

Markup Switch Analysis

MMUAC

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IMM



Monitoring Analytics

Schedule Types

- **Cost-based offers are used when a seller is determined to have local market power based on the Three Pivotal Supplier (TPS) test.**
 - flexible parameter restrictions
 - offers based on defined short run marginal costs
- **Parameter limited offers (Price PLS) are used during hot/cold weather alerts and emergencies.**
 - the same flexible parameter restrictions as cost-based offers without the restrictions on the offer dollar values
- **Price based offers are used by default.**
 - limited restrictions on offers and parameters

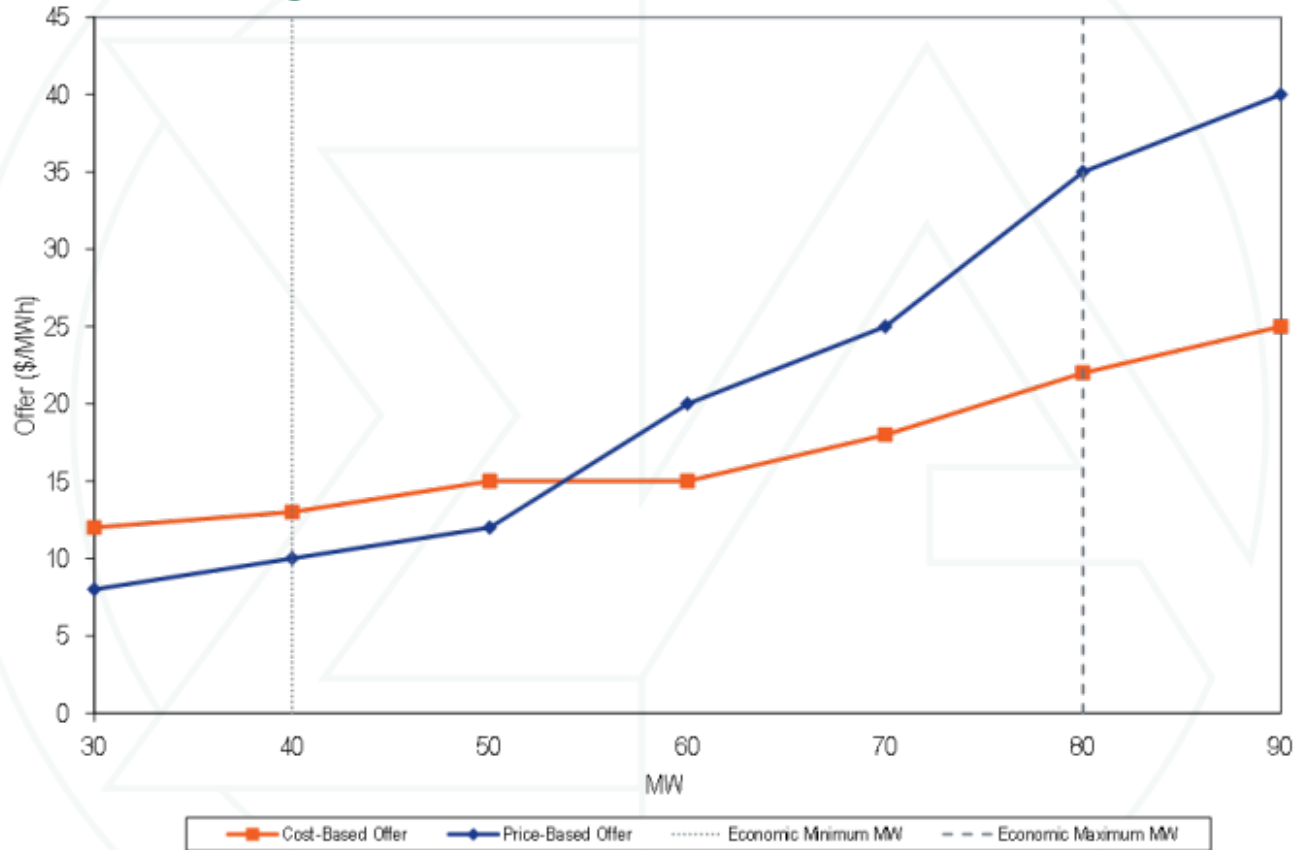
Schedule Selection

- **Cost-based schedules and parameter limited schedules are eligible for selection, but are not required to be selected, when a resource fails the TPS test or during weather alerts and emergencies.**
- **The requirement is that the lower cost offer must be selected.**
- **But the rules defining the lower cost schedule are flawed.**

Schedule Selection

- **As a result, cost-based offers may or may not be selected when a resource fails the TPS test.**
- **As a result, Price PLS offers may or may not be selected during weather alerts and emergencies.**
- **Resources that fail the TPS test may:**
 - **Set price with a positive markup;**
 - **Receive uplift based on a price-based offer that is more expensive and/or less flexible than the cost-based offer;**
 - **Withhold energy through markup or inflexibility.**

Crossing Offer Curves/ Markup Switch



Crossing Offer Curves/ Markup Switch

- **Real-time definition of lower cost offer**
 - Defined only at economic minimum
 - Crossing curves unit that fails the TPS test is not mitigated.
 - Failure of TPS does not result in use of lower cost schedule.
- **Day-ahead definition of lower cost offer**
 - Evaluation of full schedules
 - Some units with crossing curves are mitigated.
 - Crossing curves frequently result in day-ahead dispatch only up to the positive markup segment and no mitigation.

Crossing Offer Curves/ Markup Switch

- **The result in the real-time market is:**
 - **Selection of higher cost offer**
 - **Market power in real-time market when unit dispatched into the positive markup segment**
- **The result in the day-ahead market is:**
 - **Selection of higher cost offer in some cases**
 - **Commitment of unit on higher cost schedule**
 - **Day-ahead dispatch only up to the positive markup segment.**
 - **Market power in real-time market when unit dispatched into the positive markup segment**

Frequency of Crossing Curves/ Markup Switch

2024	Day-Ahead			Real-Time		
	Number of Schedule Hours with Crossing Curves	Total Number of Cost Schedule Hours Offered by Price Based Units	Percent of Schedule Hours with Crossing Curves	Number of Schedule Hours with Crossing Curves	Total Number of Cost Schedule Hours Offered by Price Based Units	Percent of Schedule Hours with Crossing Curves
Jan	86,890	839,400	10.4%	73,782	775,515	9.5%
Feb	79,862	792,552	10.1%	63,141	736,063	8.6%
Mar	72,834	745,704	9.8%	52,500	696,611	7.6%
Apr	76,590	826,728	9.3%	61,495	677,110	9.1%
May	87,098	869,976	10.0%	72,655	736,427	9.9%
Jun	88,455	839,472	10.5%	83,877	786,417	10.7%
Jul	95,303	870,960	10.9%	90,379	821,874	11.0%
Aug	98,747	869,808	11.4%	90,266	823,331	11.0%
Sep	89,362	847,152	10.5%	76,991	763,796	10.1%
Total	775,141	7,501,752	10.3%	665,086	6,817,144	9.8%

Units with Crossing Curves that Failed the TPS Test DA in the First Nine Months of 2024 and were Committed on Price

Offers committed on Price with a negative markup DA, which had a positive markup in RT

Percent of unit hours	Average Markup DA	Average Markup RT	Load-weighted average Markup DA	Load-weighted average Markup RT
65.3%	-\$5.68	\$56.93	-\$3.44	\$38.67

Units with Crossing Curves that Failed the TPS Test DA in the First Nine Months of 2024 and were Committed on Price

Offers committed on Price after failing TPS DA and were marginal in RT

Percent of Unit Hours that were Marginal in RT	Average Markup DA	Average Markup RT	Load-weighted average Markup DA	Load-weighted average Markup RT	Average marginal unit LMP contribution	Average marginal unit Markup contribution
14.1%	\$9.49	\$3.14	\$11.00	\$5.40	\$1.19	\$0.12

Units with Crossing Curves Failed the TPS Test DA in the First Nine Months of 2024 and were Committed on Price

Offers committed on Price with a negative markup DA, which were marginal and had a positive markup in RT

Percent of Unit Hours	Average Markup DA	Average Markup RT	Load-weighted average Markup DA	Load-weighted average Markup RT	Average marginal unit LMP contribution	Average marginal unit Markup contribution
8.2%	-\$3.69	\$15.39	-\$3.29	\$16.60	\$1.21	\$0.37

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