

WESTERN ENERGY IMBALANCE MARKET

Market Monitoring Update

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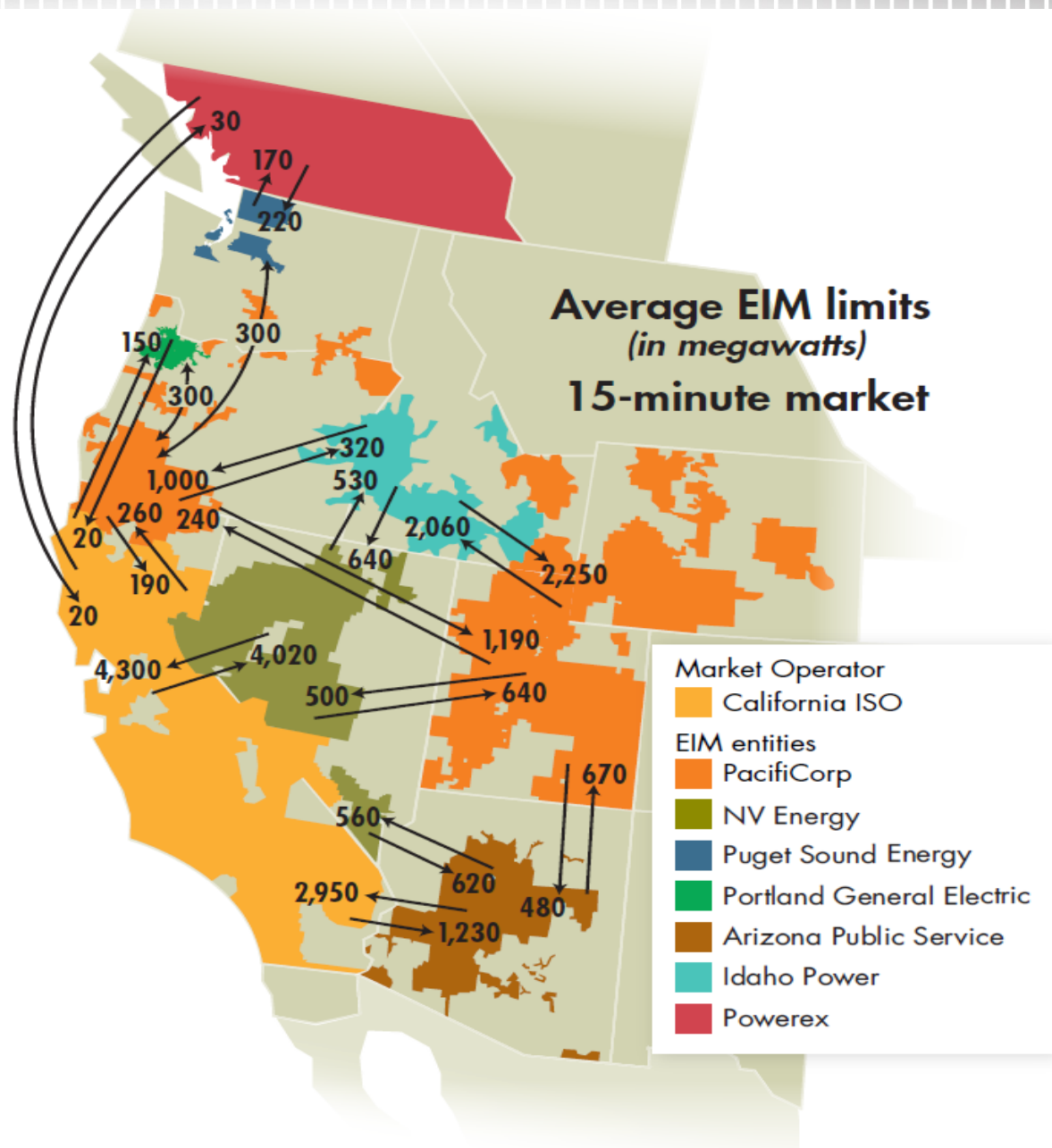
EIM Governing Body Meeting

General Session

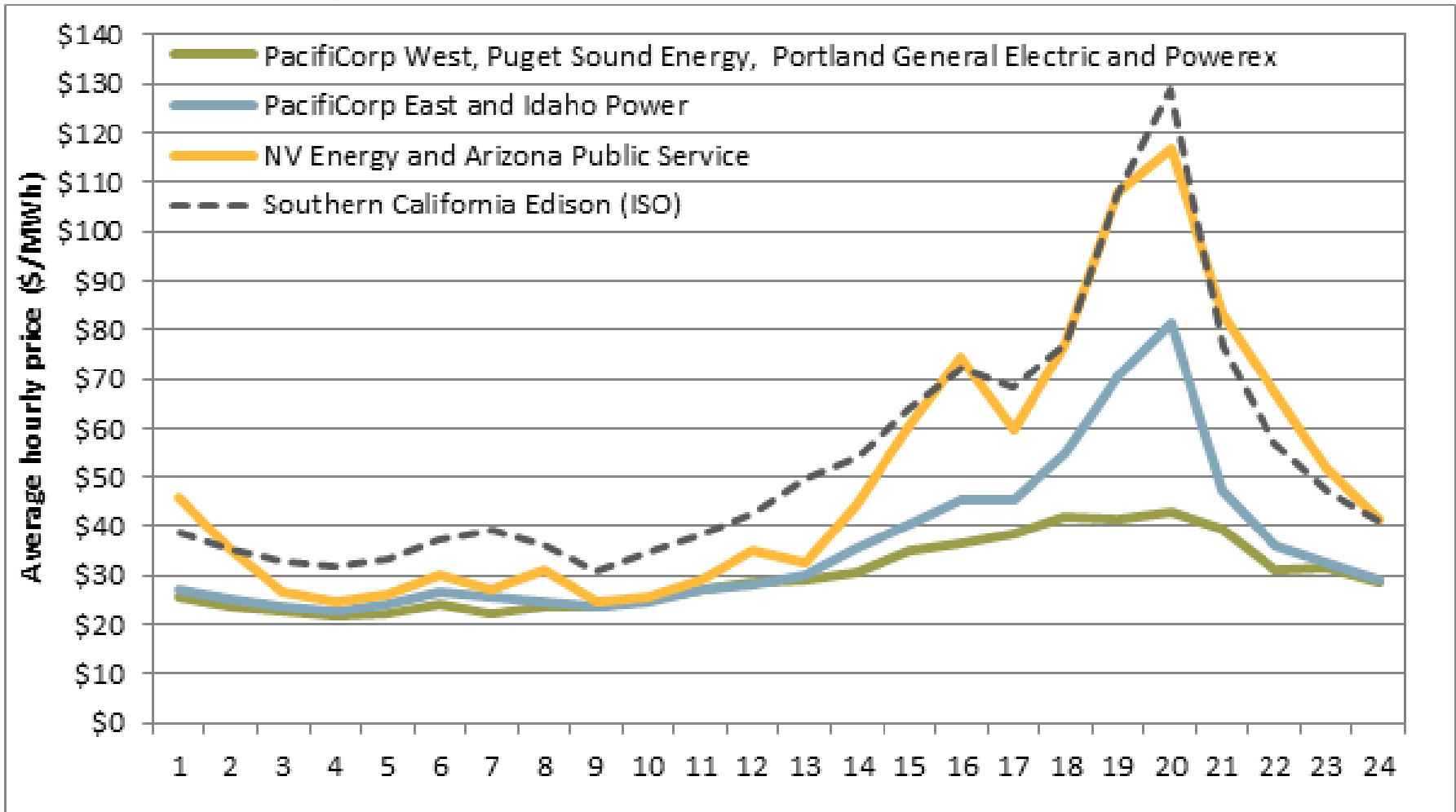
October 31, 2018



EIM transfer limits in Q3 2018



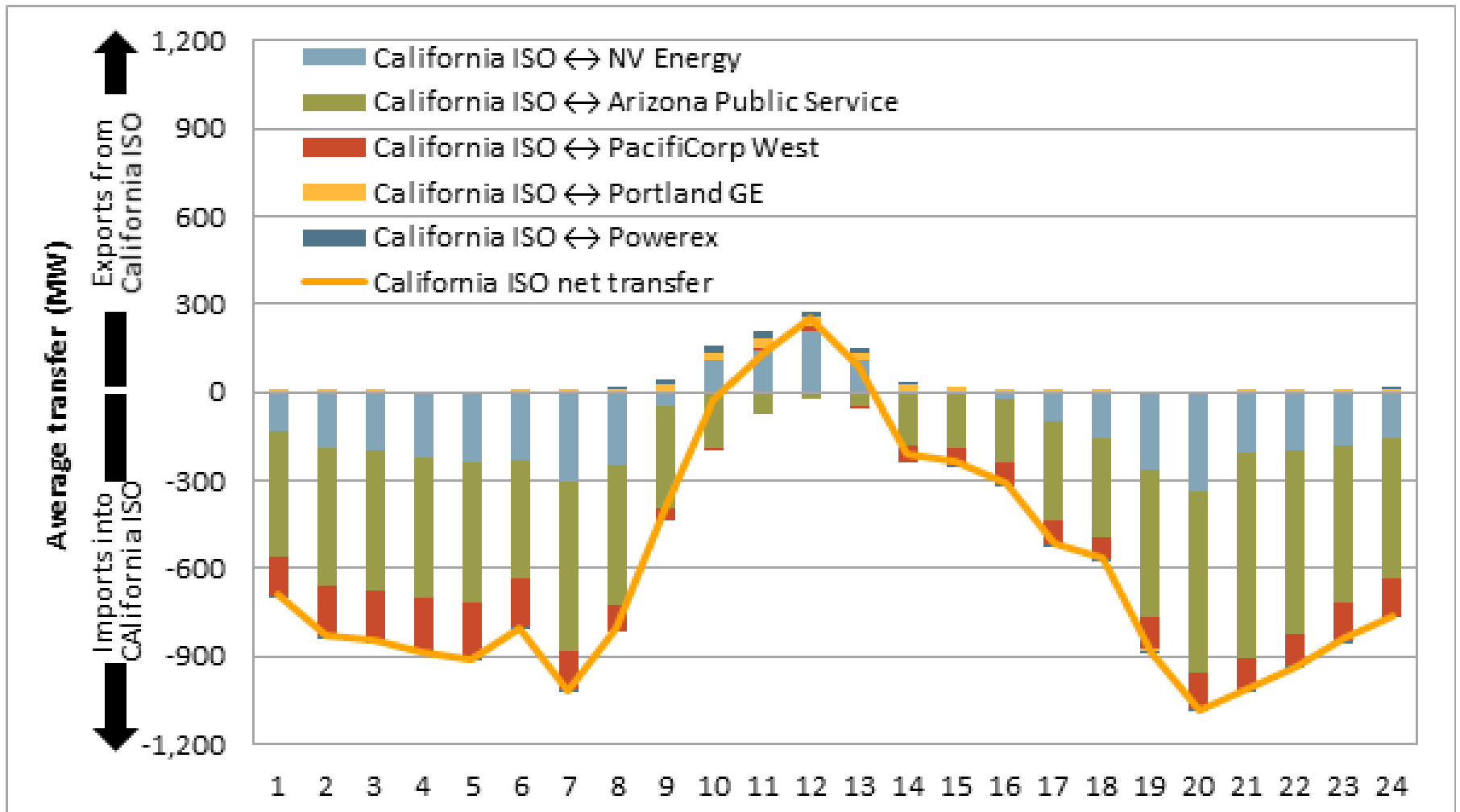
Recent EIM price trends continue – with lower prices in north and higher prices in south of ISO/EIM footprint.



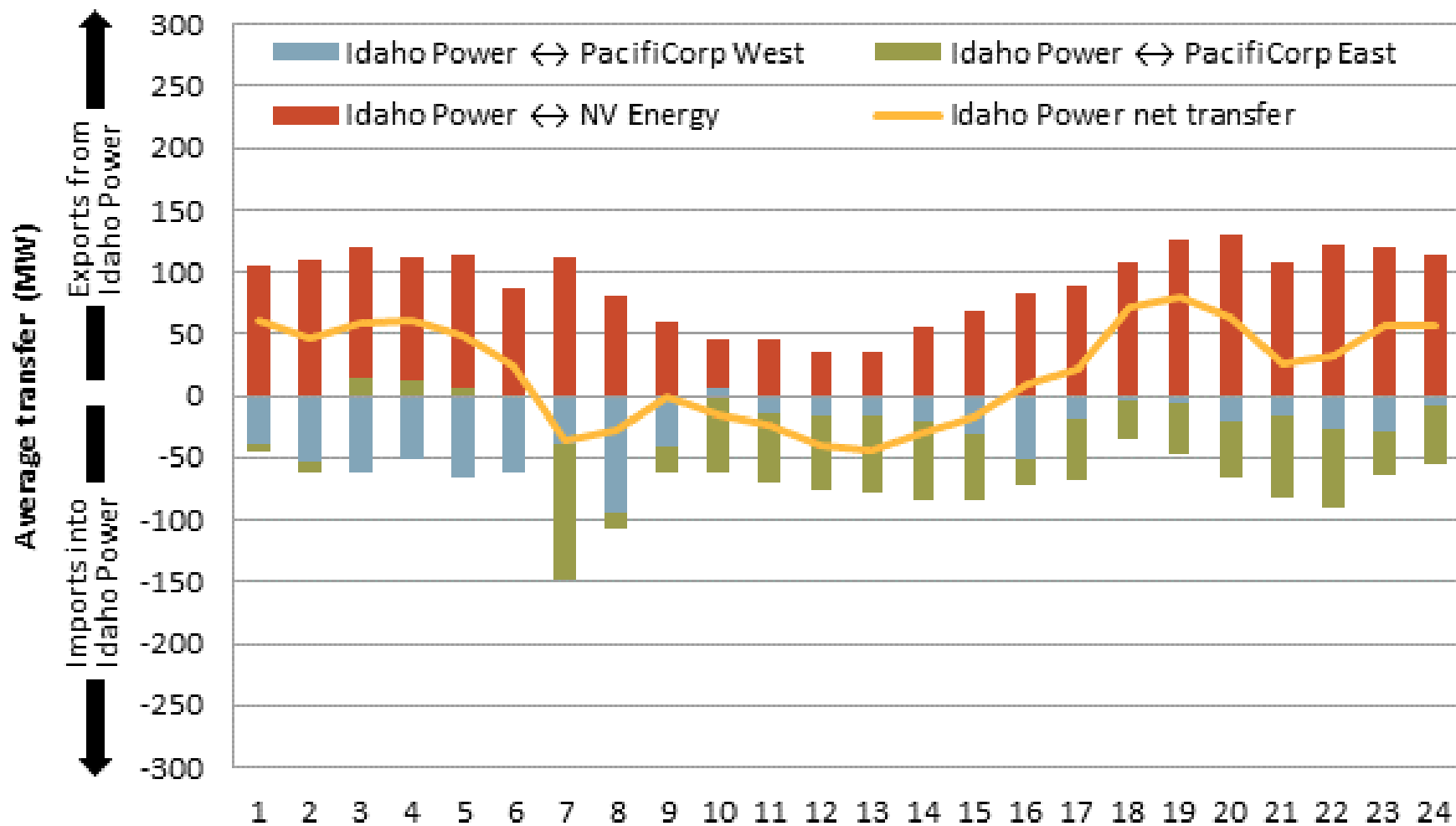
Congestion in Q3 reflects lower cost supply and limited transmission in Northwest relative to rest of EIM.

	15-minute market		5-minute market	
	Congested toward ISO	Congested from ISO	Congested toward ISO	Congested from ISO
NV Energy	3%	5%	3%	3%
Arizona Public Service	1%	4%	0%	2%
PacifiCorp East	7%	2%	4%	1%
Idaho Power	6%	0%	4%	1%
PacifiCorp West	34%	1%	21%	1%
Portland General Electric	33%	4%	21%	5%
Puget Sound Energy	33%	8%	21%	4%
Powerex	31%	21%	14%	11%

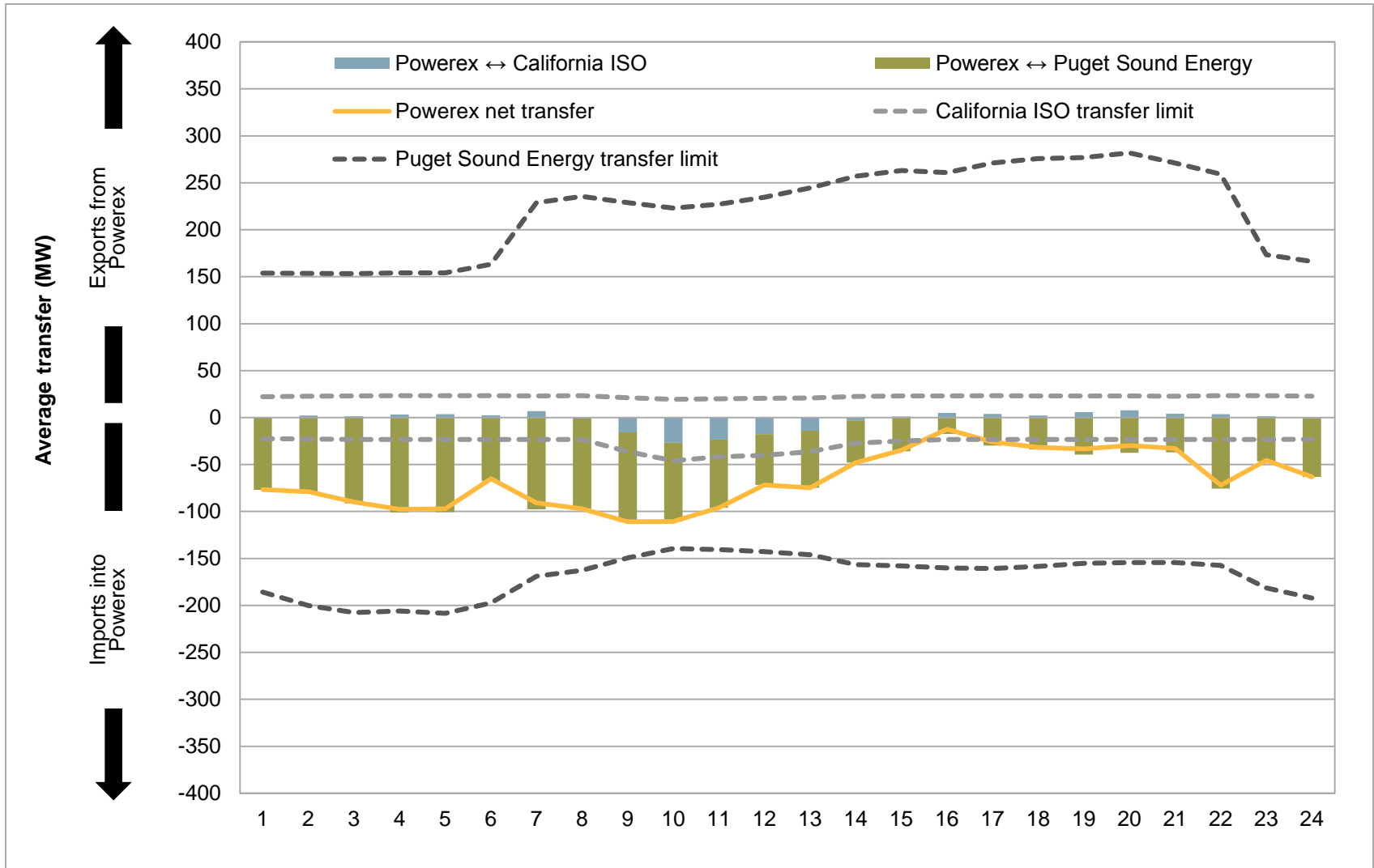
Net imports in EIM by ISO increased in Q3.



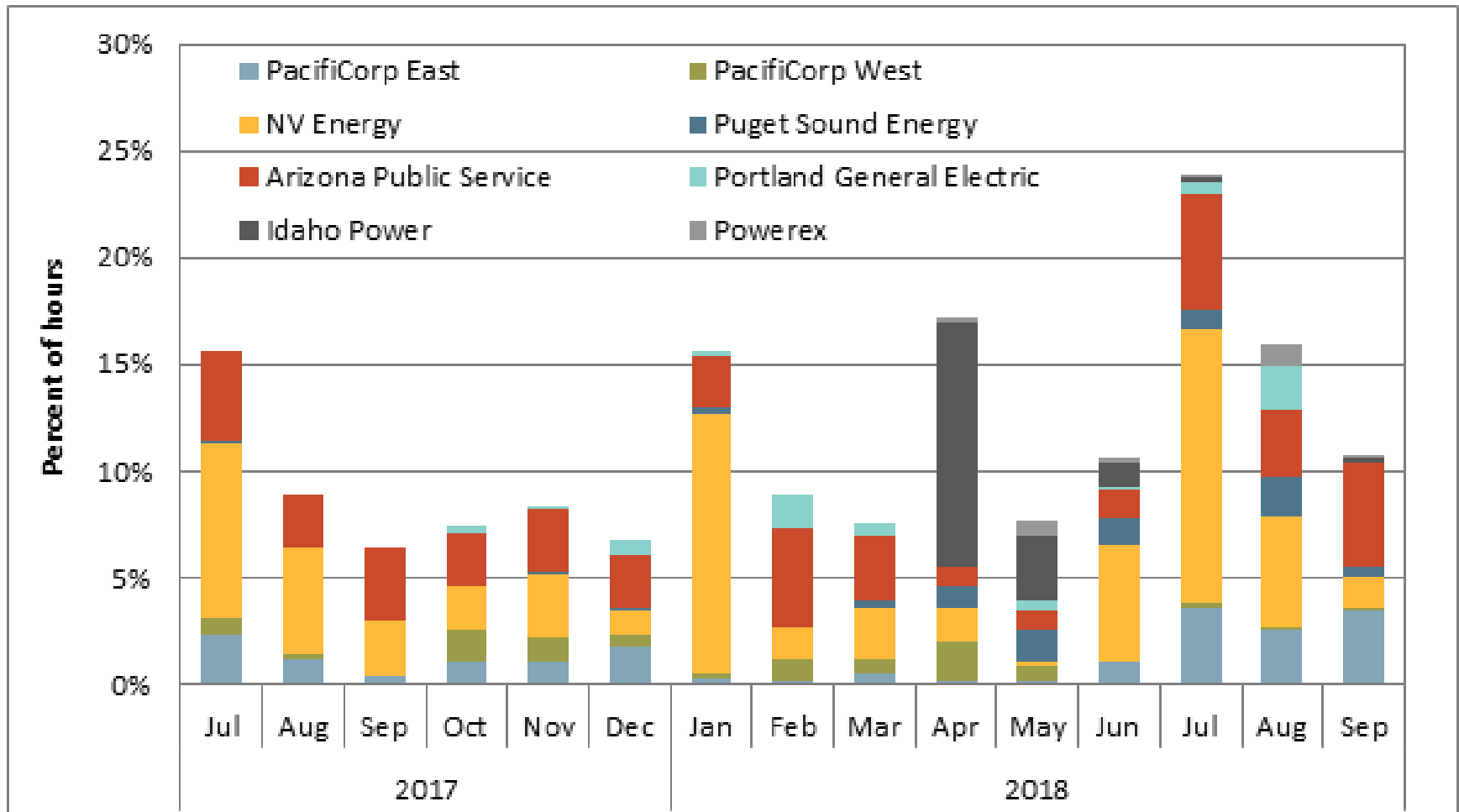
Average EIM transfers with Idaho Power (15-minute market, Q3 2018)



Average EIM transfers with Powerex (15-minute market, Q3 2018)



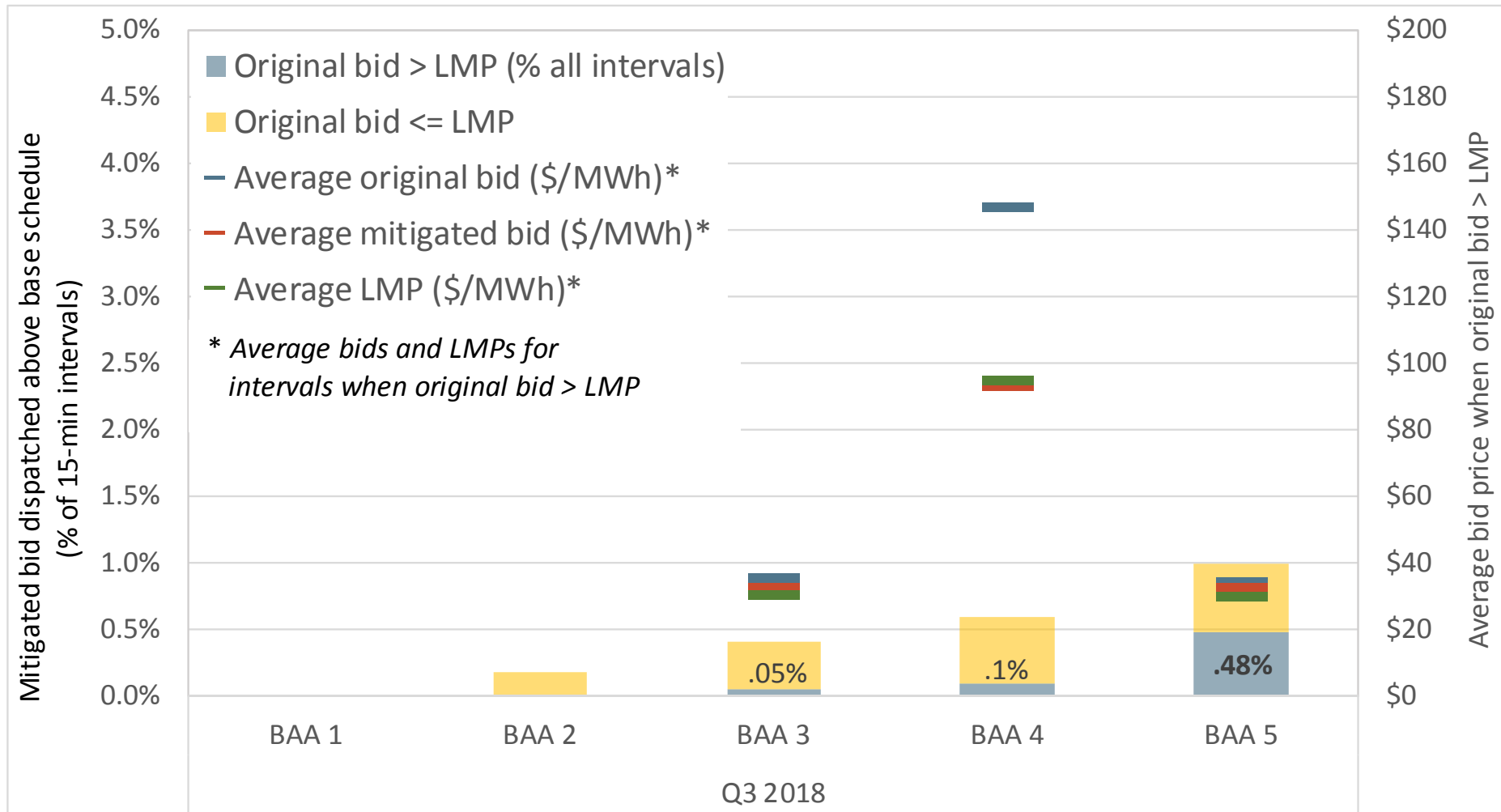
Meeting upward flexible ramping requirement continues to be problematic in some hours for some EIM areas.



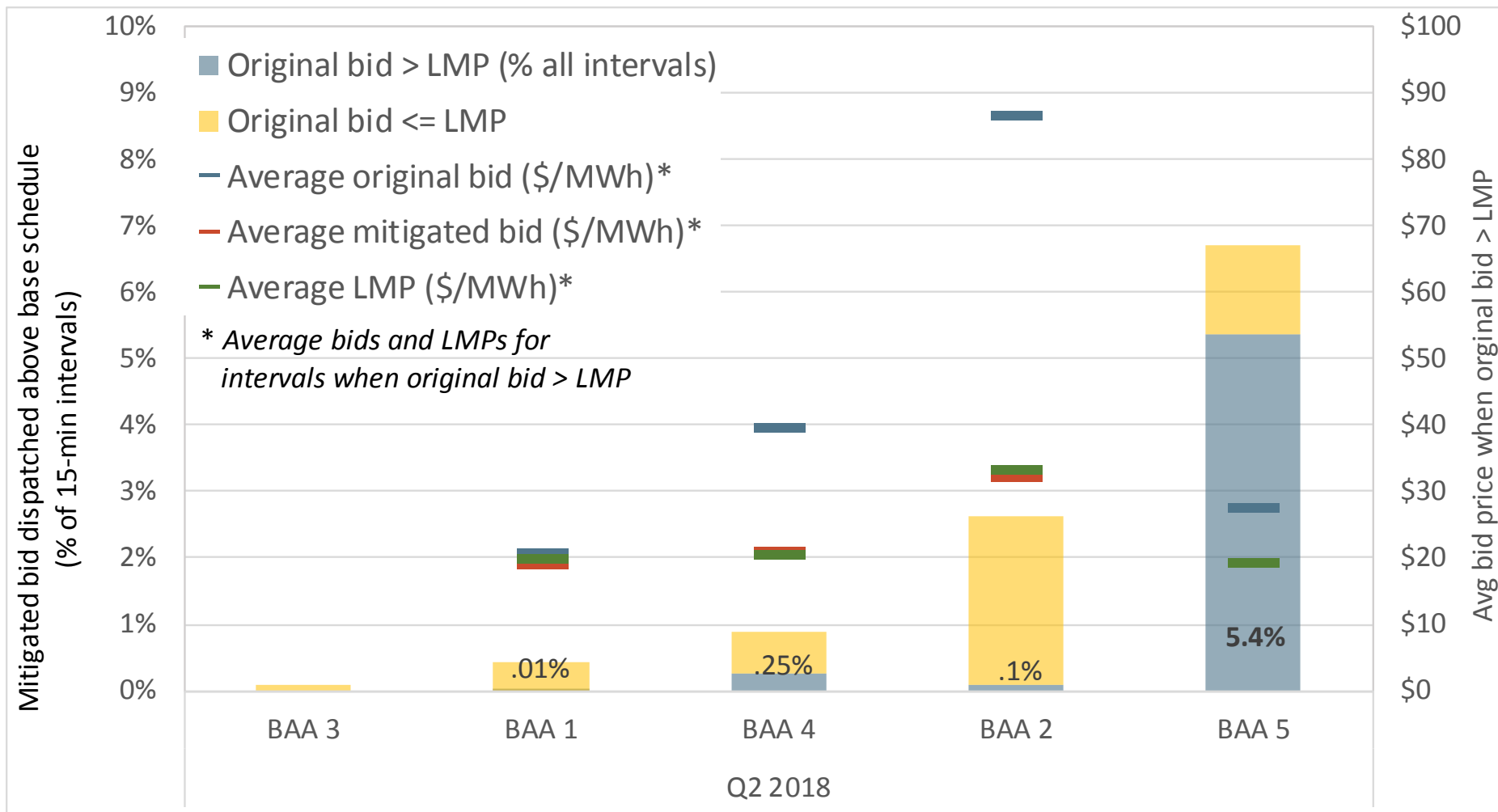
DMM approach to analyzing impact of bid mitigation on EIM hydro resources.

1. Identify all intervals when resources had bids mitigated and were dispatched above base schedule.
2. Compare resource's original market bid (before mitigation) to LMP:
 - If original bid \leq LMP, then mitigation had no impact.
 - If original bid $>$ LMP, then mitigation increased dispatch above base schedule.
3. If original bid $>$ LMP, then calculate difference between original bid vs LMP.

The impact of bid mitigation on hydro units was very low in Q3 2018.



The impact of mitigation on hydro units was also very low in Q2 2018.



Follow-up on prior DMM recommendations

- ✓ Expand *EIM Offer Rules Initiative* to include changes to mitigation cited as reasons for needing extremely high hydro DEB option.
- ✓ Revise CCDEBE proposal to allow *reasonableness thresholds* to be adjusted during operating day.
- ? Do not allow import bids up to \$2,000/MWh to set LMPs without cost verification (FERC Order 831).
 - *Allowing import bids into the ISO up to \$2,000/MWh without cost-verification could undermine incentive to offer supply in EIM and bilateral markets.*