



Update on western energy imbalance market and benefits

Mark Rothleder

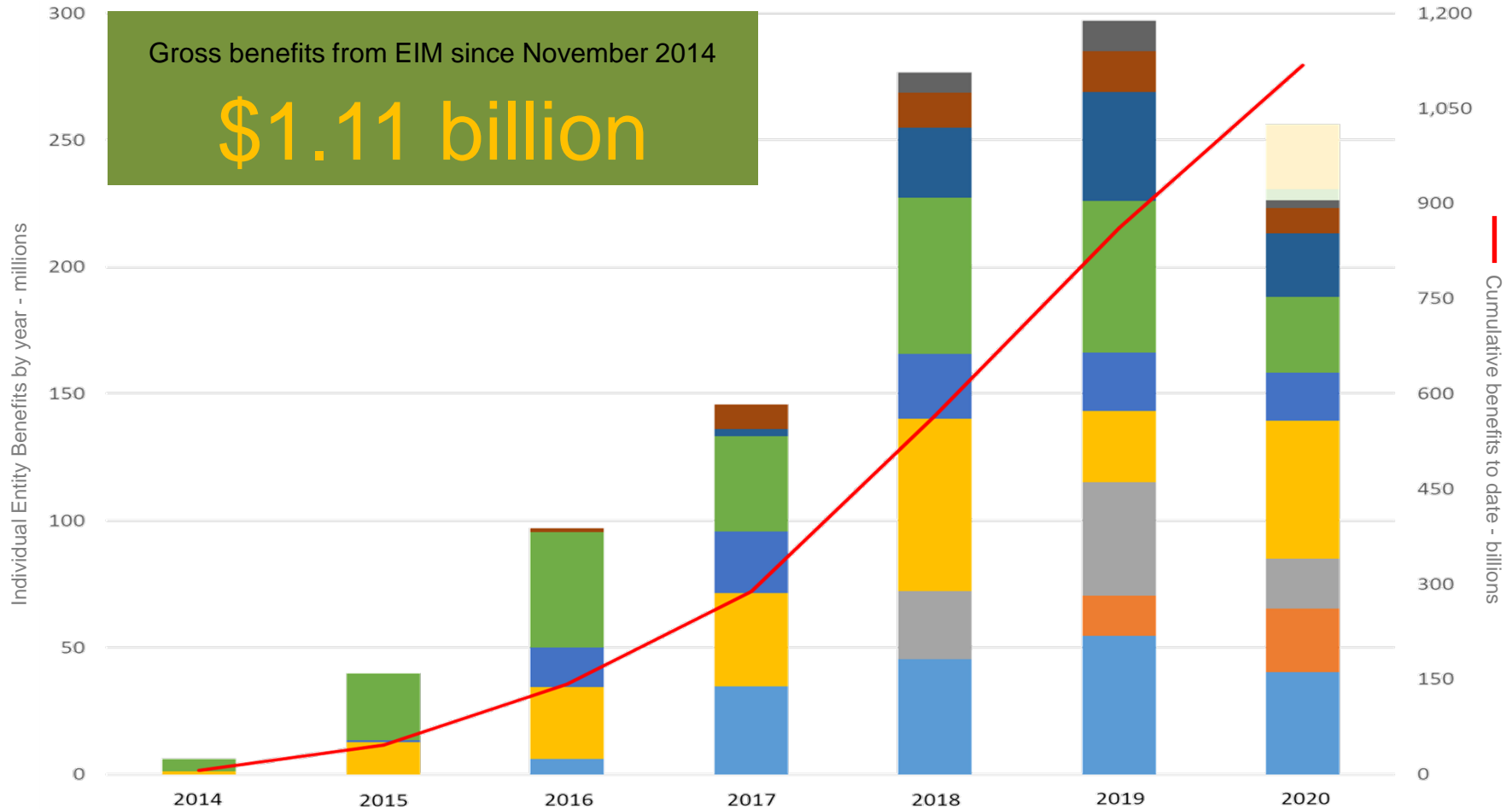
Senior Vice President, Chief Operating Officer

Board of Governor's Meeting

General Session

November 18, 2020

\$119.32 million gross economic benefits – 2020 3rd Qtr.



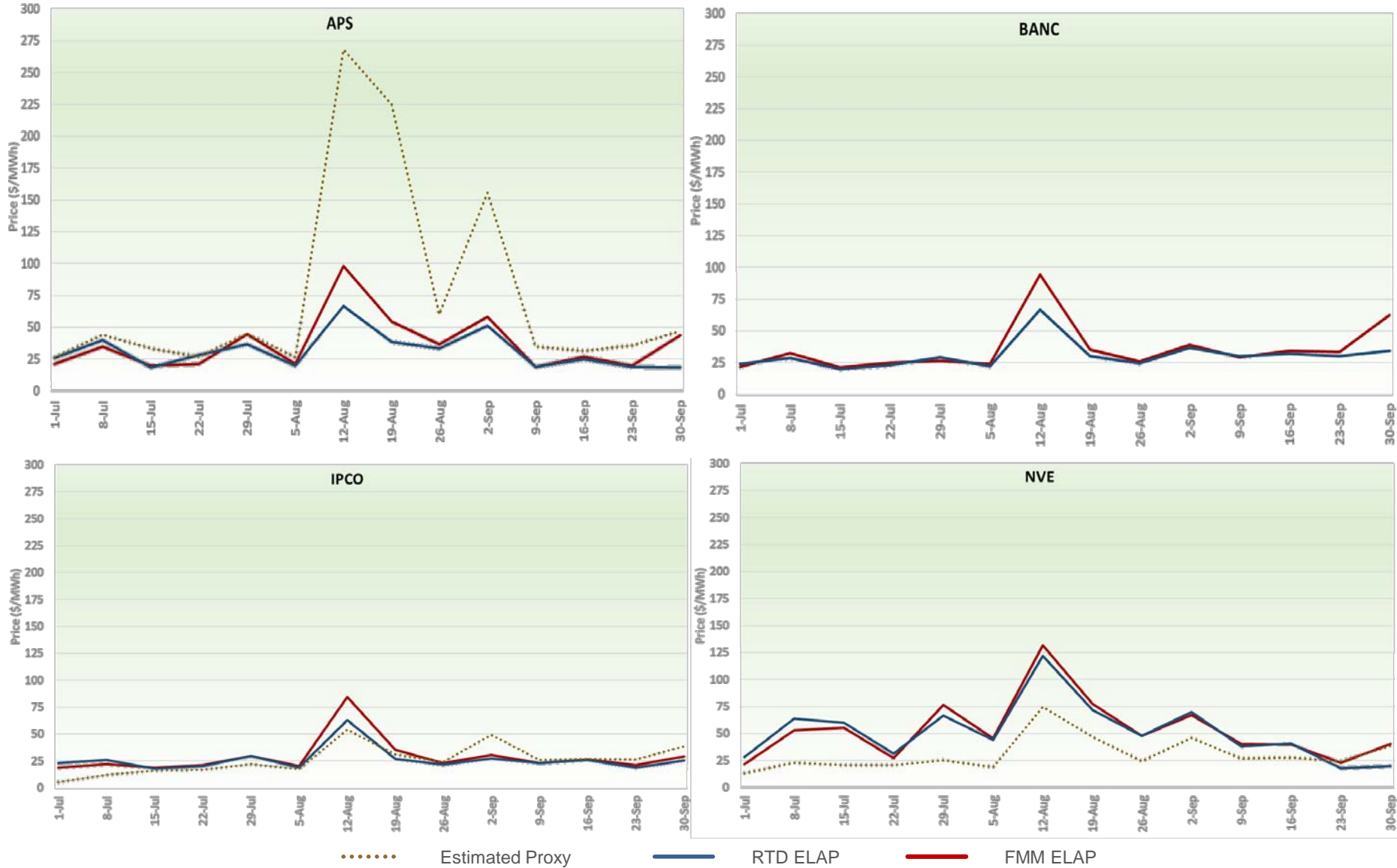
Individual Entity Benefits for 3rd Quarter - millions



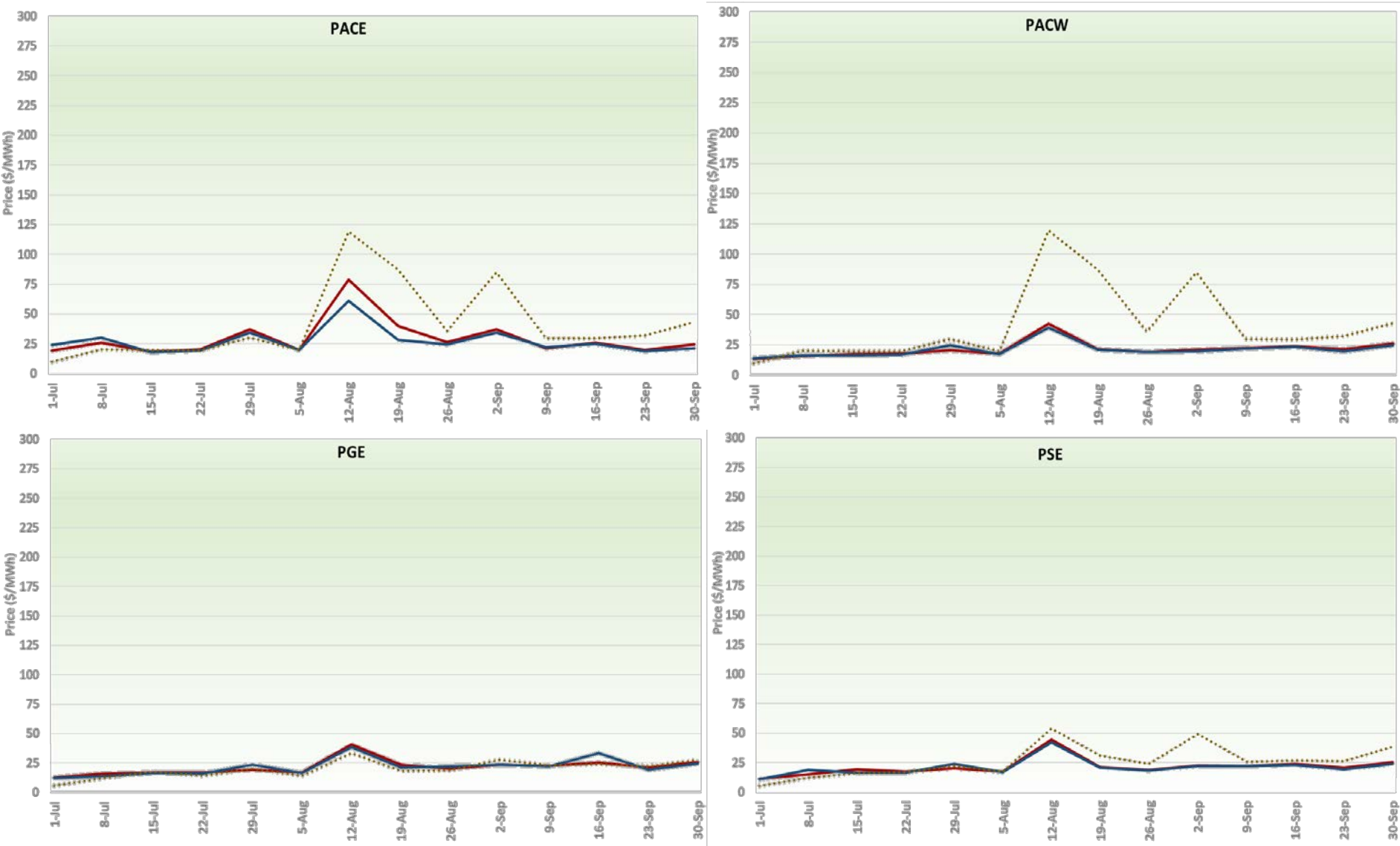
Flexible ramping procurement diversity savings for 3rd Quarter, 2020

	July		August		September	
Direction	Up	Down	Up	Down	Up	Down
Average MW saving	925	969	906	959	924	957
Sum of BAA requirements	2,057	1,757	2,041	1,698	2,246	1,702
Diversity Benefit	45%	55%	44%	56%	41%	56%
Estimated Savings	\$204,990	\$0	\$611,385	\$1,741	\$262,923	\$0

Weekly average prices in EIM areas

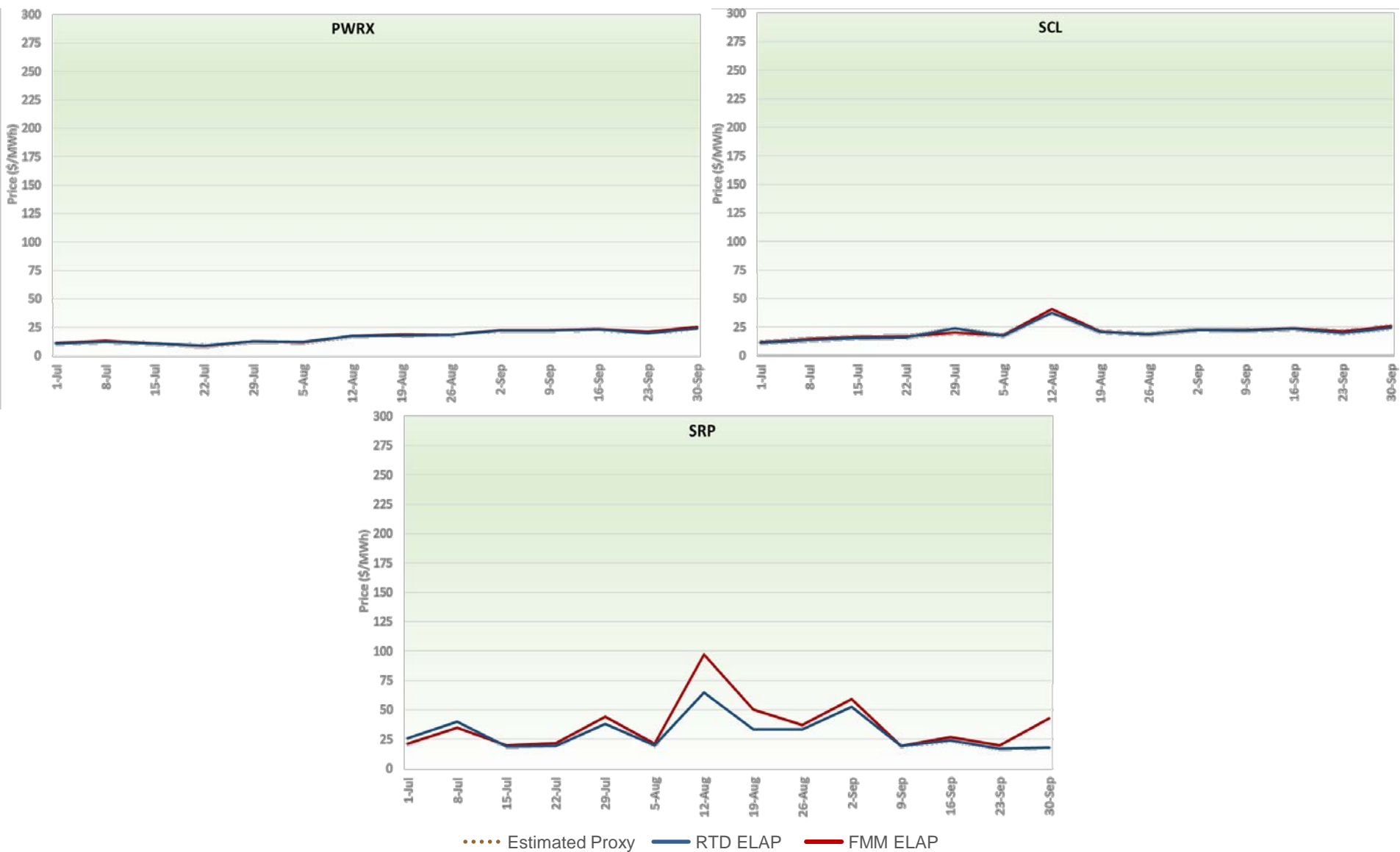


Weekly average prices in EIM areas

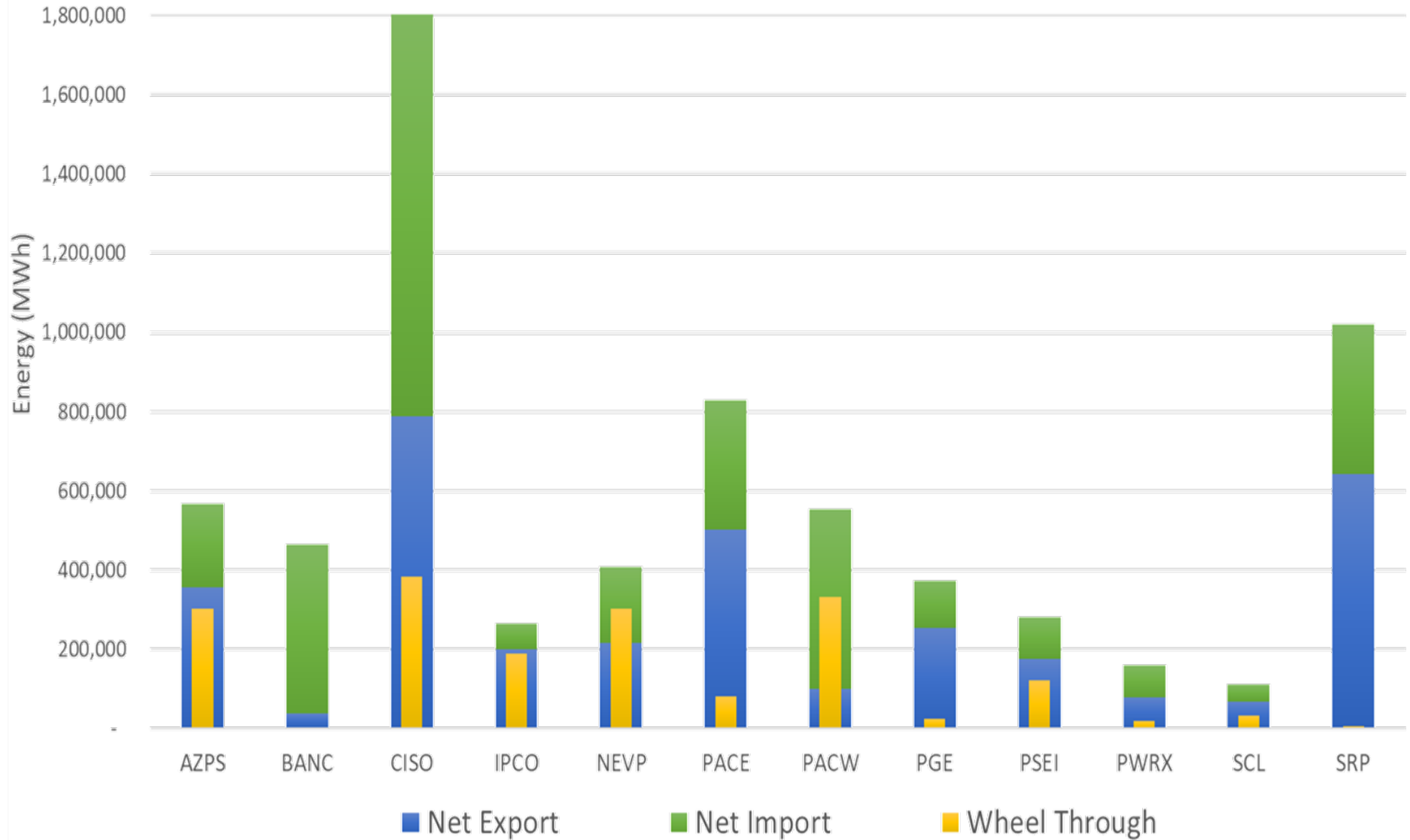


Estimated Proxy RTD ELAP FMM ELAP

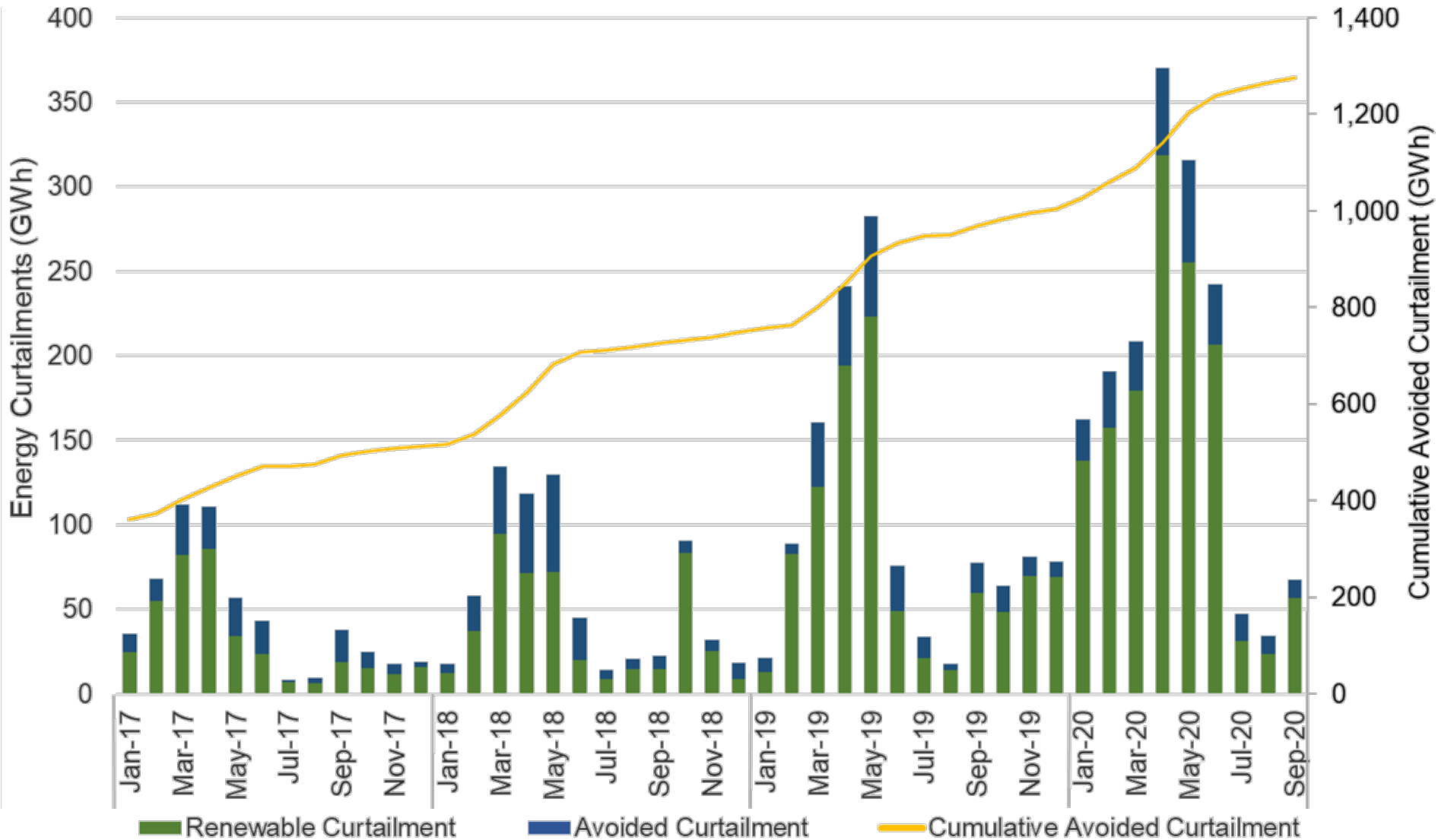
Weekly average prices in EIM areas



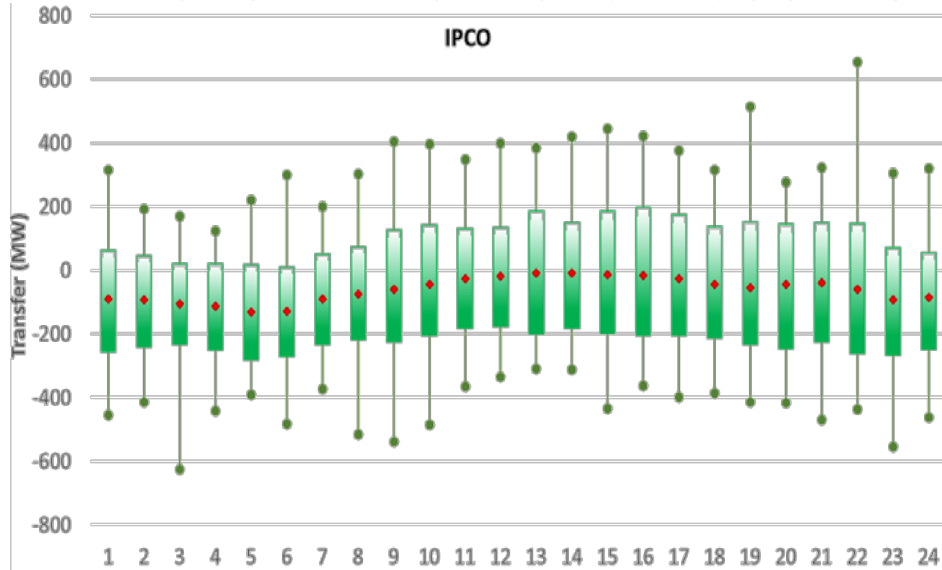
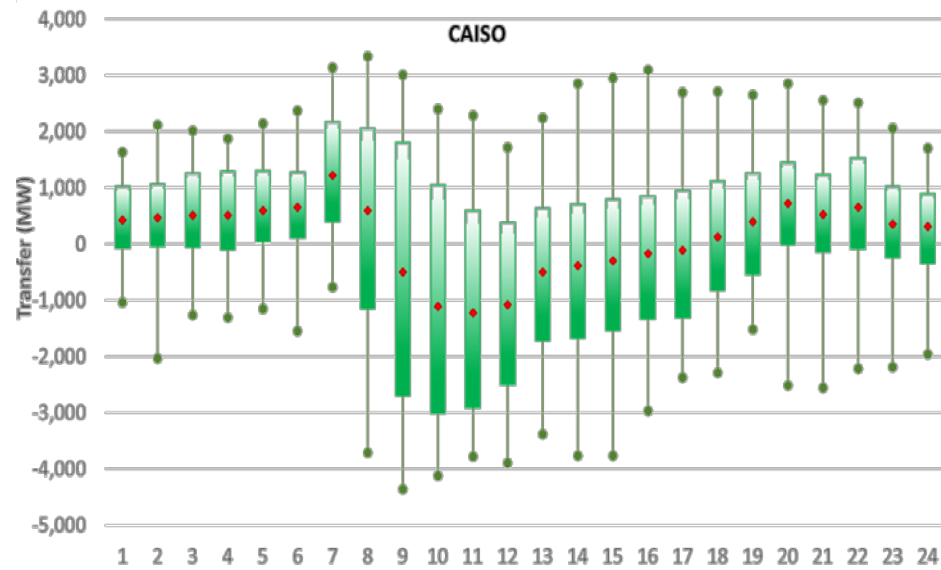
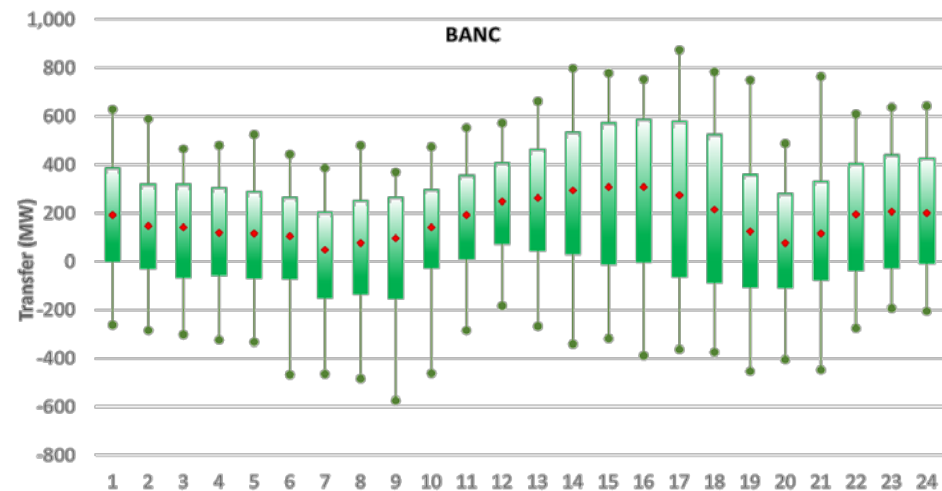
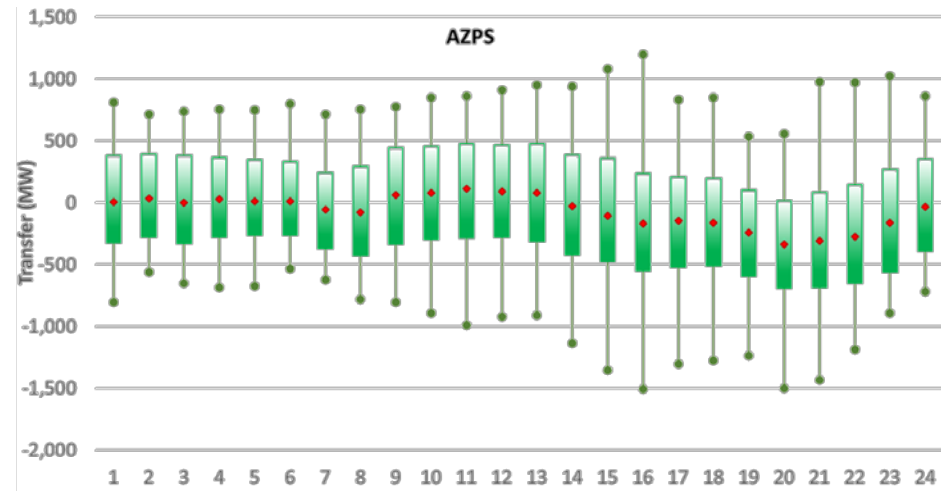
Estimated wheel through transfers in Q3, 2020



Energy imbalance market helps avoid curtailment



Robust energy transfers in 3rd quarter, 2020



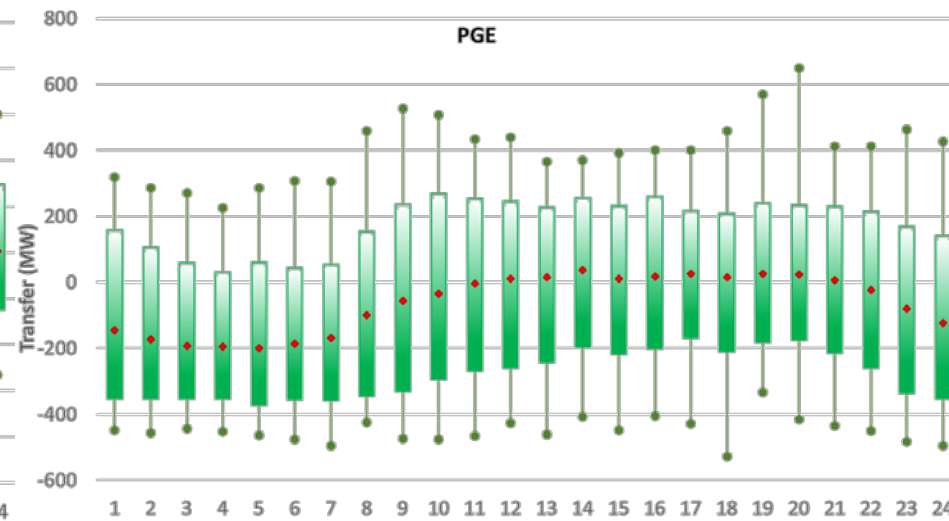
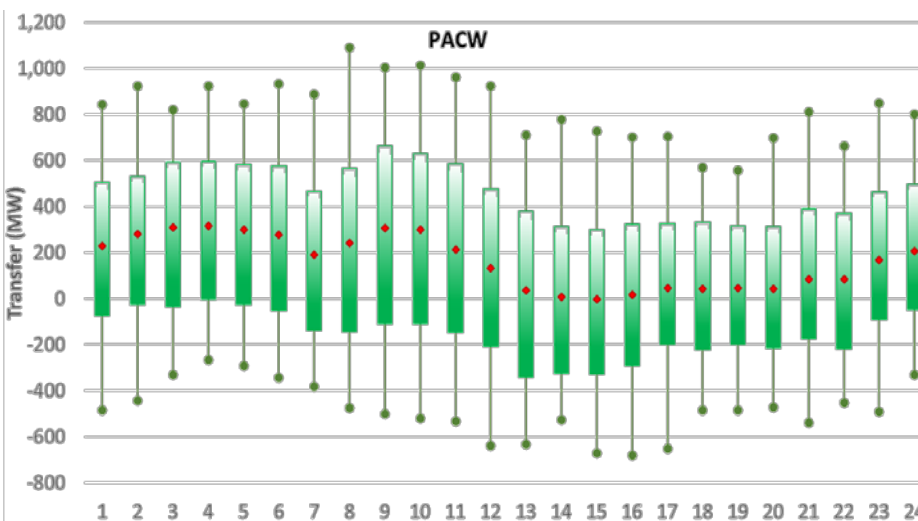
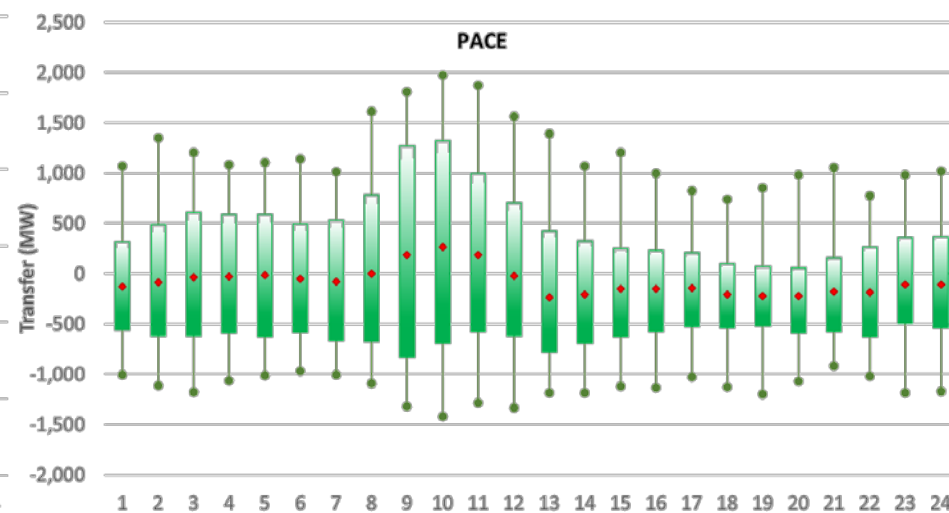
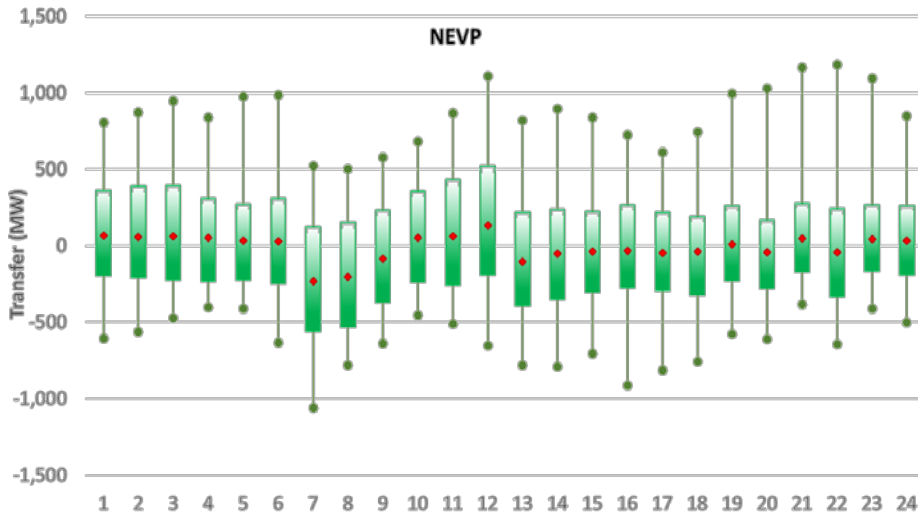
Transfer Axis: (+) Import (-) Export

10th to 90th percentile

Tails are max and min

Simple averages

Robust energy transfers in 3rd quarter, 2020



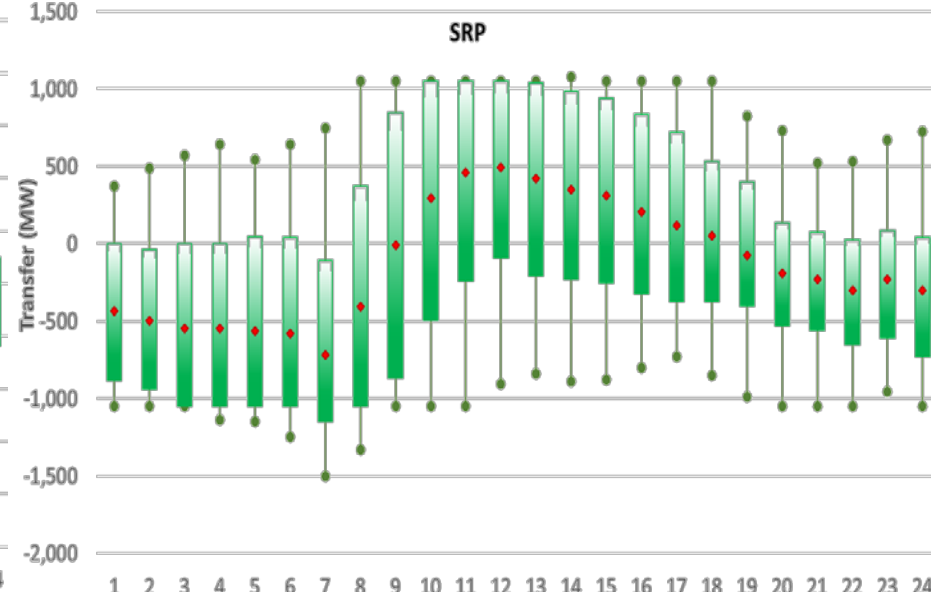
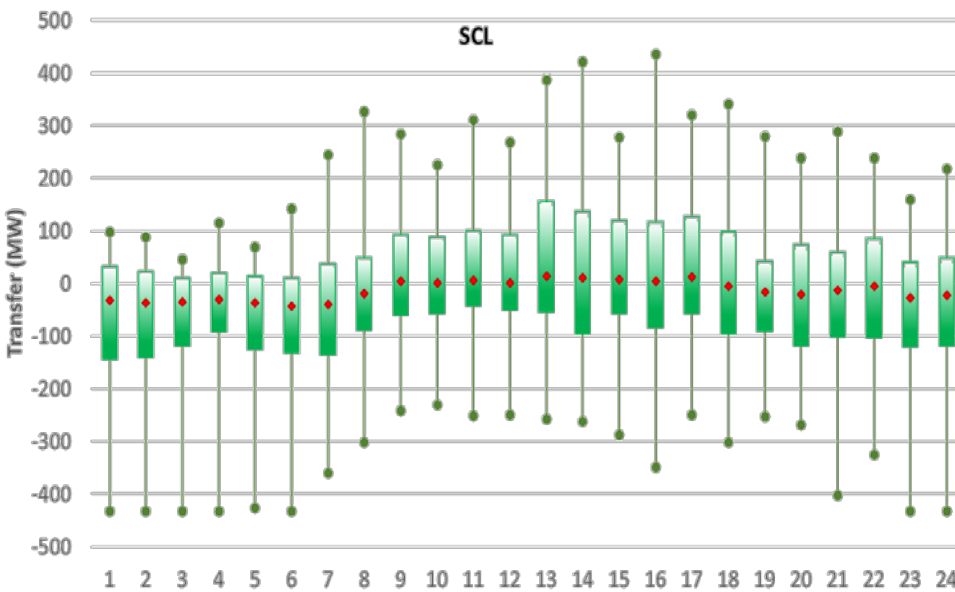
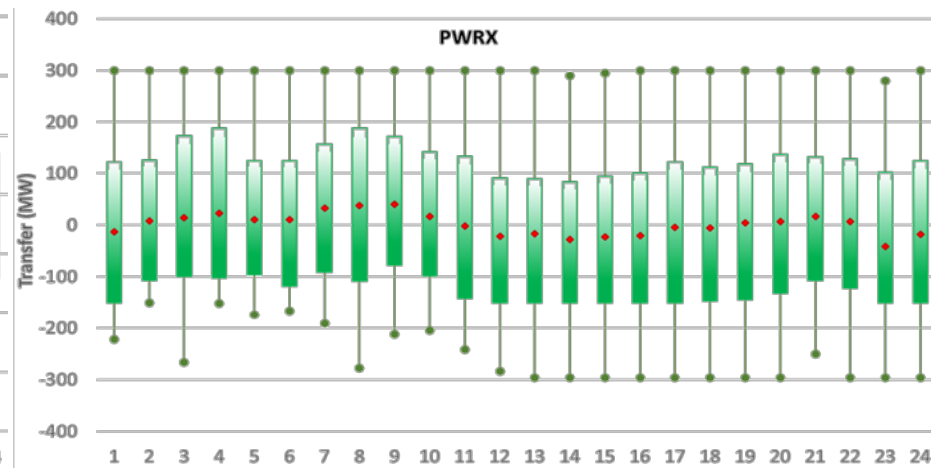
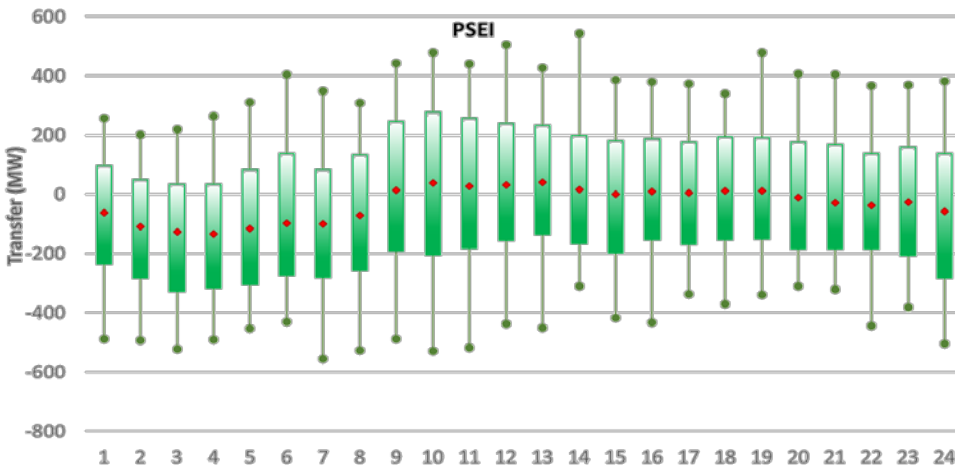
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