

Broader Regional Market Metrics (CTS)

**New York Independent
System Operator**

December 2015

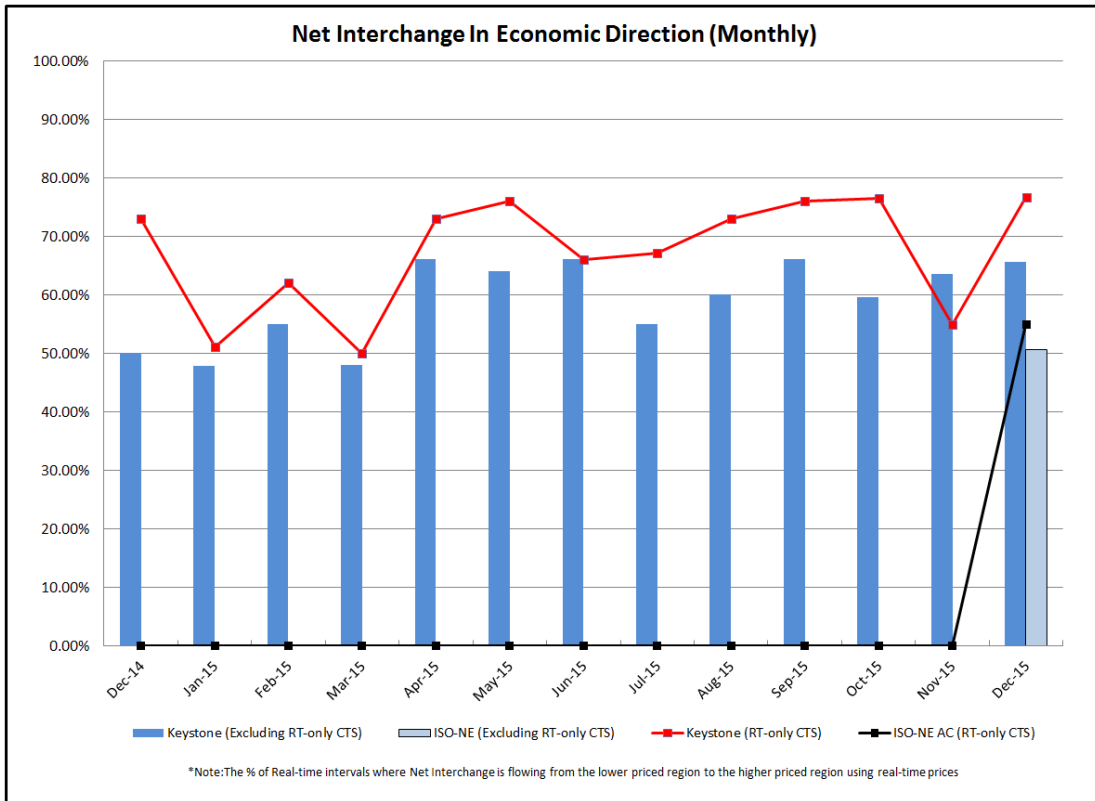
December 2015 Broader Regional Markets Highlights (CTS)

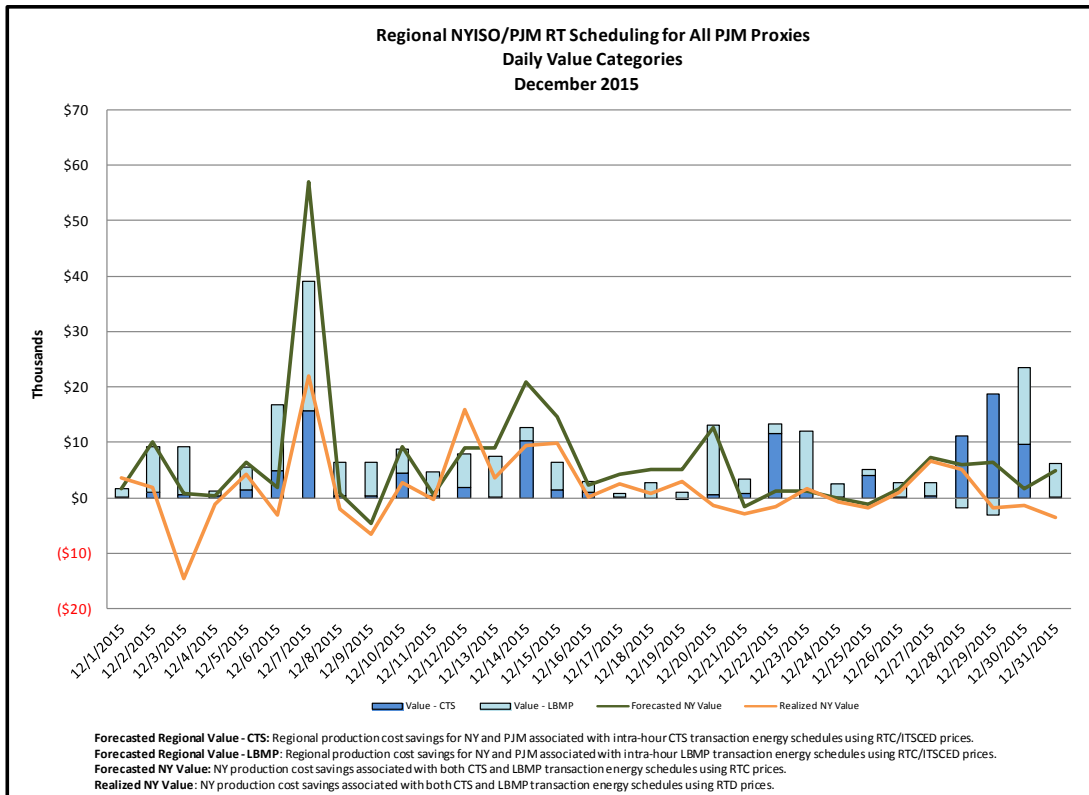
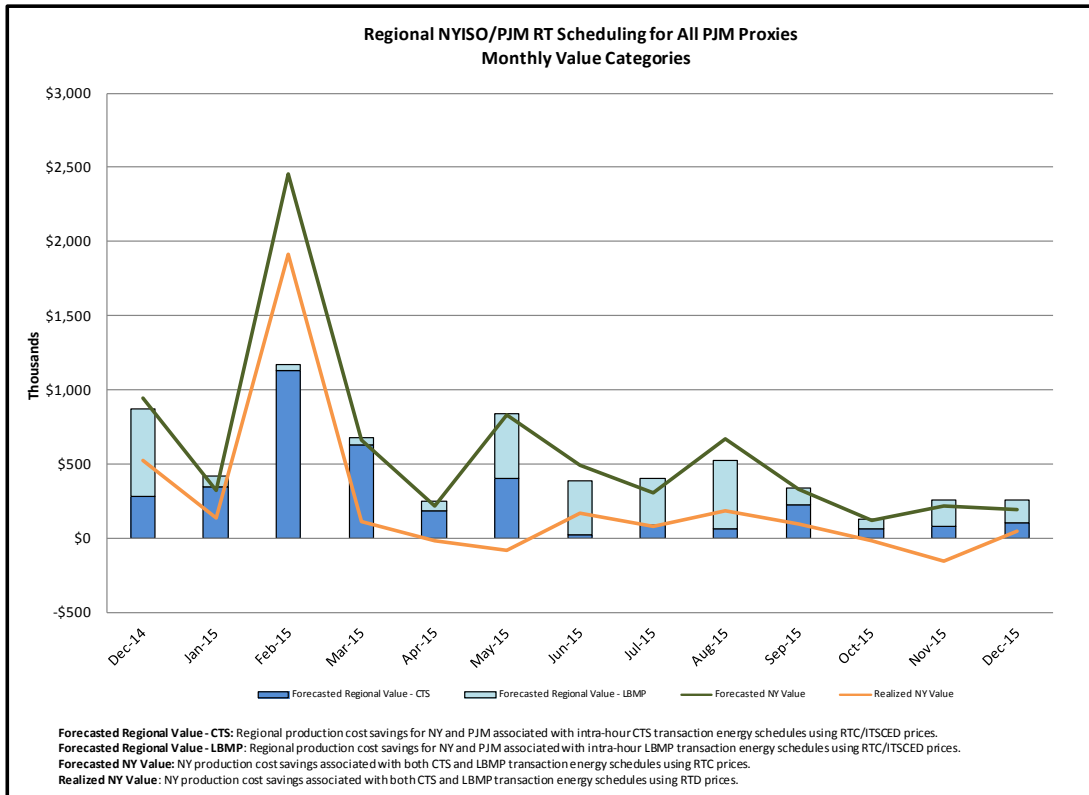
- PJM
 - At PJM Keystone, there was an average of 200 MWs¹ per hour of CTS offers, and an average of 7 MWs per hour of CTS schedules.
 - Interchange at PJM Keystone associated with CTS transactions scheduled only in real-time flowed in the economic direction in 77% of the real-time intervals, as compared to all other interchange at the interface which flowed in the economic direction in 66% of the real-time intervals.
 - There was a \$0.05M production cost savings associated with real-time transaction scheduling with PJM (\$0.19M forecasted savings at time schedules are set). Year-to-date, the NY production cost savings is \$2.5M (\$6.8M forecasted savings).
- ISO-NE
 - Activated CTS with ISO-NE at the Sandy Pond (AC) interface on December 15, 2015.
 - At NE Sandy Pond, there was an average of 1943 MWs¹ per hour of CTS offers, and an average of 677 MWs per hour of CTS schedules.
 - Interchange at ISO-NE AC associated with CTS transactions scheduled only in real-time flowed in the economic direction in 55% of the real-time intervals, as compared to all other interchange which flowed in the economic direction in 51% of the real-time intervals.
 - There was a \$0.09M production cost increase associated with real-time transaction scheduling with NE (\$0.05M forecasted increase at time schedules are set).

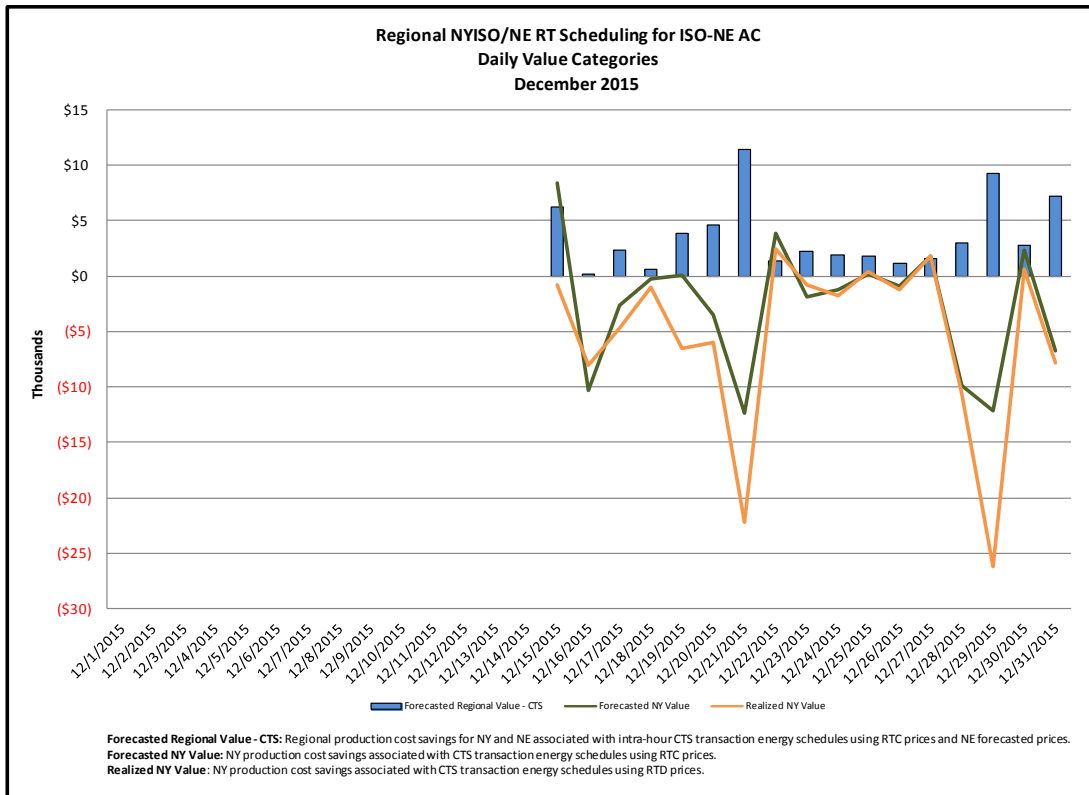
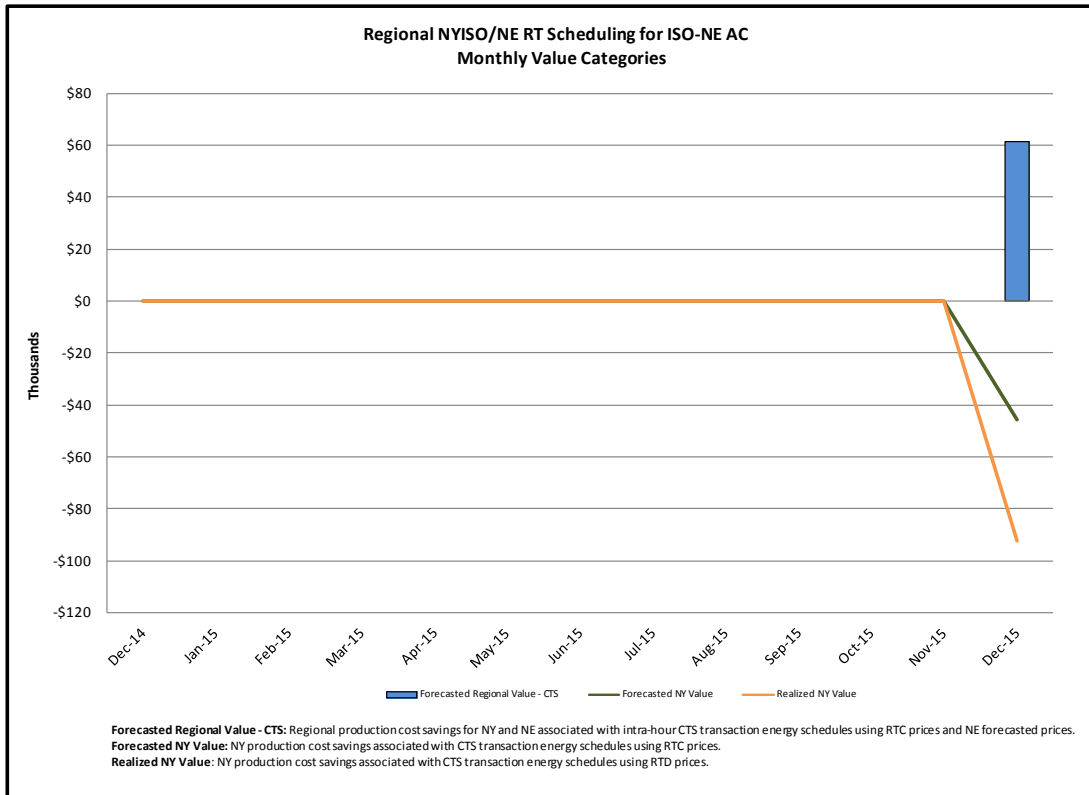
Pricing Data²

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	\$961.75	(\$255.48)	7.9%	7.3%	38.8%	35.5%	4.7%	5.8%
HTP	\$961.85	(\$851.77)	8.3%	7.5%	36.8%	35.9%	6.5%	5.0%
NEPTUNE	\$978.71	(\$256.75)	9.4%	7.7%	35.8%	34.3%	6.8%	6.0%
VFT	\$962.37	(\$255.76)	8.4%	7.6%	37.3%	35.3%	6.5%	4.9%
Sandy Pond	\$100.00	(\$230.69)	7.8%	8.3%	40.5%	32.0%	7.3%	4.0%





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 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 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 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 on CTS and LBMP bids (Total Intra-hour CTS & LBMP Schedule Changes * NY RTD LBMP).

