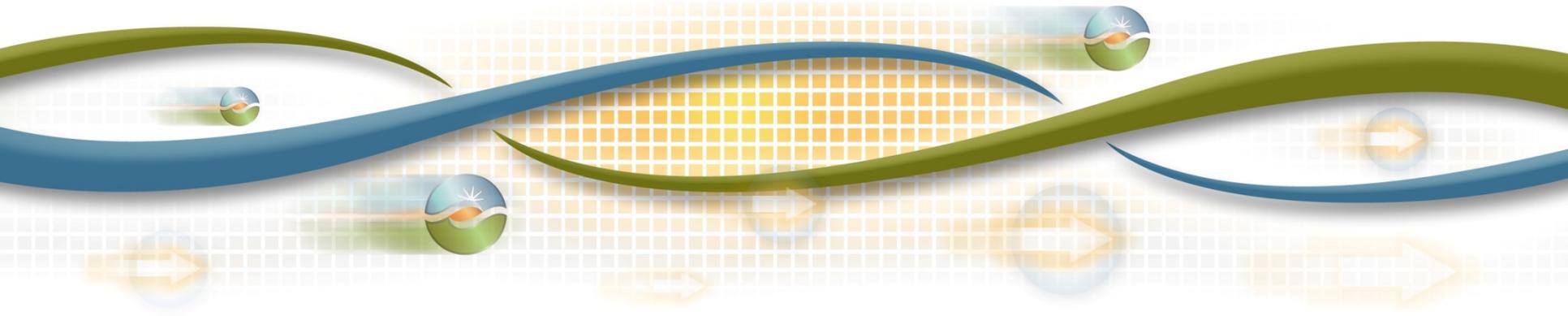




DMM 2017 Q1 Report Highlights

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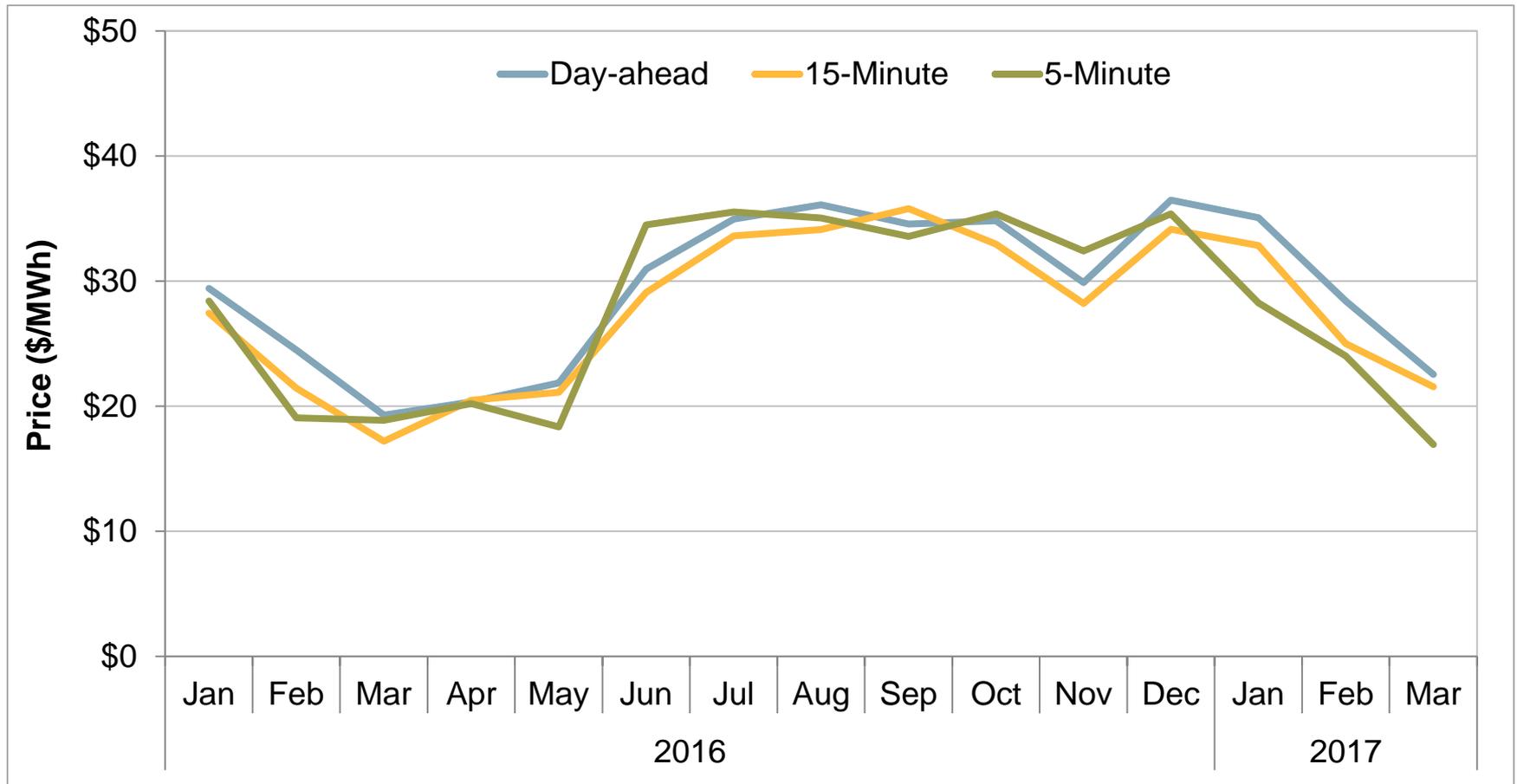
Conference call
July 31, 2017



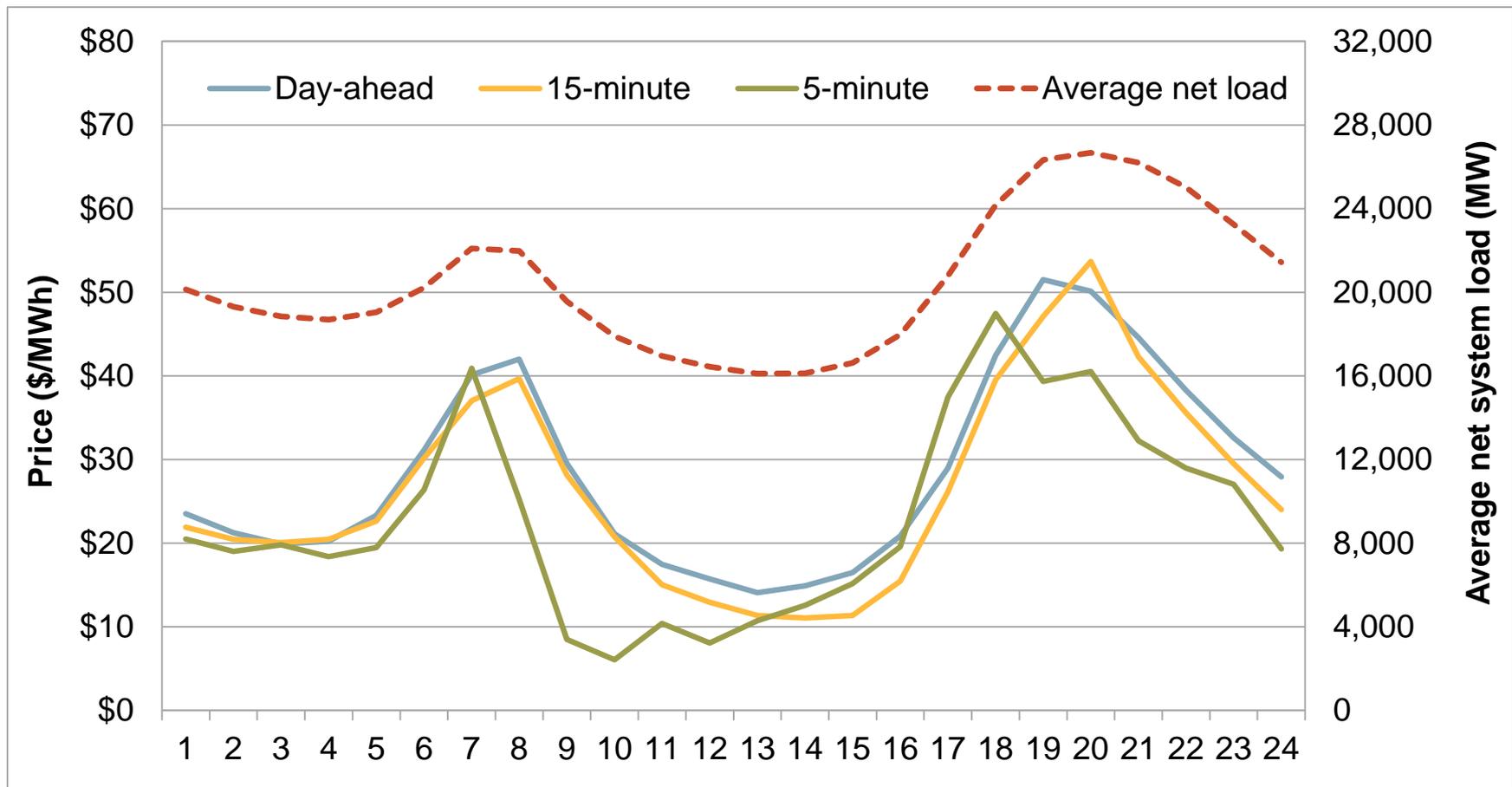
Discussion outline

- ISO market results
- EIM market results
- Load adjustments
- Special Issues
 - Aliso Canyon gas constraints
 - Load bias limiter

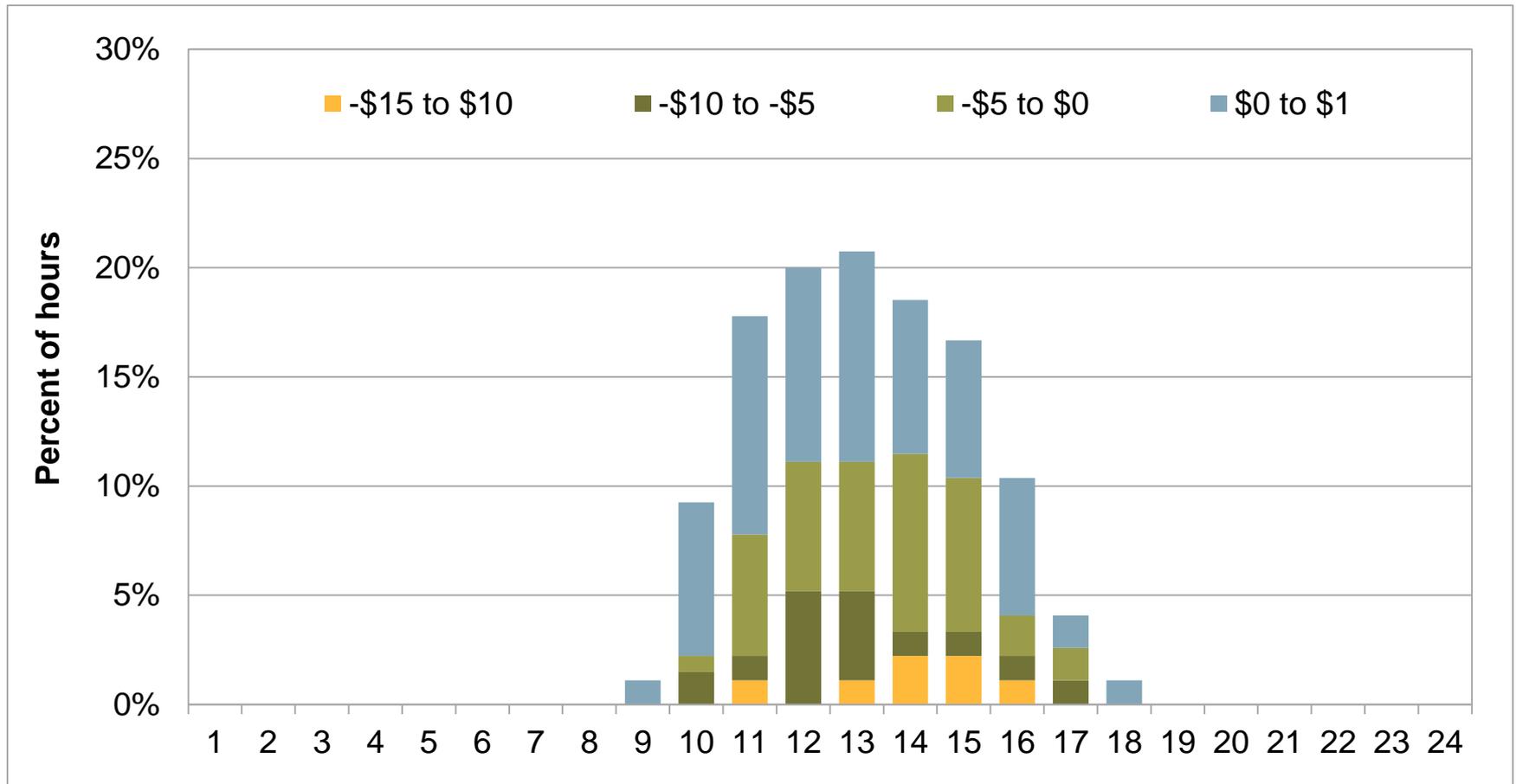
Prices declined in the first quarter because of low loads and high renewable generation.



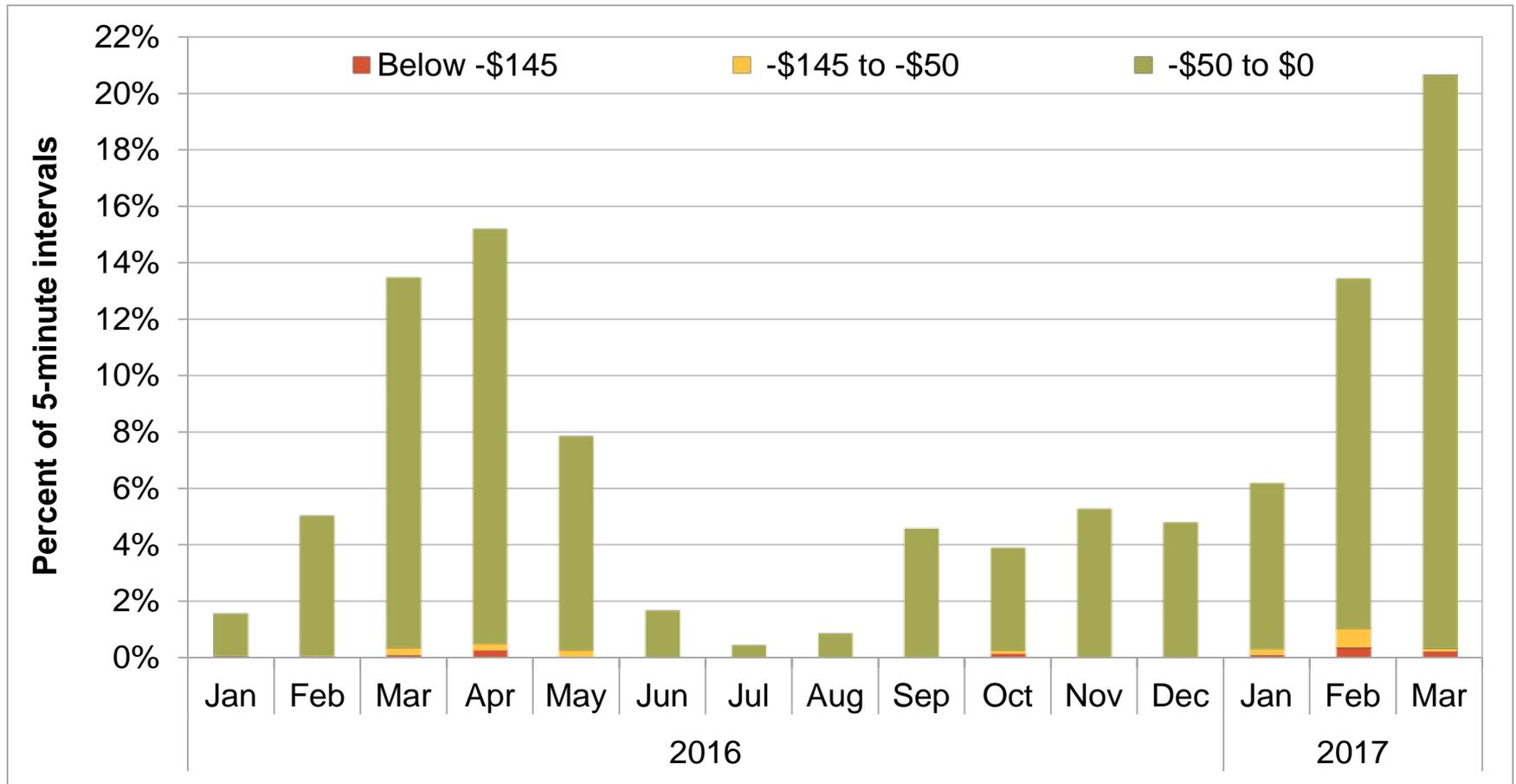
Net loads were lower in the afternoon and prices followed a similar pattern.



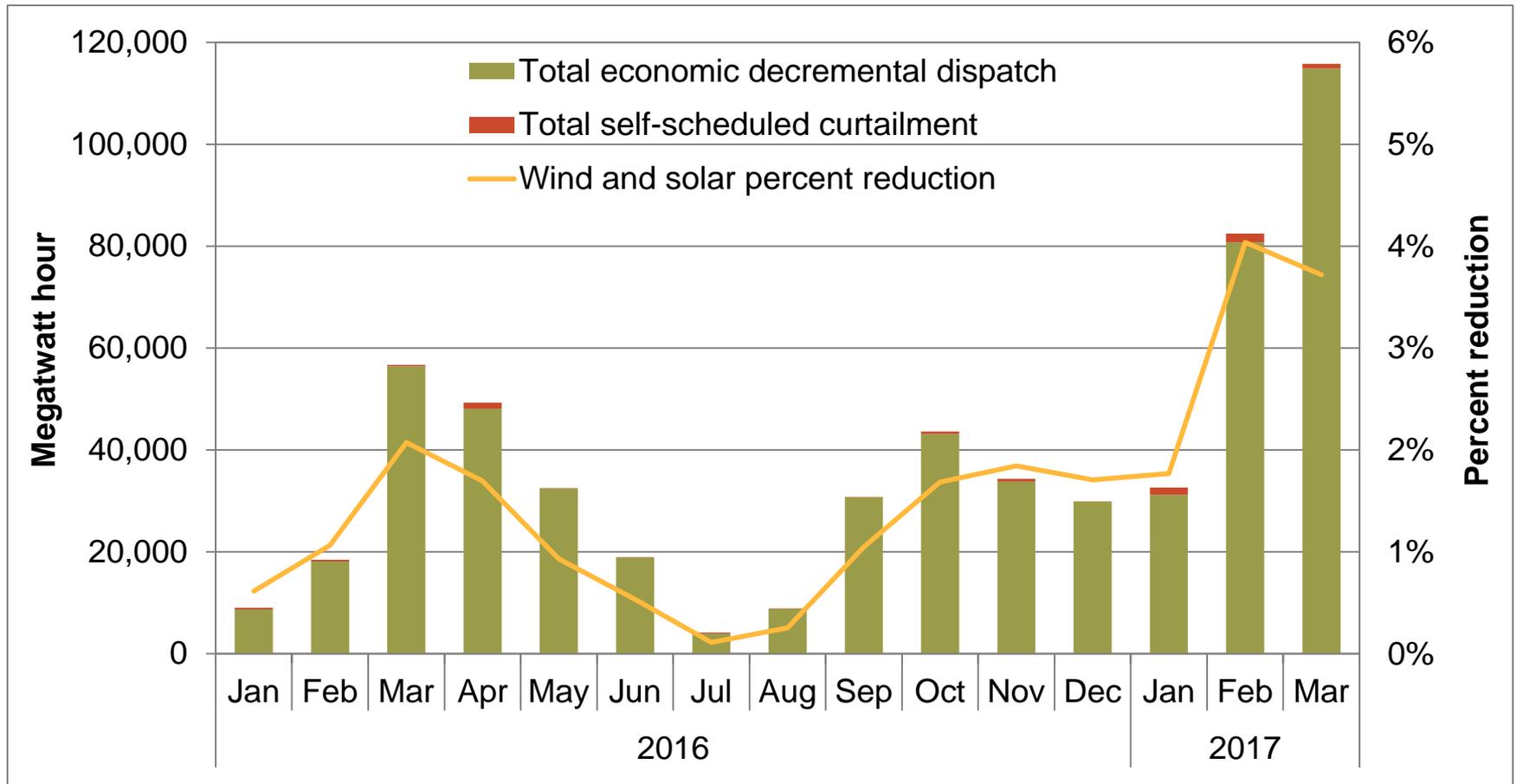
Day-ahead prices were consistently negative during the quarter.



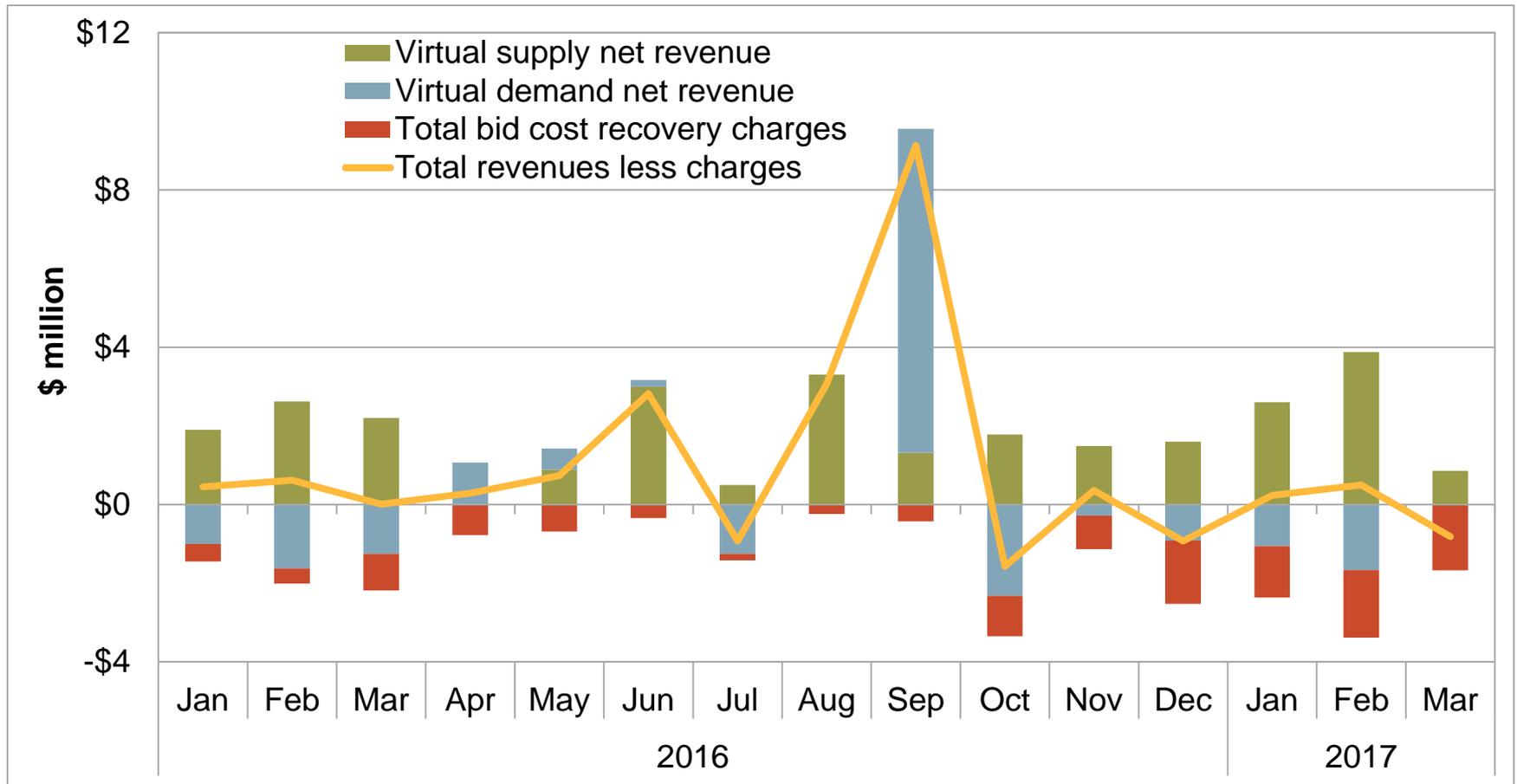
Low loads and abundant renewables caused frequent negative prices in real-time.



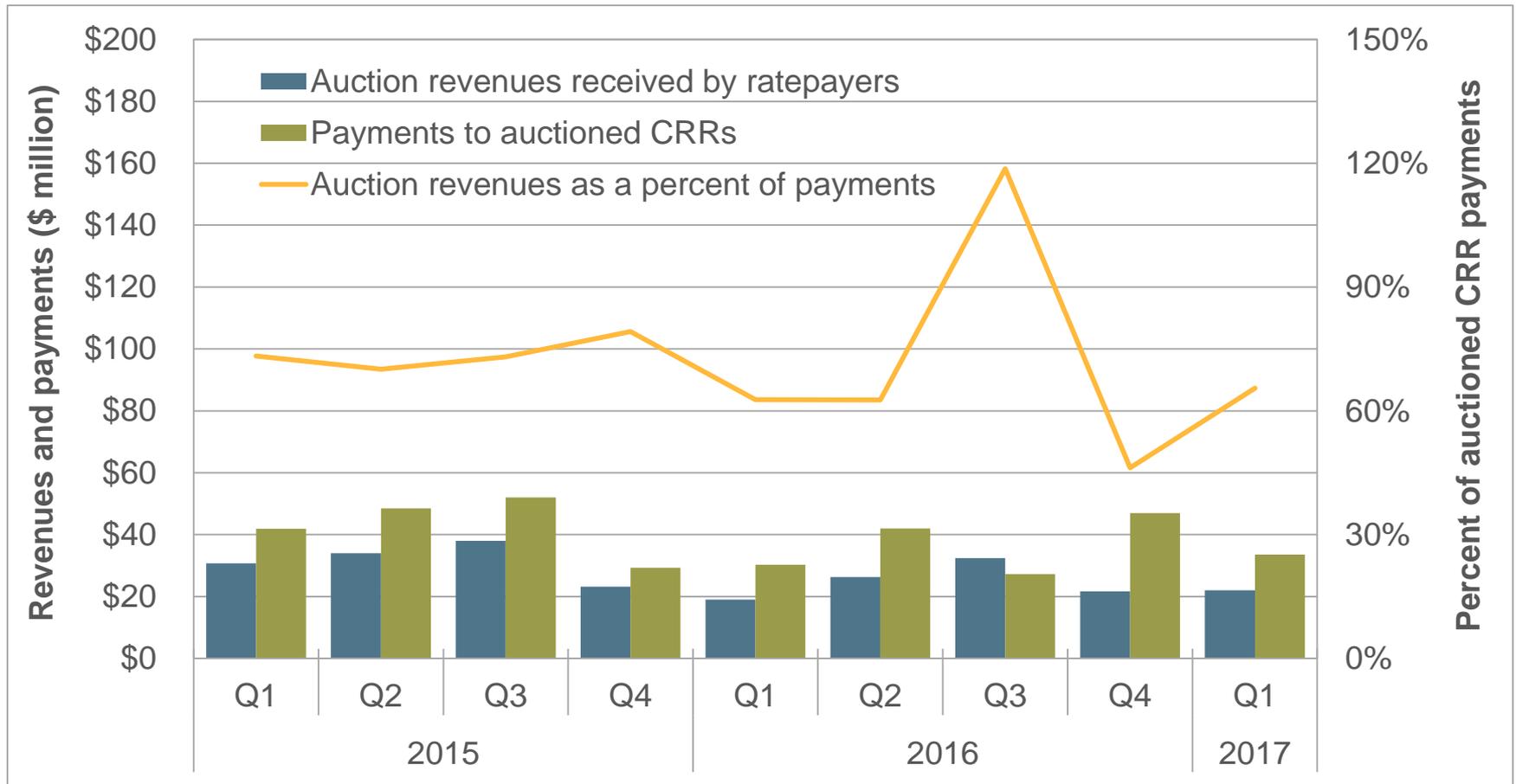
With negative prices the ISO reduced more renewable output this quarter than.



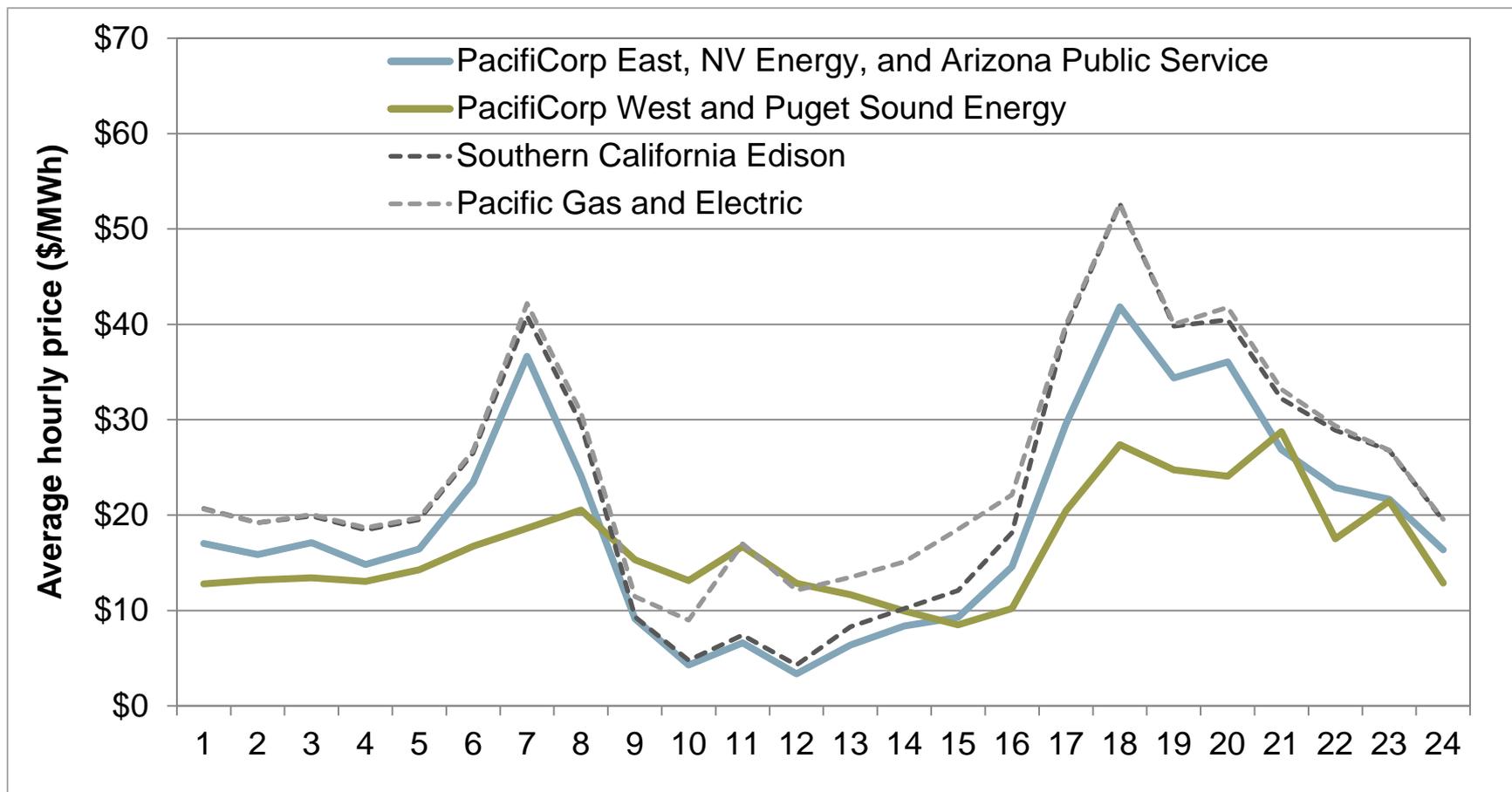
Virtual bidders made payments to the ISO for the second consecutive quarter.



Auction revenues continued to be less than payments made to CRR holders.



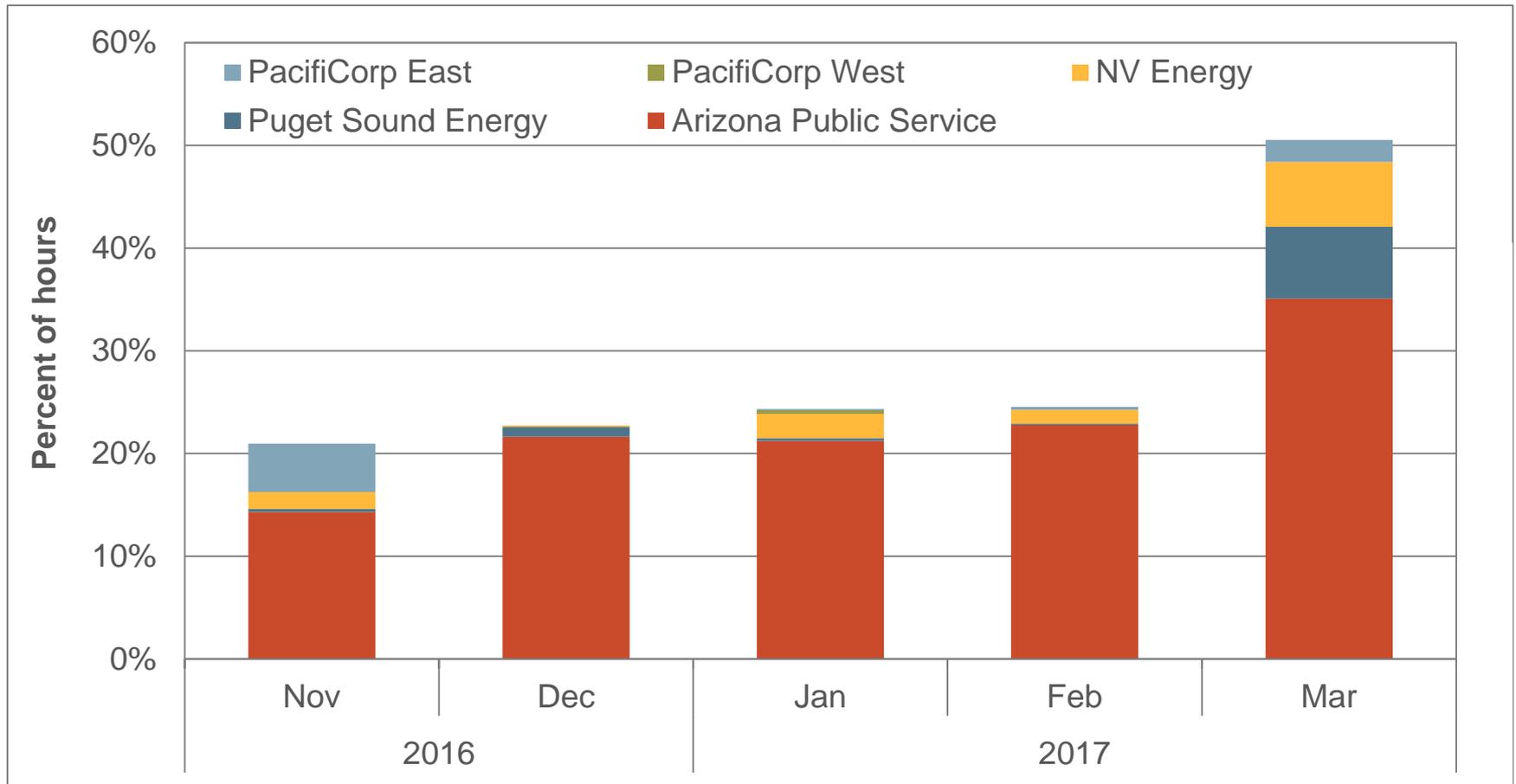
EIM prices were lower in Northwest areas during many hours because of congestion.



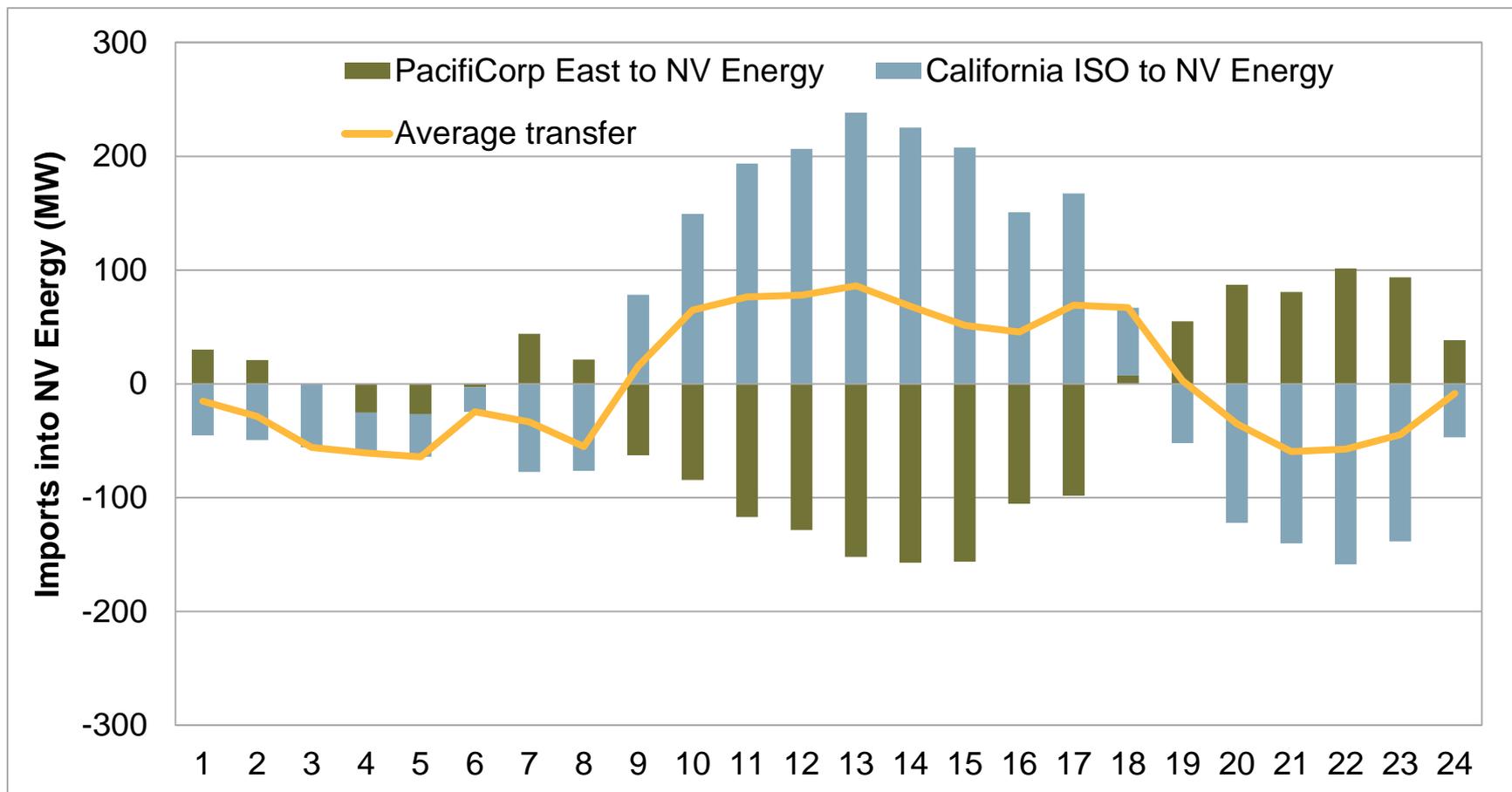
EIM prices in Puget and Arizona were significantly impacted by transition pricing.

	Average EIM price	Estimated EIM price without transition period pricing	Estimated impact of transition period pricing	
			Dollars	Percent
<i>Puget Sound Energy</i>				
15-minute market (FMM)	\$18.75	\$19.16	-\$0.41	-2.1%
5-minute market (RTD)	\$15.54	\$17.31	-\$1.77	-10.2%
<i>Arizona Public Service</i>				
15-minute market (FMM)	\$19.45	\$8.64	\$10.81	125%
5-minute market (RTD)	\$17.44	\$5.13	\$12.31	240%

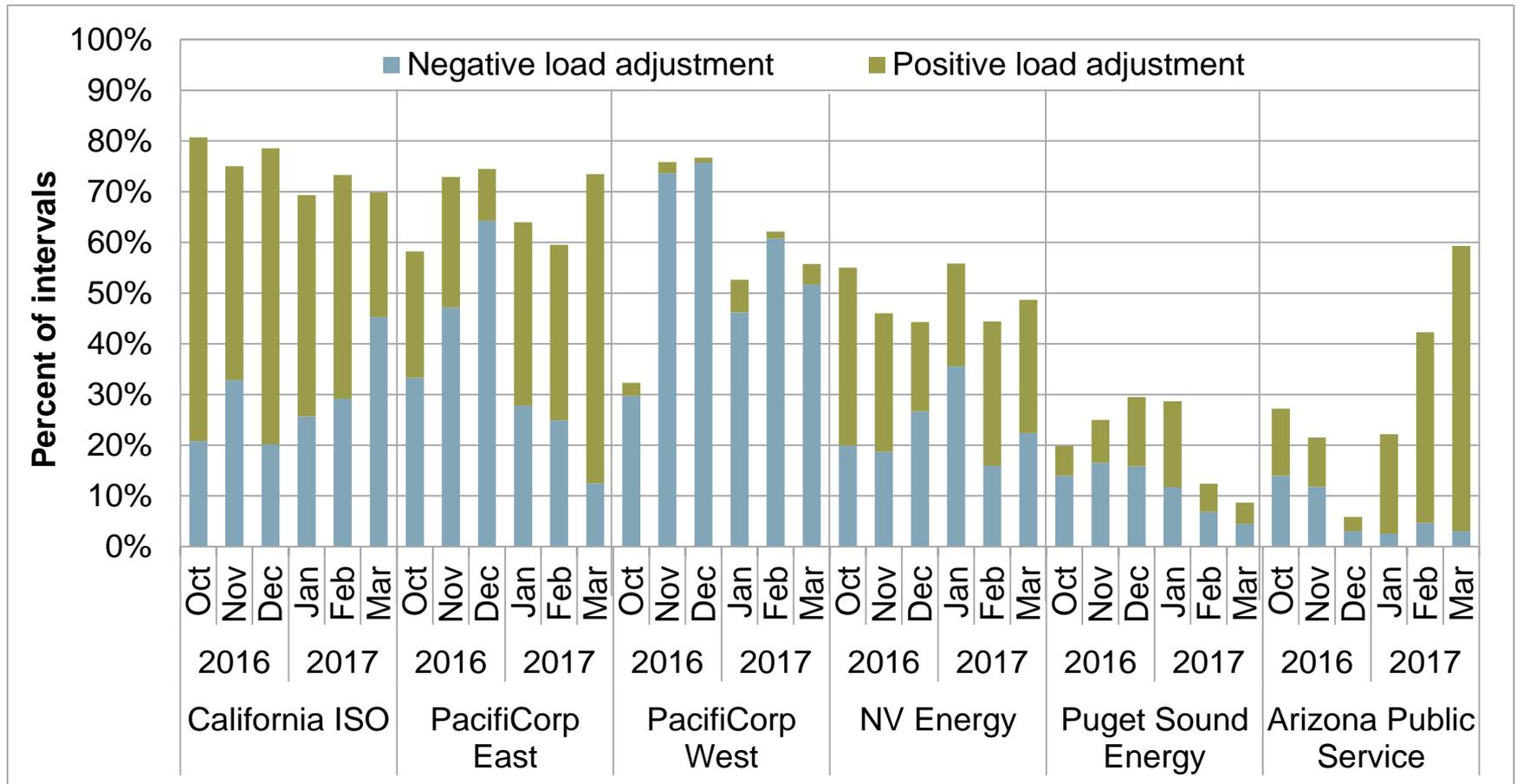
Frequent flex ramp sufficiency test failures limited transfers to and from Arizona.



NV Energy continued to receive imports from the ISO during the middle of the day.



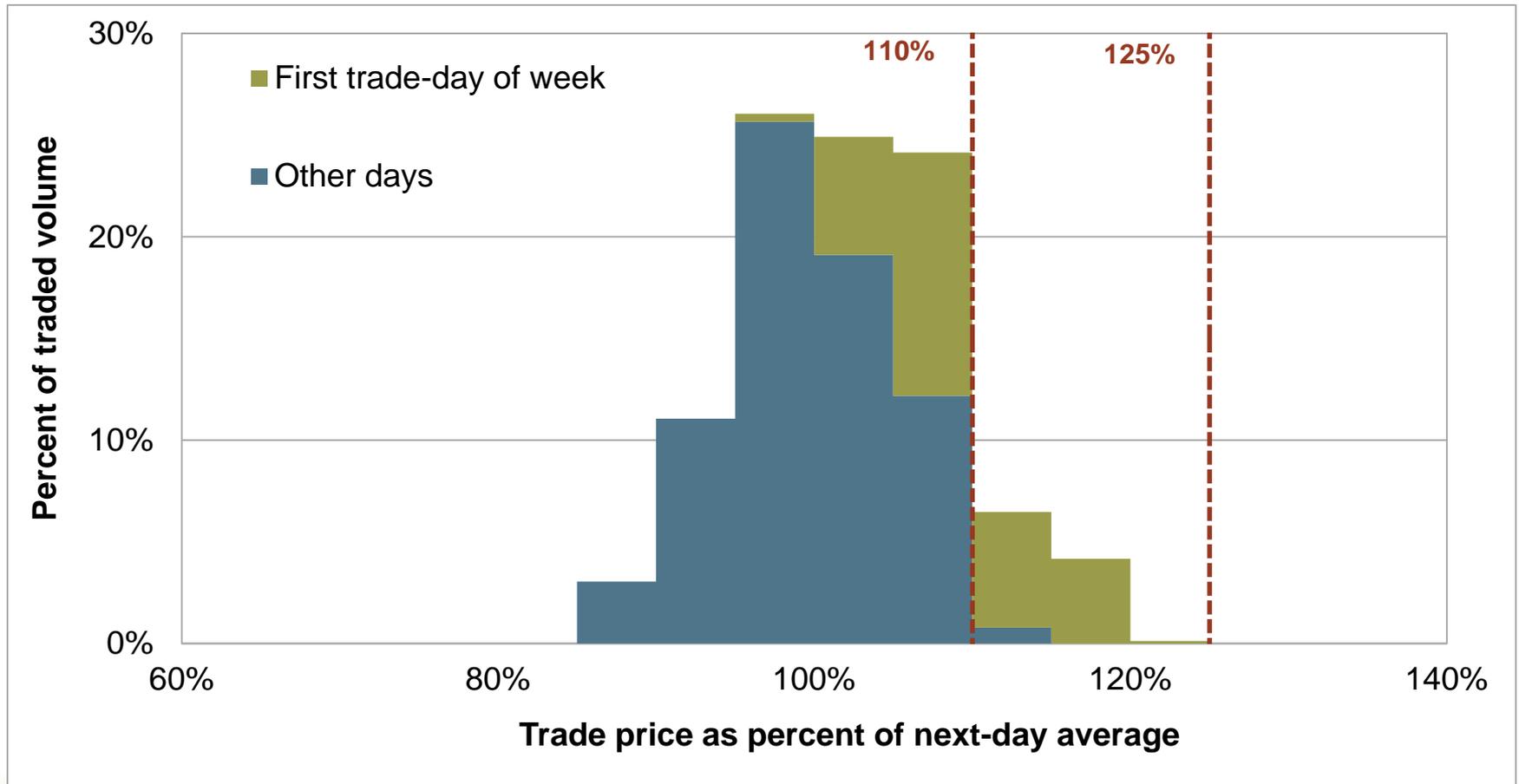
Arizona increased positive load adjustments in 2017.



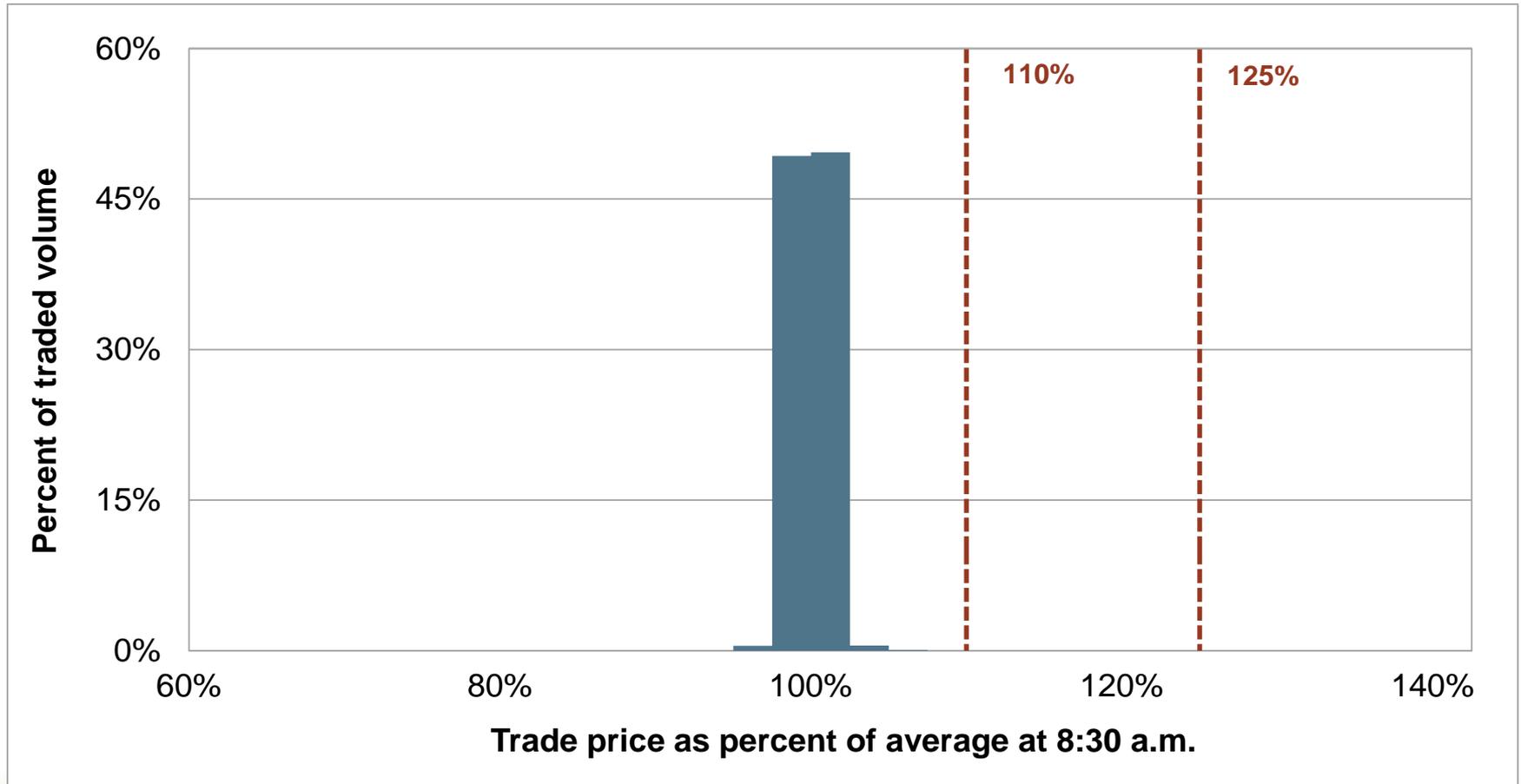
Recommended approach for Phase 1: Use available gas information

- Permanently update day-ahead indices with ICE information
- Use Monday only trading information on ICE to update day-ahead market index
- Update indices in real-time market with same day gas information
- Clarify after-the-fact recovery provisions

Also measures related to gas constraints should be carefully considered because of gas trade data and the mitigation process.



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Proposed changes to load bias limiter would reduce impact on prices.

