

Price-based Offers > \$1,000/MWh Long-term Solution

Susan Kenney
Sr. Consultant, Real-time Market Ops
Market Implementation Committee
September 12, 2018

- Estimated to be implemented by December 1, 2018
- Cost-based and price-based offers over \$1,000/MWh are automatically verified upon submission
 - Switch to Cost remains an available option
 - Allowing price-based offers > \$1,000/MWh maintains 2015 compromise from Cap Review Senior Task Force
- PJM believes this approach will ensure price-based offers above \$1,000/MWh will not exceed the reference cost-based offer on a segment level.

- In order to automate compliance of price-offers above \$1,000/MWh with cost-based offer, price-based offers must:
 - Specify “Reference Cost-based Schedule”
 - Have certain identical offer data to “Reference Cost-based Schedule”
 - MW Blocks
 - Use Bid Slope
 - Fuel Type
 - Have offer values less than or equal to “Reference Cost-based Schedule”
 - Startup and No-load offers
 - Incremental energy curve prices per segment



Example 1 – MW Break Points do not Match

Cost-based Schedule (01)			Price-based Schedule (99)			Notes
Fuel Type:	Gas		Fuel Type:	Gas		Fuel Types Match - ✓
Startup Cost	\$100		Startup Cost	\$100		Startup on Price <= Cost - ✓
No-Load Cost	\$50		No-Load Cost	\$30		No-load on Price <= Cost - ✓
Use Bid Slope	Yes		Use Bid Slope	Yes		Use Bid Slope Match - ✓
MW	Submitted Price	Verified Price	MW	Submitted Price	Capped Price	MW Blocks Match - ✓
10	1200	1200	15	1200	1000	Price-based segment does not have same MW break points, Capped Price at \$1,000/MWh.
20	1400	1400	20	1400	1000	Price-based segment does not have same MW break points, Capped Price at \$1,000/MWh.

If requirements are not met, PJM will cap the offer price for unit commitment, dispatch and pricing at \$1,000/MW.



Example 2 – Price Offer Verified Successfully

Cost-based Schedule (01)			Price-based Schedule (99)			Notes
Fuel Type:	Gas		Fuel Type:	Gas		Fuel Types Match - ✓
Startup Cost	\$100		Startup Cost	\$100		Startup on Price <= Cost ✓
No-Load Cost	\$50		No-Load Cost	\$30		No-load on Price <= Cost ✓
Use Bid Slope	Yes		Use Bid Slope	Yes		Use Bid Slope Match ✓
MW	Submitted Price	Verified Price	MW	Submitted Price	Capped Price	MW Blocks Match ✓
10	1200	1200	10	1200	1200	Price-based segment can be submitted up to cost-based segment verified price.
20	1400	1400	20	1400	1400	Price-based segment can be submitted up to cost-based segment verified price.



Example 3 – Cost Offer Decreased After Price Offer Submitted > \$1,000

Cost-based Schedule (01)			Price-based Schedule (99)			Notes
Fuel Type:	Gas		Fuel Type:	Gas		Fuel Types Match - ✓
Startup Cost	\$100		Startup Cost	\$100		Startup on Price <= Cost - ✓
<p>If Price-based schedule is not updated when cost-based schedule is decreased, PJM will cap the price for unit commitment, dispatch and pricing</p>						
MW	Submitted Price	Verified Price	MW	Submitted Price	Capped Price	MW Blocks Match - ✓
10	1200 900	1200 900	10	1200	1200 1000	Price-based segment exceeds cost-based segment verified price, use Capped Price as verified price.
20	1400 1100	1400 1100	20	1400	1400 1000	Price-based segment exceeds cost-based segment verified price, use Capped Price as verified price.

- First Read M-11 Proposed Updates:
 - MIC – August 8
 - MRC – September 12
- Endorsement: M-11 Proposed Updates:
 - MIC – September 27
 - MRC – October 25
- Planned System Implementation: By December 1, 2018