



California ISO

BAA-level mitigation in the WEIM

Price Formation Enhancements

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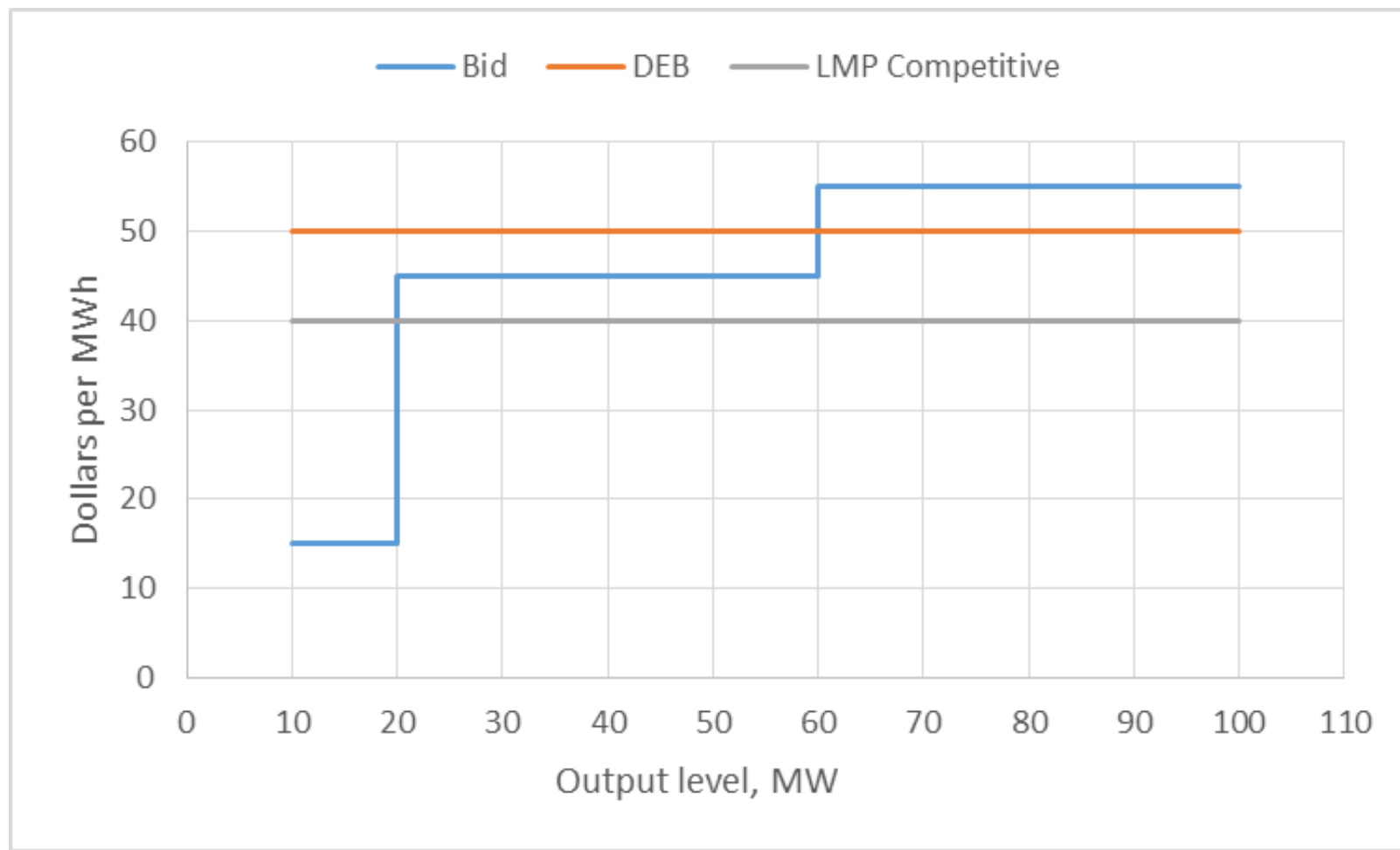
Department of Market Monitoring

California Independent System Operator

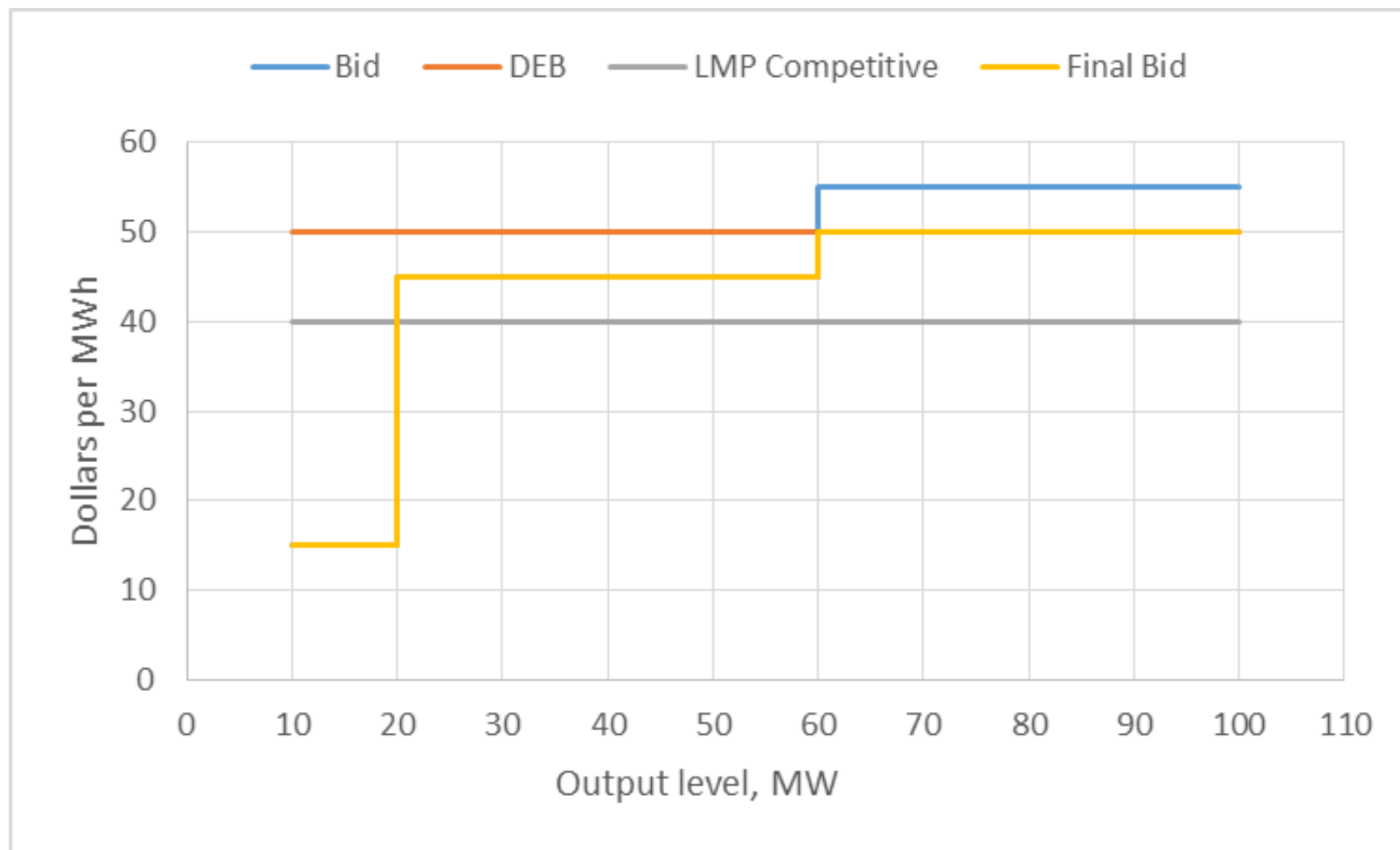
BAA-Level Mitigation Refresher

- When WEIM Transfers into a BAA are constrained, the BAA is tested for competitiveness
 - Using three pivotal supplier test
 - EIM BPM Section 11.3.5.2
- If assessment identifies non-competitive conditions, all bids in that BAA are **subject** to mitigation
 - BAAs almost always determined non-competitive when tested
 - Due to structure of most WEIM BAAs
 - Bids are only mitigated if they are higher than **both** the resource's default energy bid and competitive LMP
- WEIM resources are also subject to local market power mitigation (based on flow-based constraints)
 - However most instances of mitigation of WEIM resources is due to the triggering of BAA-level mitigation

Bids and mitigation examples: inputs



Bids and mitigation examples: mitigated bid



Data details

- Regions

Mountain Northwest	Desert Southwest	Pacific Northwest	California
PacifiCorp East	Arizona Public Service	PacifiCorp West	Turlock Irrigation District
Idaho Power	NV Energy	Seattle City Light	Balancing Area of Northern California
NorthWestern Energy	WAPA Desert Southwest	Bonneville Power Authority	Los Angeles Dept of Water and Power
Avista	Tucson Electric	Powerex	
	Salt River Project	Avangrid	
	El Paso Electric	Portland General	
	New Mexico	Puget Sound	
		Tacoma Power	

Timeframe: January – October, 2023

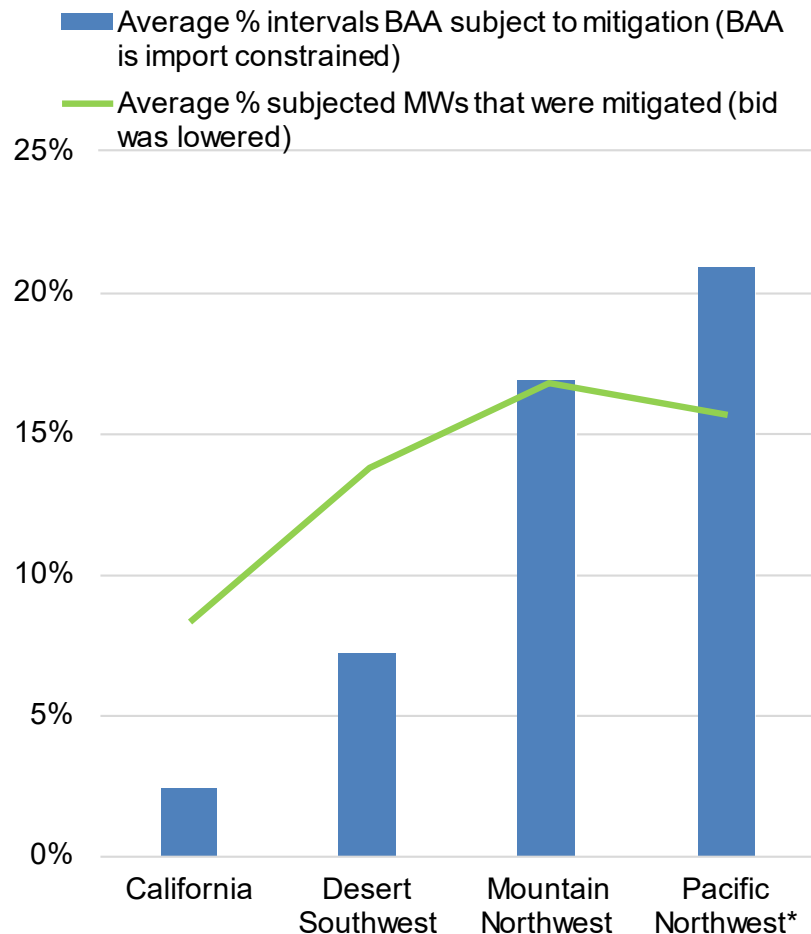
Mitigation terminology

- Interval subject to BAA-level mitigation
 - Interval where BAA is import constrained
 - And BAA is found to be structurally uncompetitive
 - BAAs in WEIM almost always fail this test (3 pivotal supplier)
- % of MW subject to mitigation (when BAA-level mitigation is triggered)
 - BAA-level mitigation is triggered
 - Resource(s) in BAA bid high enough to be mitigated
 - Bids only mitigated when higher than both DEB and competitive LMP

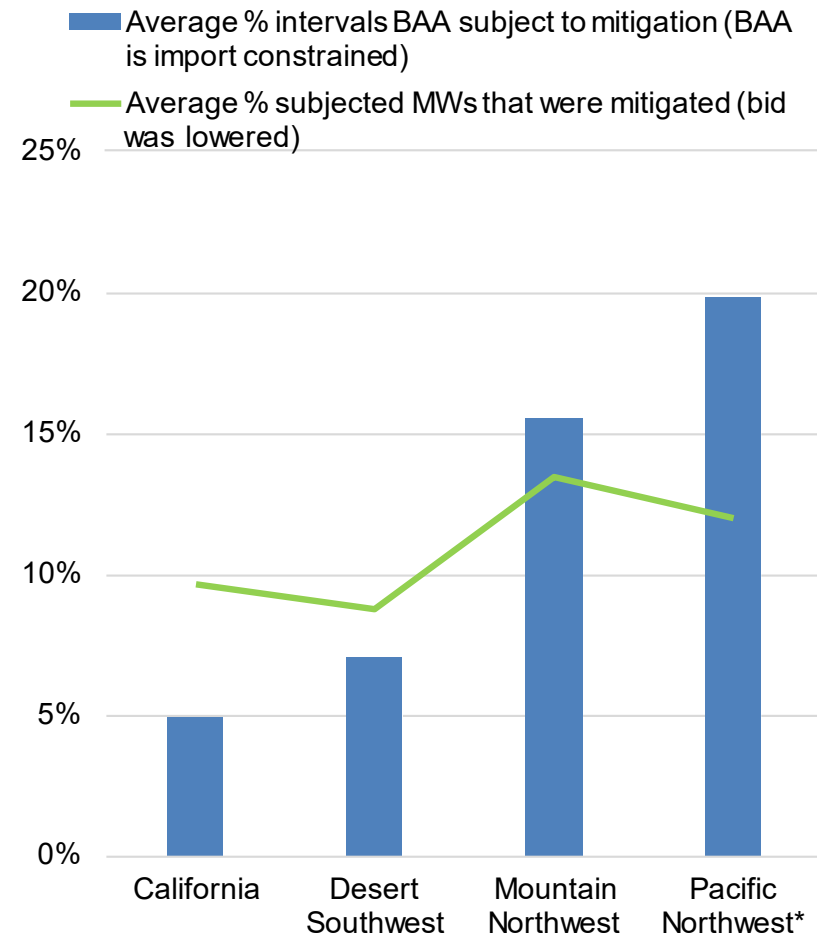
Resource Type	Average DEB
Gas (combined cycle)	\$55
Gas (gas turbine)	\$70
Hydro DEB	\$197

Frequency and magnitude of BAA-level mitigation

RTPD

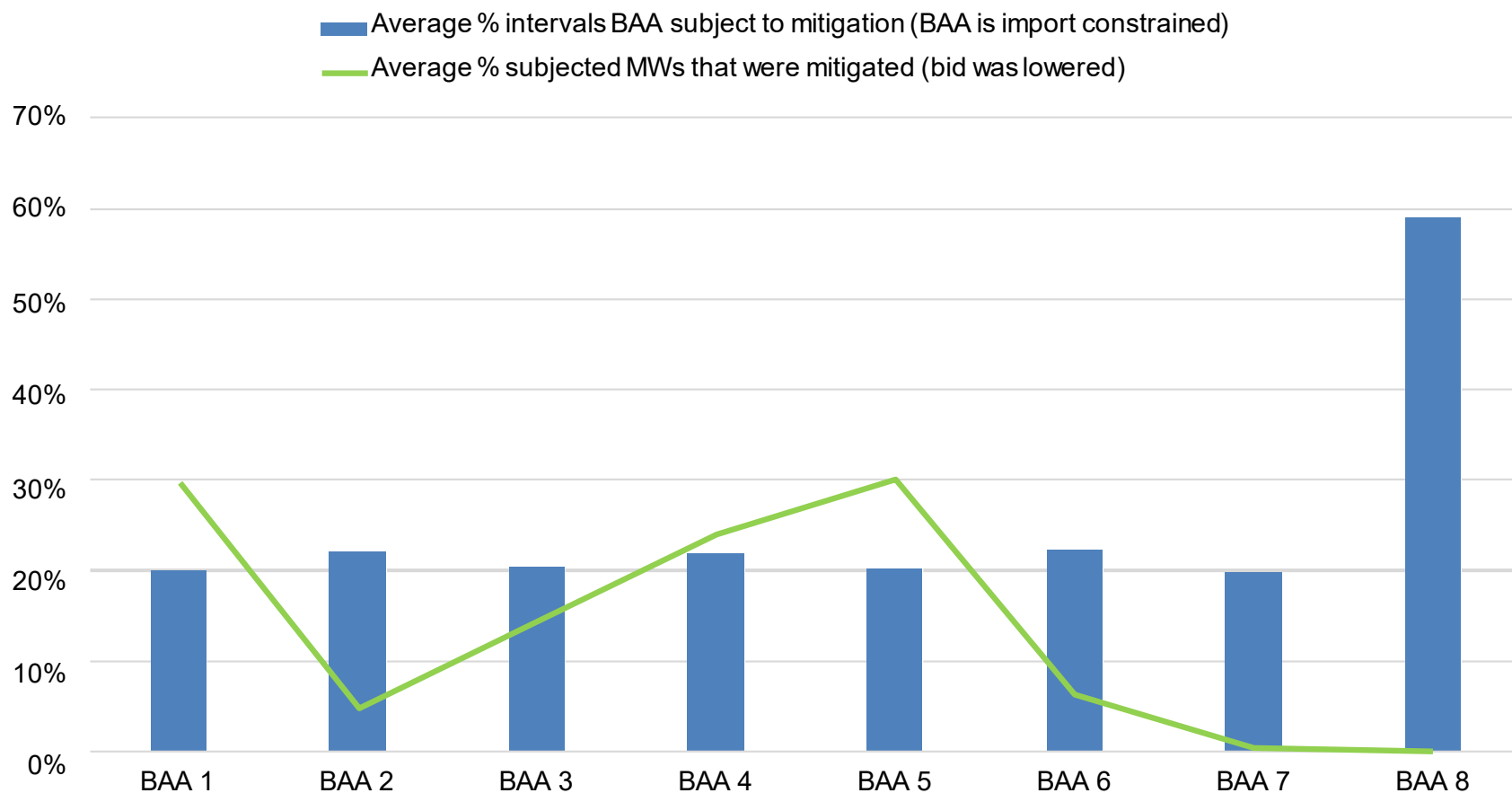


RTD



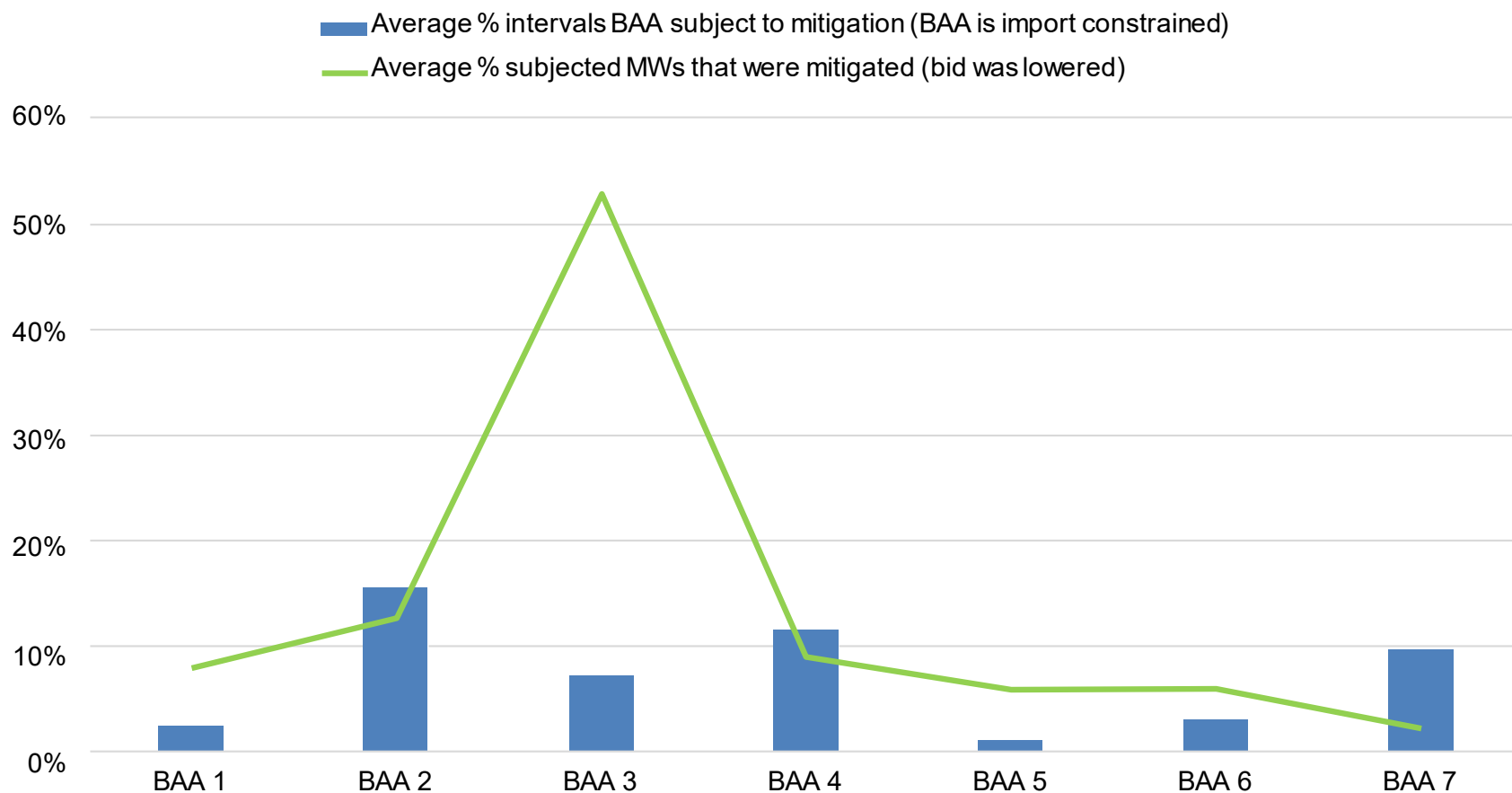
Frequency and magnitude of BAA – level mitigation

Pacific Northwest BAAs (in RTPD)



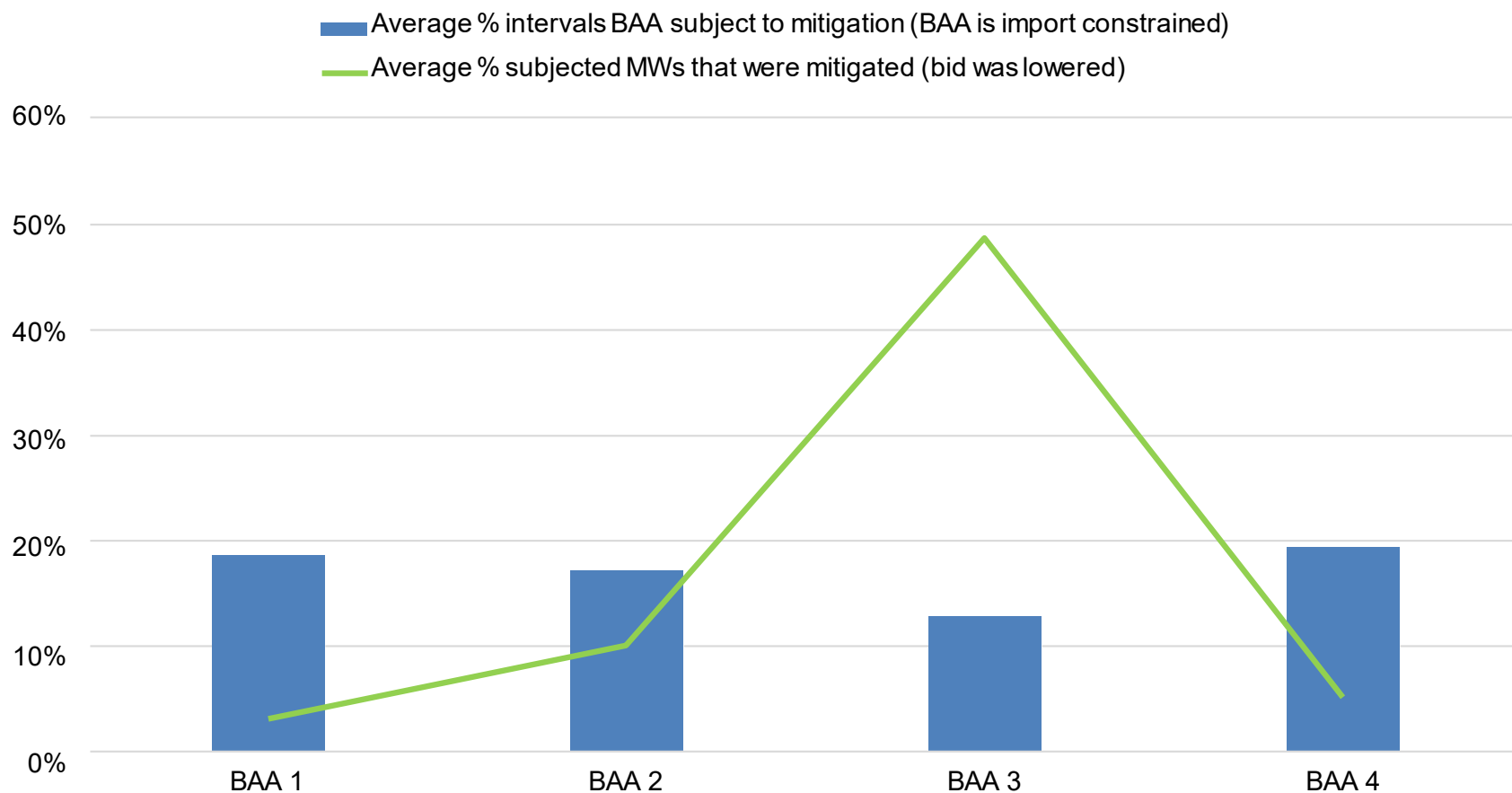
Frequency and magnitude of BAA – level mitigation

Desert Southwest BAAs (in RTPD)



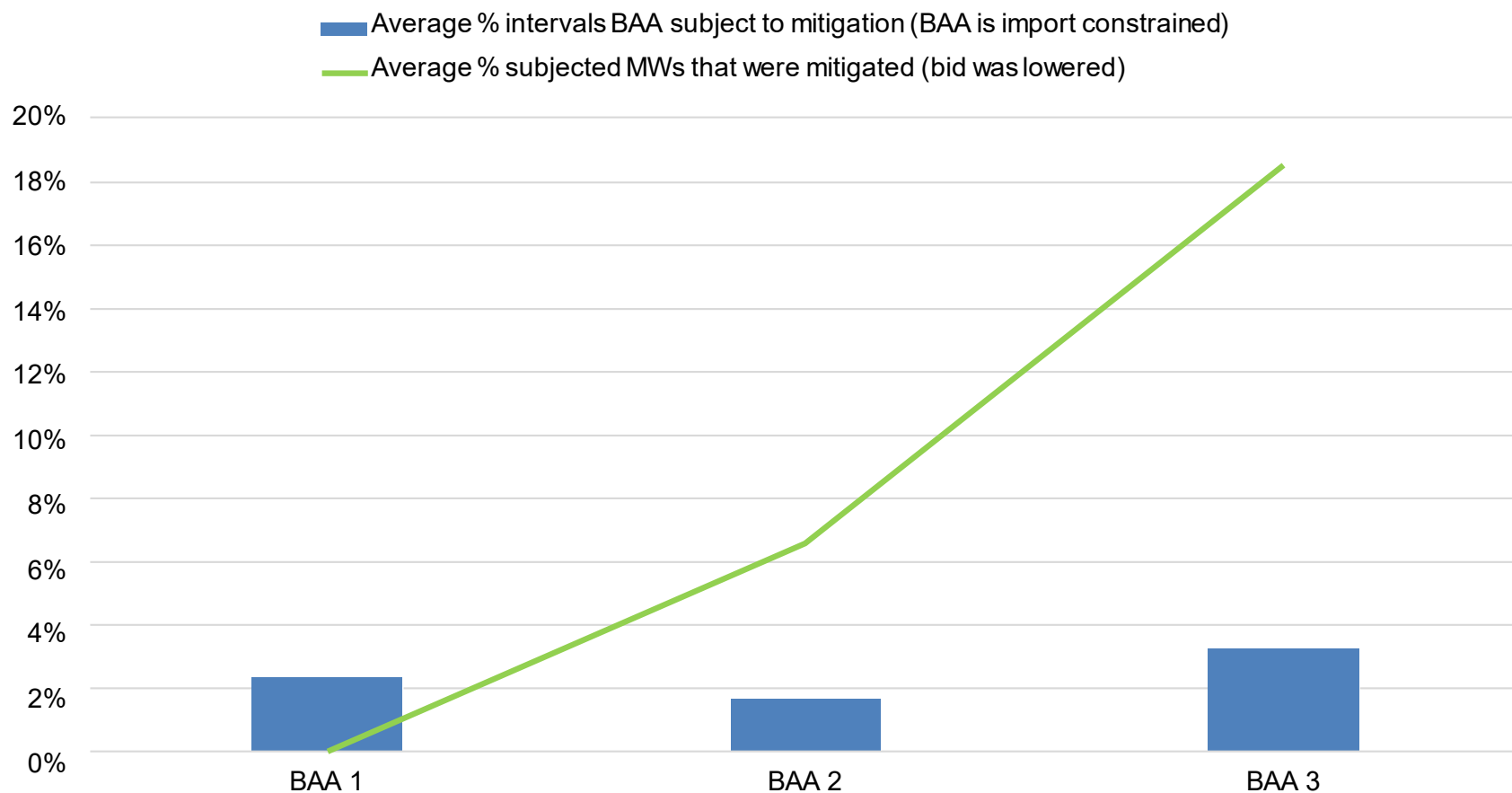
Frequency and magnitude of BAA – level mitigation

Mountain Northwest BAAs (in RTPD)



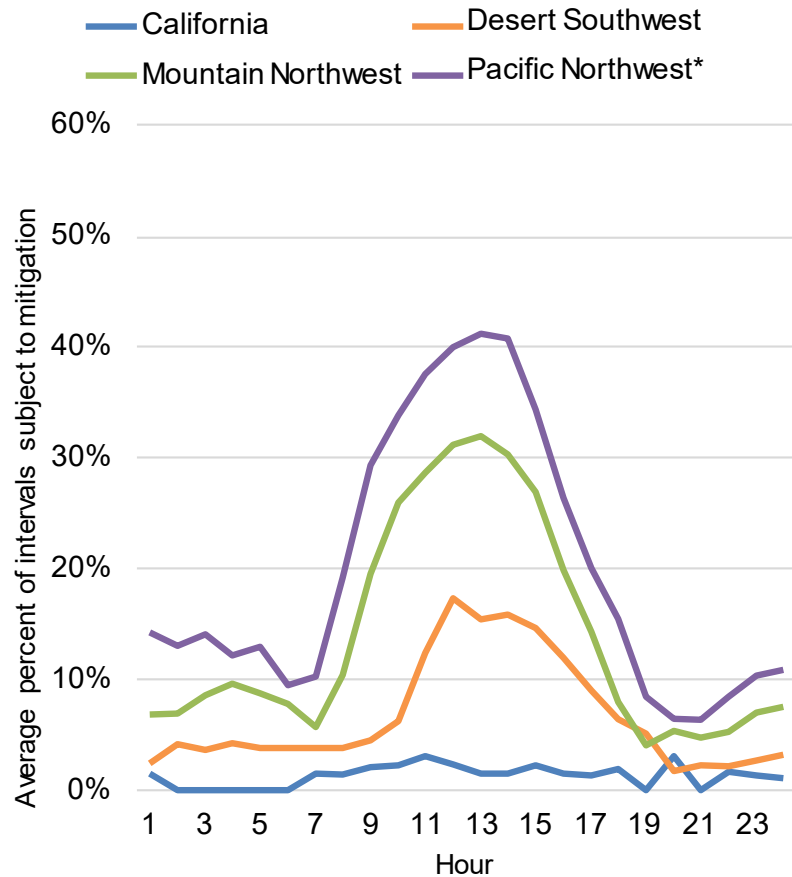
Frequency and magnitude of BAA – level mitigation

California BAAs (in RTPD)

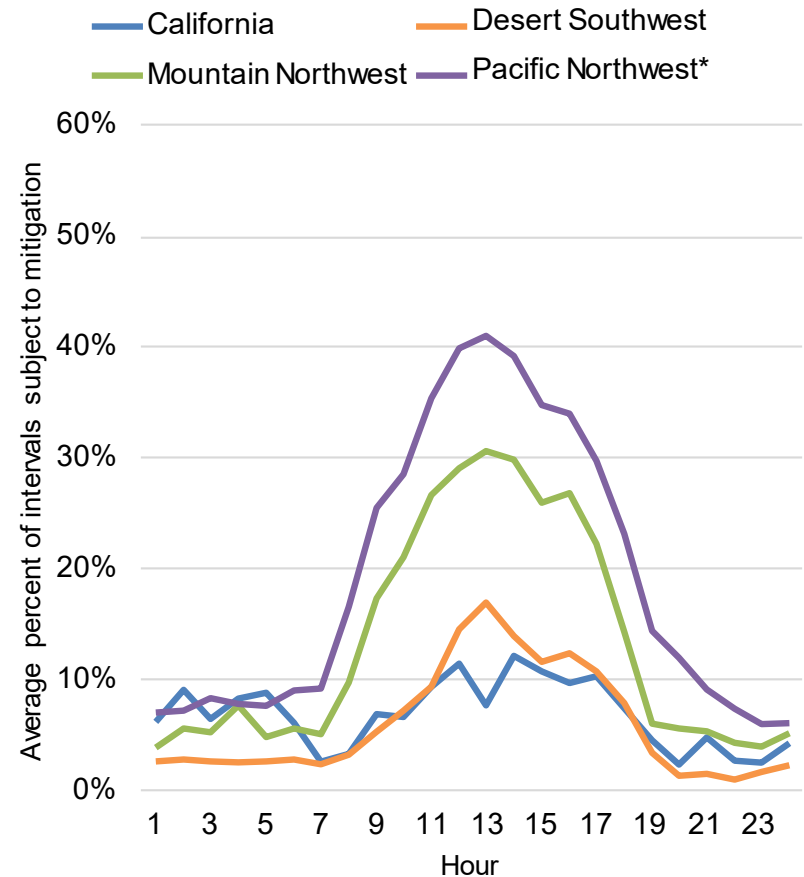


Frequency of areas subject to mitigation – by hour

RTPD

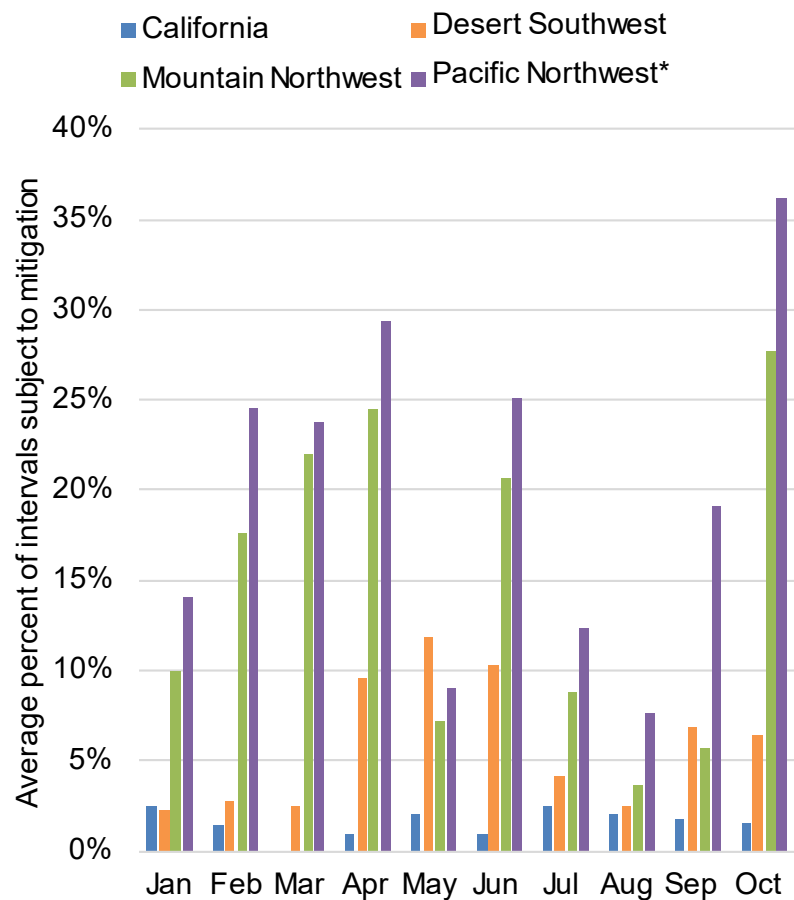


RTD

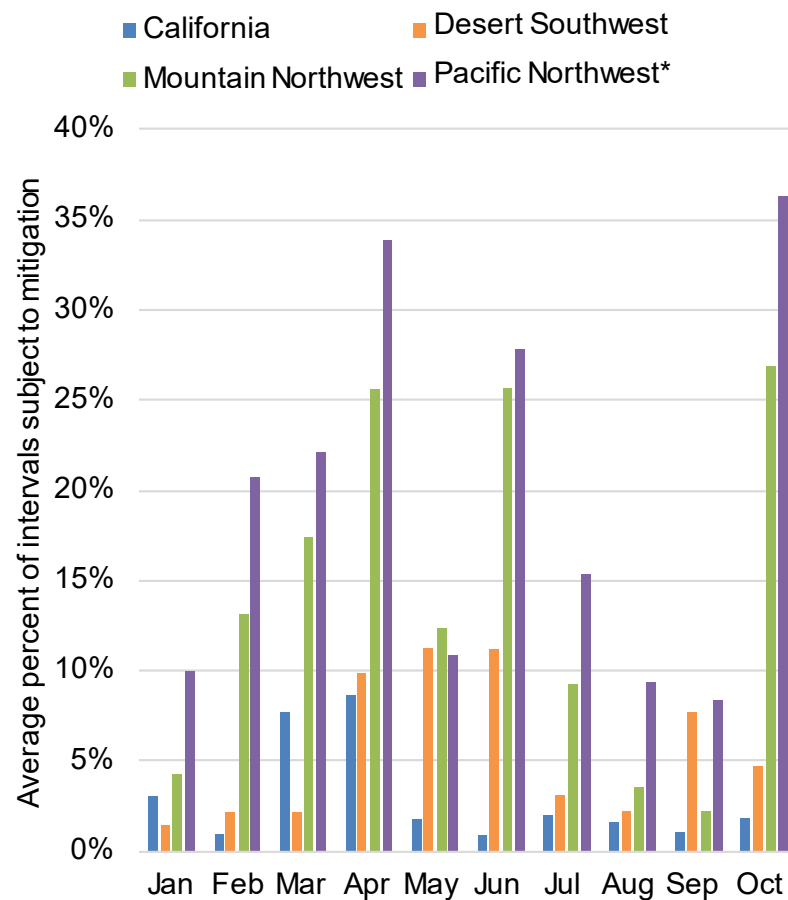


Frequency of areas subject to mitigation – by month

RTPD



RTD

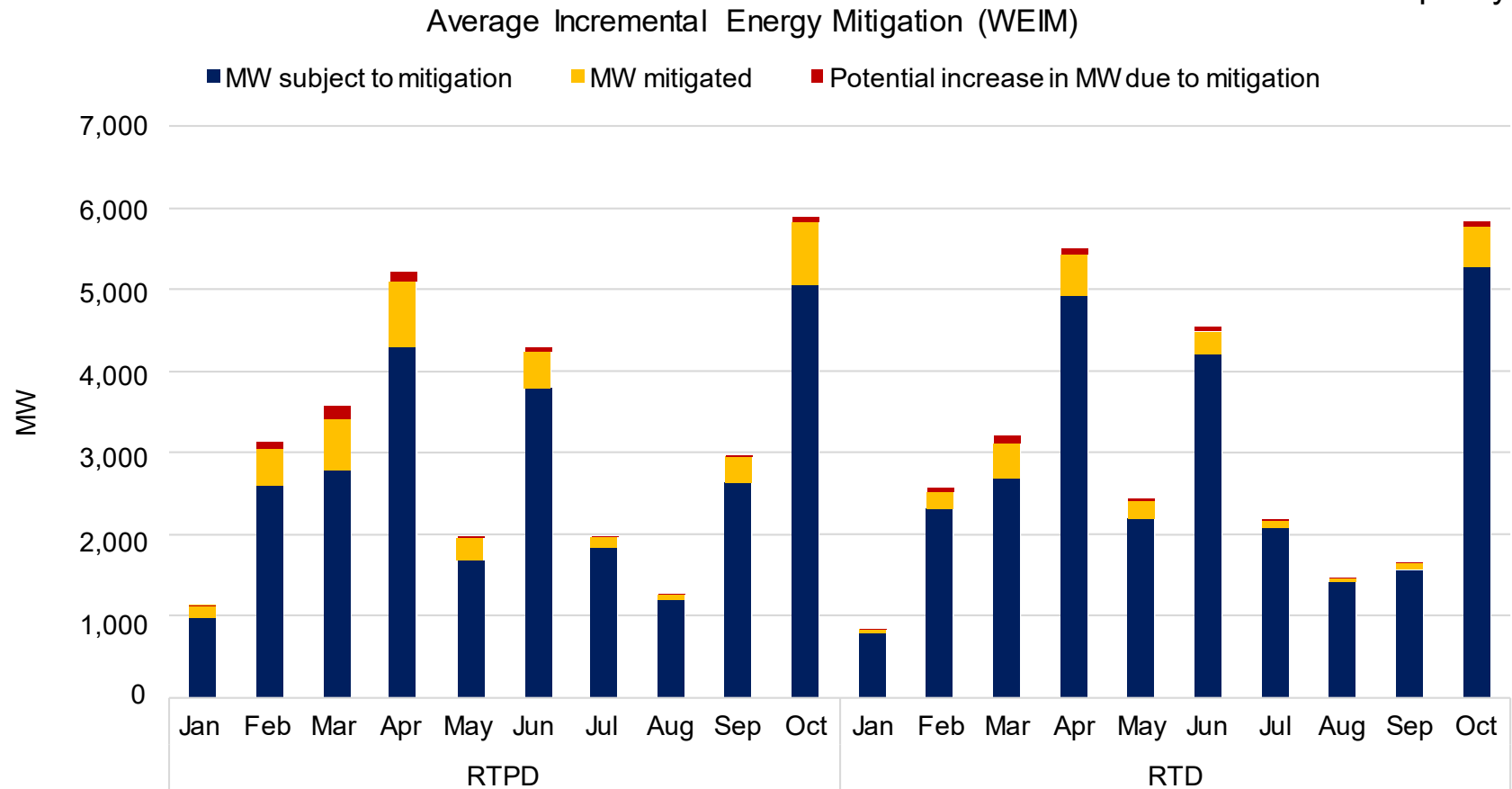


Mitigation terminology

- **MW subject to mitigation**
 - BAA is import constrained
 - And BAA failed the structural test (3 pivotal supplier test)
- **MW mitigated**
 - Bids were changed/lowered because bid was higher than both competitive LMP and default energy bid
- **Potential increase in MW due to mitigation**
 - Bid was lowered enough to potentially cause additional dispatch from that resource

Average monthly mitigation in WEIM

Around
87,000 MW of
participating
capacity



Average monthly mitigation in WEIM

Around
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participating
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