

Broader Regional Market Metrics (CTS)

**New York Independent
System Operator**

December 2016

December 2016 Broader Regional Markets Highlights (CTS)

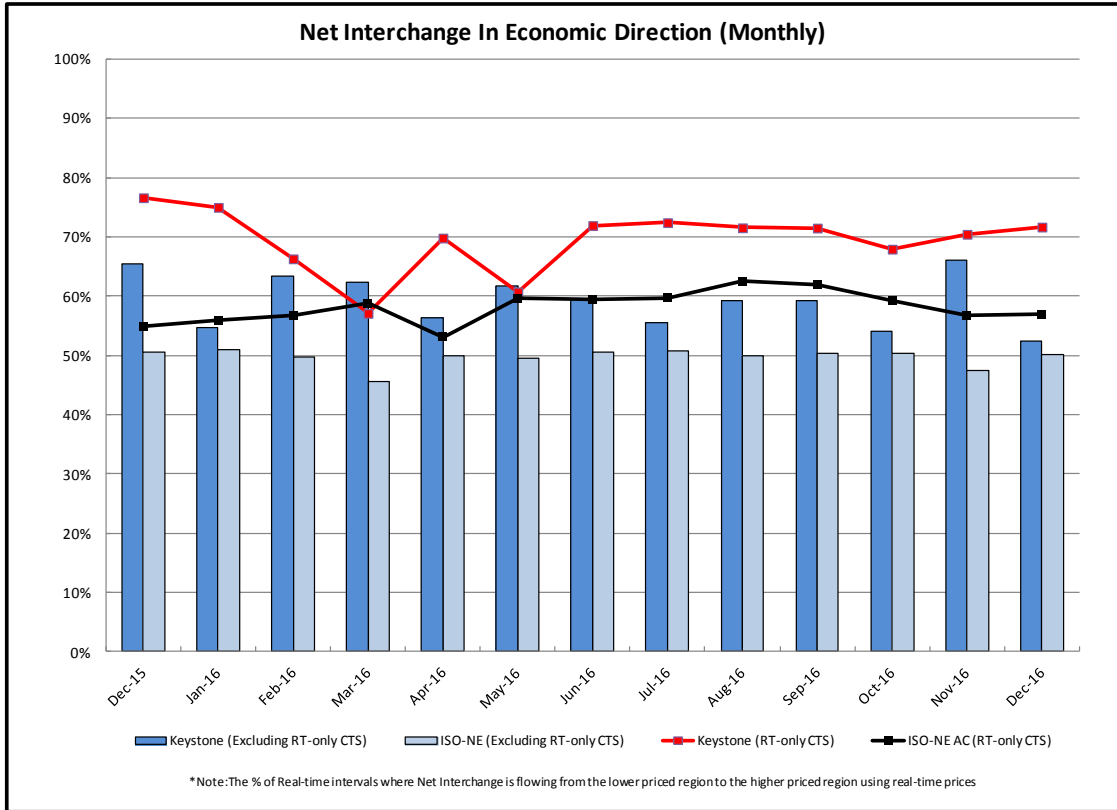
- PJM
 - At PJM Keystone, there was an average of 200 MWs¹ per hour of CTS offers and an average of 82 MWs per hour of CTS schedules.
 - Interchange at PJM Keystone associated with CTS transactions scheduled only in real-time flowed in the economic direction in 71.7% of the real-time intervals, as compared to all other interchange at the interface which flowed in the economic direction in 52.4% of the real-time intervals.

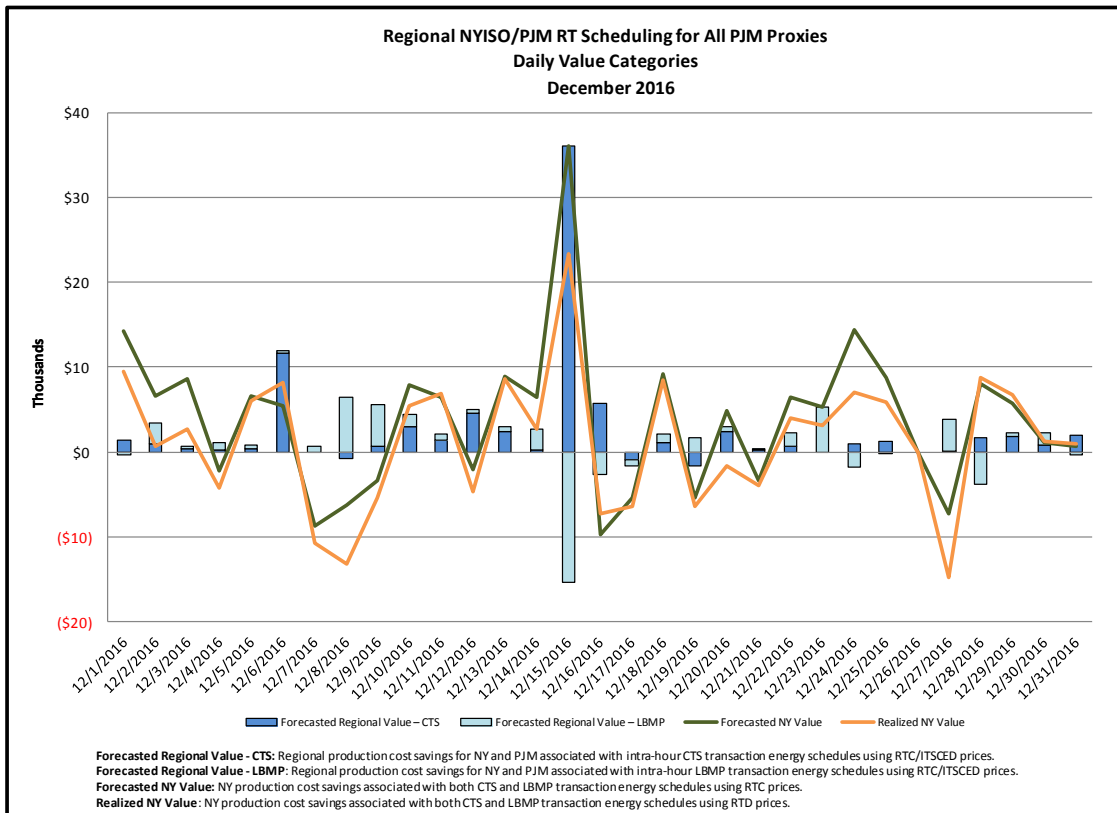
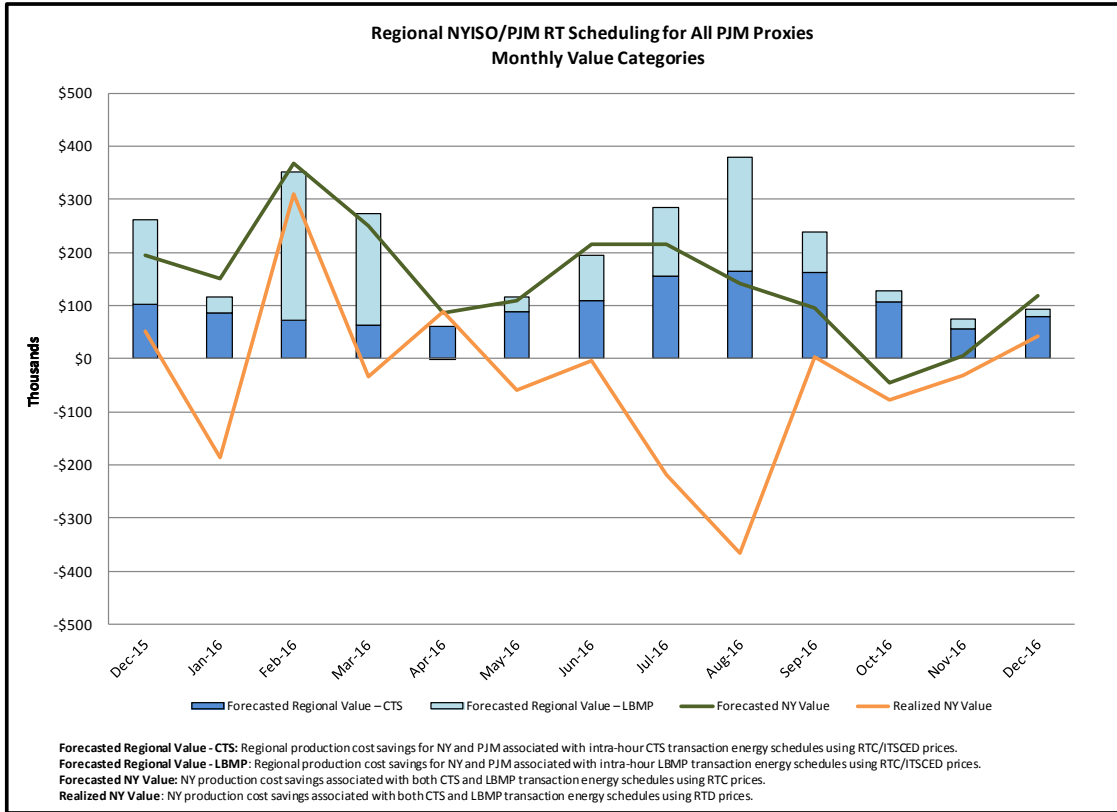
- ISO-NE
 - At NE Sandy Pond, there was an average of 2080 MWs¹ per hour of CTS offers, and an average of 1070 MWs per hour of CTS schedules.
 - Interchange at NE Sandy Pond associated with CTS transactions scheduled only in real-time flowed in the economic direction in 56.9% of the real-time intervals, as compared to all other interchange which flowed in the economic direction in 50.2% of the real-time intervals.

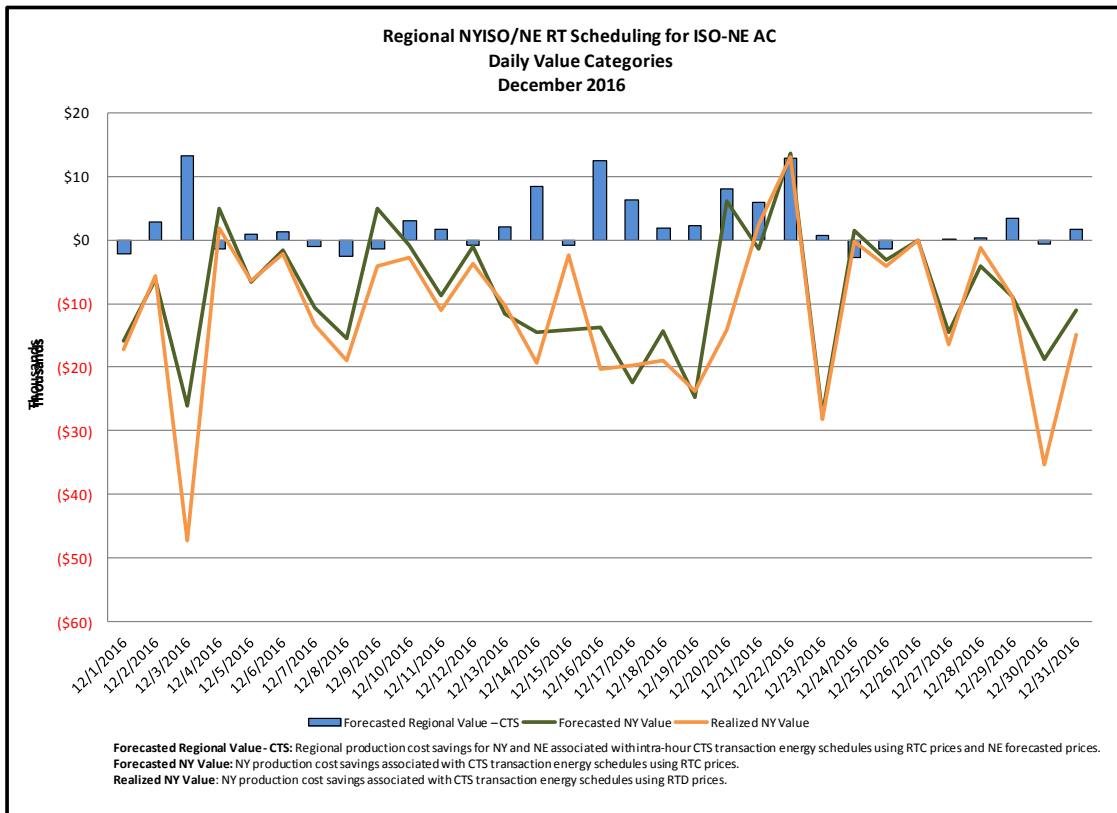
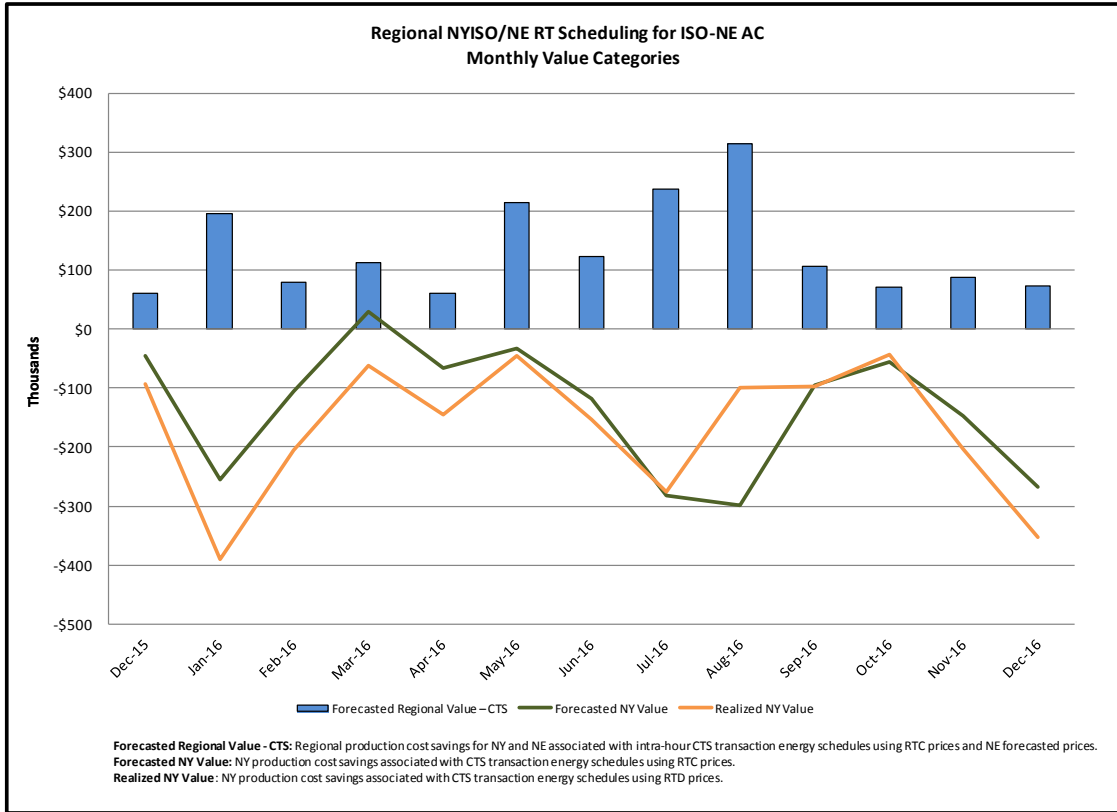
Pricing Data²

Interface	Max Forecasted Price Spread	Min Forecasted Price Spread	Forecasted Price Spreads minus Real-time Price Spreads					
			< \$-20	\$-20 to \$-10	\$-10 to \$0	\$0 to \$10	\$10 to \$20	> \$20
Keystone	\$70.04	(\$484.57)	5.4%	8.5%	39.7%	36.2%	5.5%	4.7%
HTP	\$139.88	(\$598.48)	7.4%	8.0%	35.3%	34.9%	7.7%	6.7%
NEPTUNE	\$142.91	(\$508.16)	8.0%	8.1%	34.5%	34.0%	7.4%	8.0%
VFT	\$139.23	(\$509.23)	8.4%	8.7%	35.3%	34.0%	7.3%	6.2%
Sandy Pond	\$155.24	(\$520.65)	15.5%	9.0%	25.4%	27.8%	11.7%	10.7%





1. All MW Values include the absolute sum of both imports + exports. Wheels have been excluded.
2. "Forecasted Prices" refer to NYISO's RTC LBMP and RTO's LMP used in RTC. "Real-time Prices" refer to NYISO's RTD LBMP and RTO's Real-time LMP. Forecasted Prices are used during NYISO's RTC evaluation to schedule transactions. Real-time Prices are used to settle transactions. Price Spreads are always calculated as NYISO's LBMP minus RTO's LMP.







Regional NYISO RT Scheduling

<u>Category</u>	<u>Description</u>
 Forecasted Regional Value - CTS	Forecasted regional production cost savings from the intra-hour (non-TOH) energy schedule changes ¹ on CTS bids (Intra-hour CTS Schedule Changes * [NY RTC LBMP – PJM or ISO-NE’s Forecasted LMP]).
 Forecasted Regional Value - LBMP	Forecasted regional production cost savings from the intra-hour (non-TOH) energy schedule changes ¹ on LBMP bids (Intra-hour LBMP Schedule Changes * [NY RTC LBMP - PJM or ISO-NE’s Forecasted LMP]).
 Forecasted NY Value	Forecasted NY production cost savings from the intra-hour (non-TOH) energy schedule changes ¹ on CTS and LBMP bids (Total Intra-hour CTS & LBMP Schedule Changes * NY RTC LBMP).
 Realized NY Value	Realized NY production cost savings from the intra-hour (non-TOH) energy schedule changes ¹ on CTS and LBMP bids (Total Intra-hour CTS & LBMP Schedule Changes * NY RTD LBMP).

¹ Note: Schedule changes associated with manual Operator actions such as curtailments and/or transaction derates, and that have a significant impact (either positive or negative) to the above metrics, are generally excluded.

