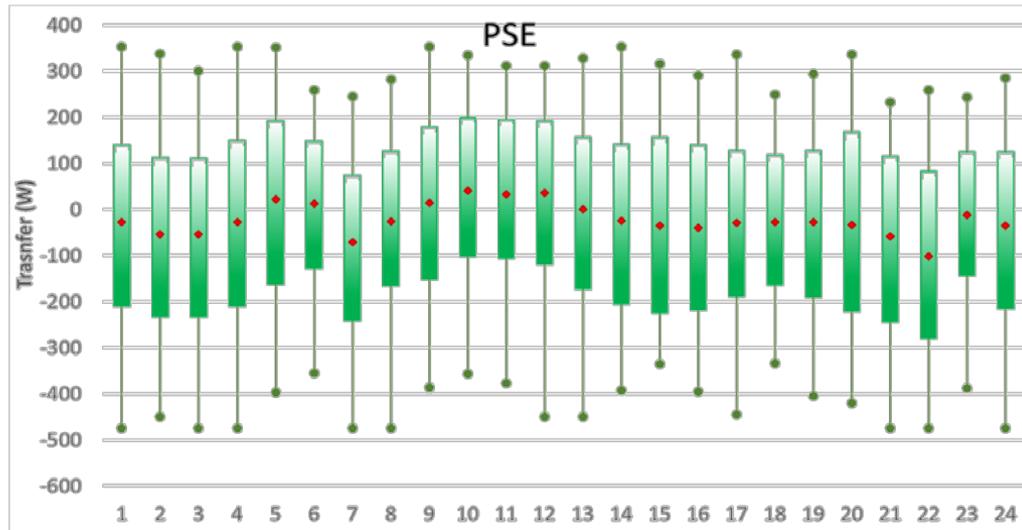
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