

Broader Regional Market Metrics (CTS)

**New York Independent
System Operator**

January 2016

January 2016 Broader Regional Markets Highlights (CTS)

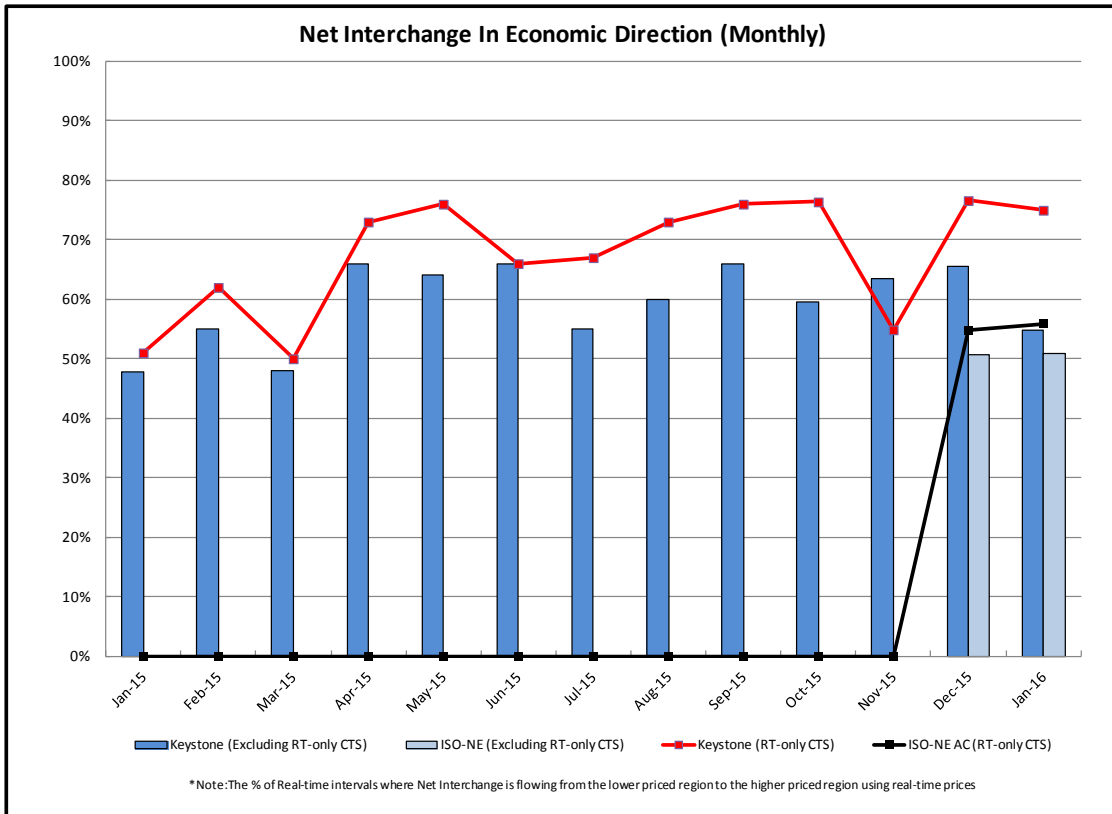
- PJM
 - At PJM Keystone, there was an average of 533 MWs¹ per hour of CTS offers, and an average of 31 MWs per hour of CTS schedules. The volume of CTS offers was much higher in January than in the prior 6-months.
 - Interchange at PJM Keystone associated with CTS transactions scheduled only in real-time flowed in the economic direction in 75% of the real-time intervals, as compared to all other interchange at the interface which flowed in the economic direction in 55% of the real-time intervals.
 - There was a \$0.19M production cost increase associated with real-time transaction scheduling with PJM (\$0.15M forecasted savings at time schedules are set).

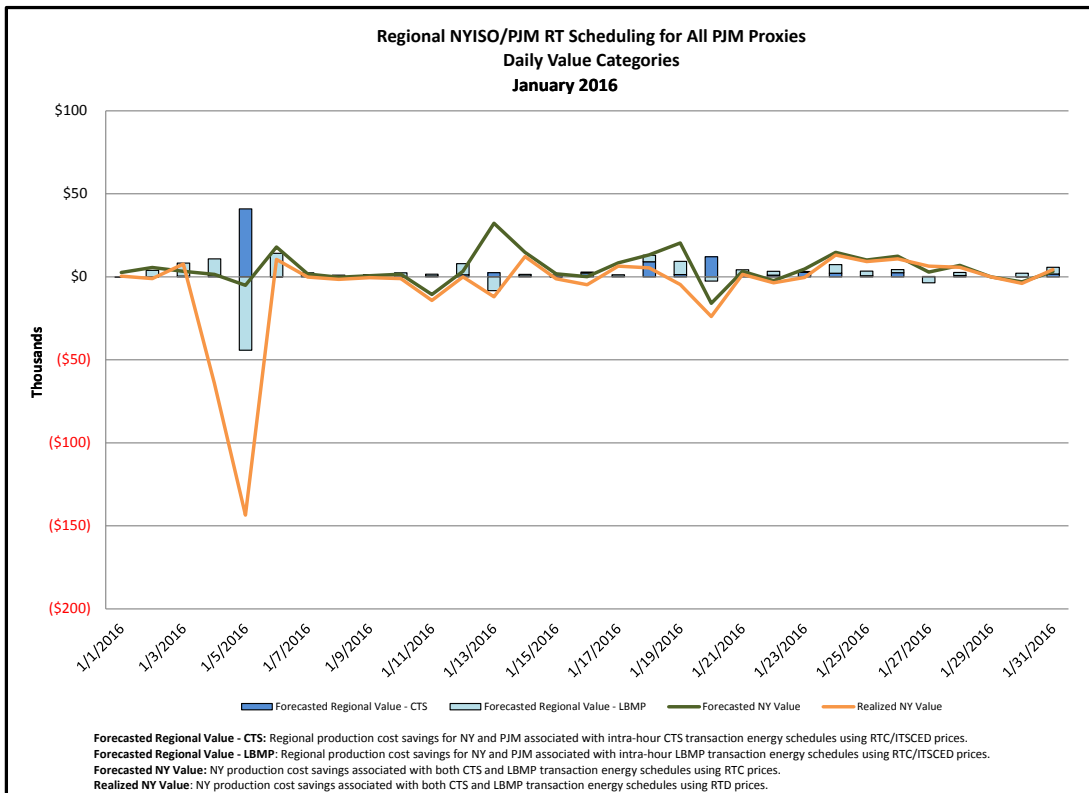
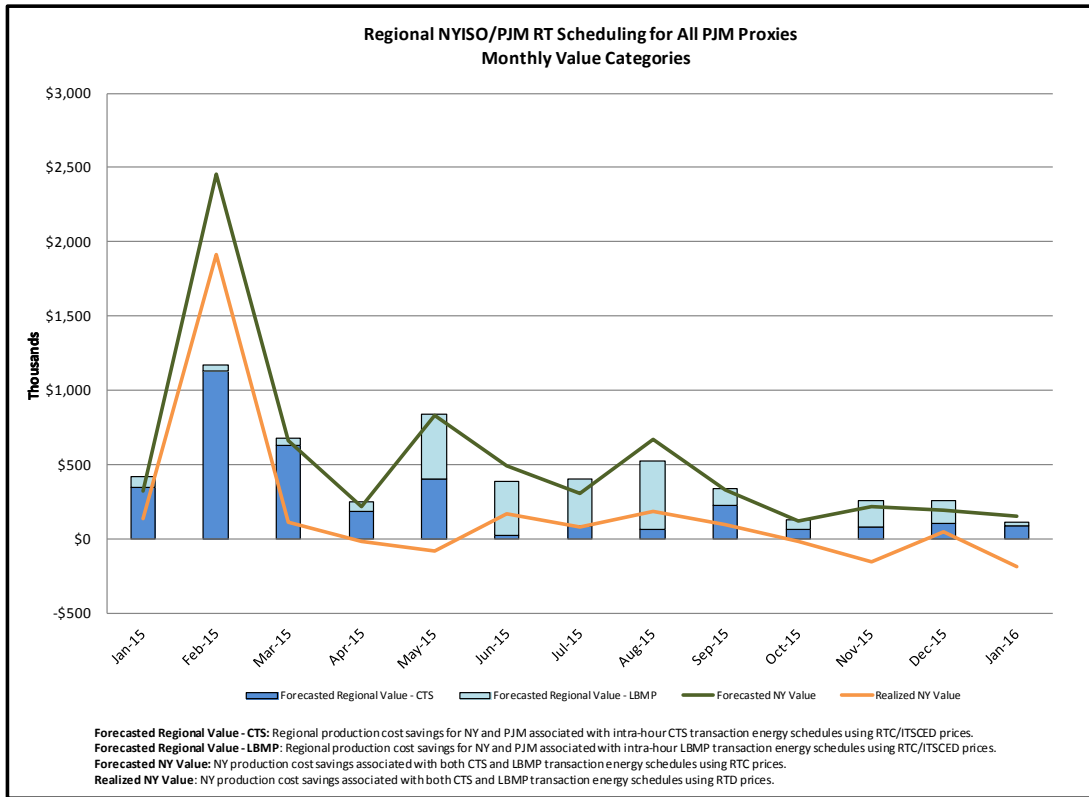
- ISO-NE
 - At NE Sandy Pond, there was an average of 2126 MWs¹ per hour of CTS offers, and an average of 1034 MWs per hour of CTS schedules.
 - Interchange at ISO-NE AC associated with CTS transactions scheduled only in real-time flowed in the economic direction in 56% of the real-time intervals, as compared to all other interchange which flowed in the economic direction in 51% of the real-time intervals.
 - There was a \$0.39M production cost increase associated with real-time transaction scheduling with NE (\$0.26M forecasted increase at time schedules are set).

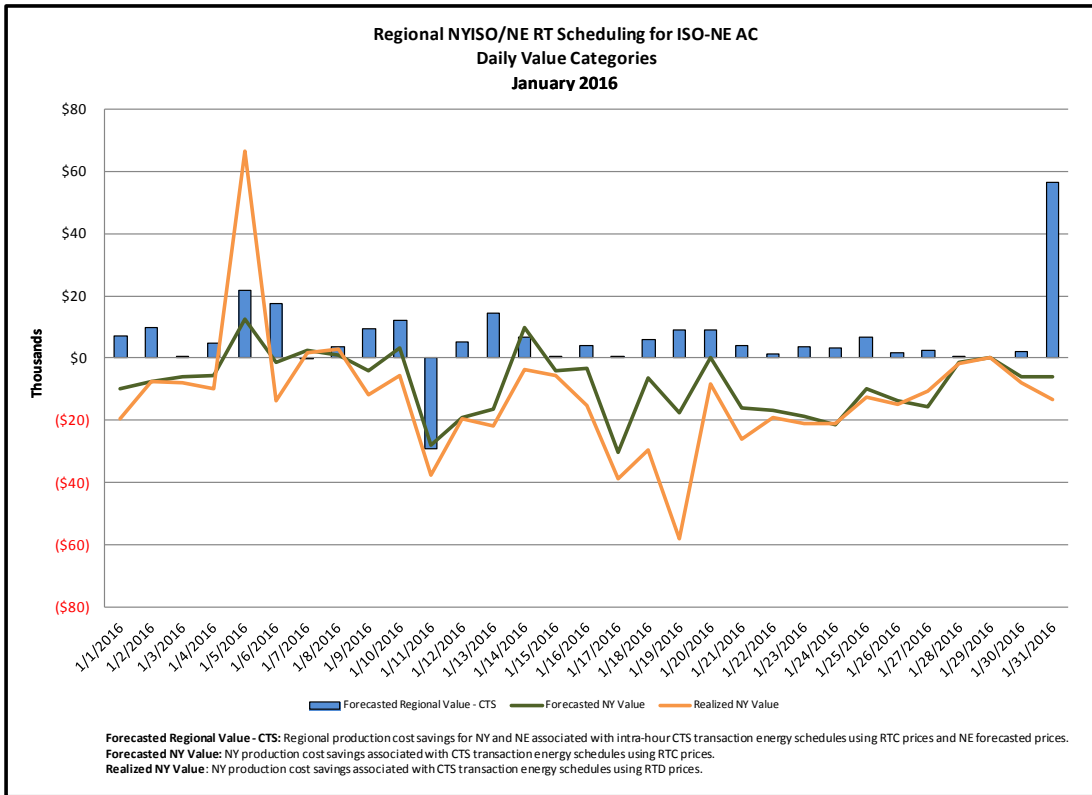
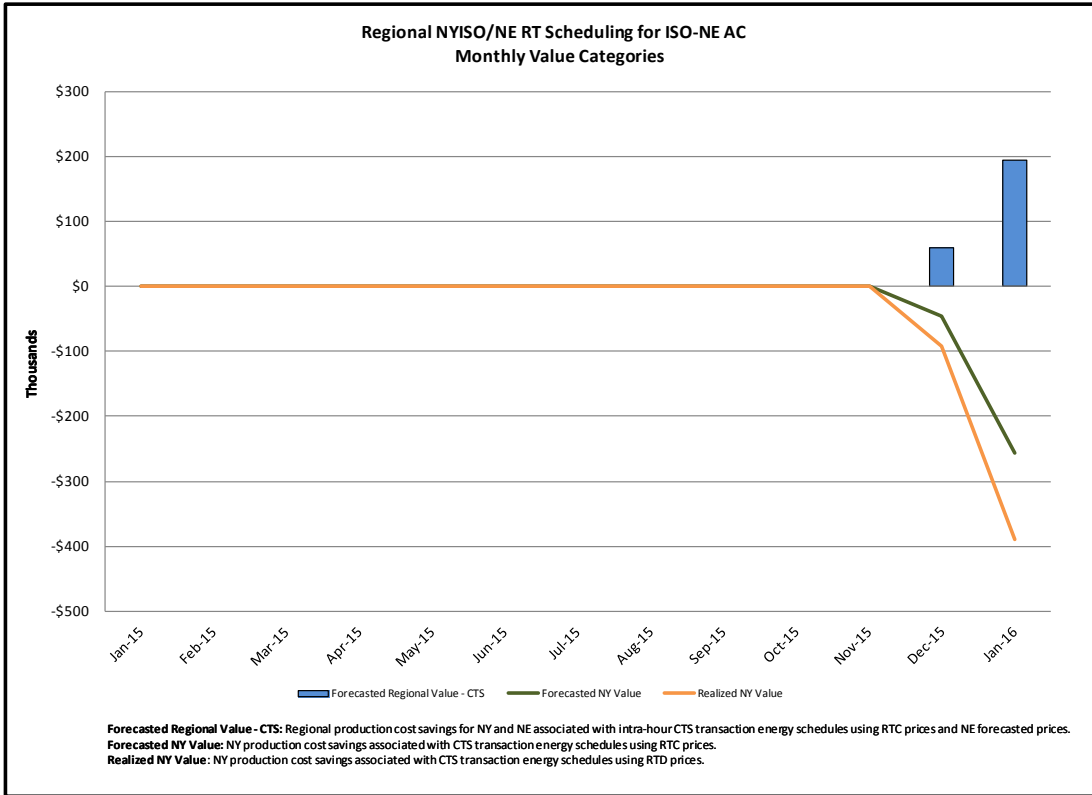
Pricing Data²

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	\$167.61	(\$100.49)	6.3%	7.2%	37.9%	35.7%	6.6%	6.3%
HTP	\$364.25	(\$106.72)	6.9%	7.0%	32.9%	34.1%	9.4%	9.7%
NEPTUNE	\$968.58	(\$241.03)	8.8%	8.1%	34.8%	31.1%	8.8%	8.5%
VFT	\$365.53	(\$107.88)	7.6%	6.8%	32.2%	33.6%	9.6%	10.2%
Sandy Pond	\$999.70	(\$988.34)	11.2%	8.7%	27.7%	32.5%	9.4%	10.6%





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).

