

Broader Regional Market Metrics (CTS)

**New York Independent
System Operator**

July 2016

July 2016 Broader Regional Markets Highlights (CTS)

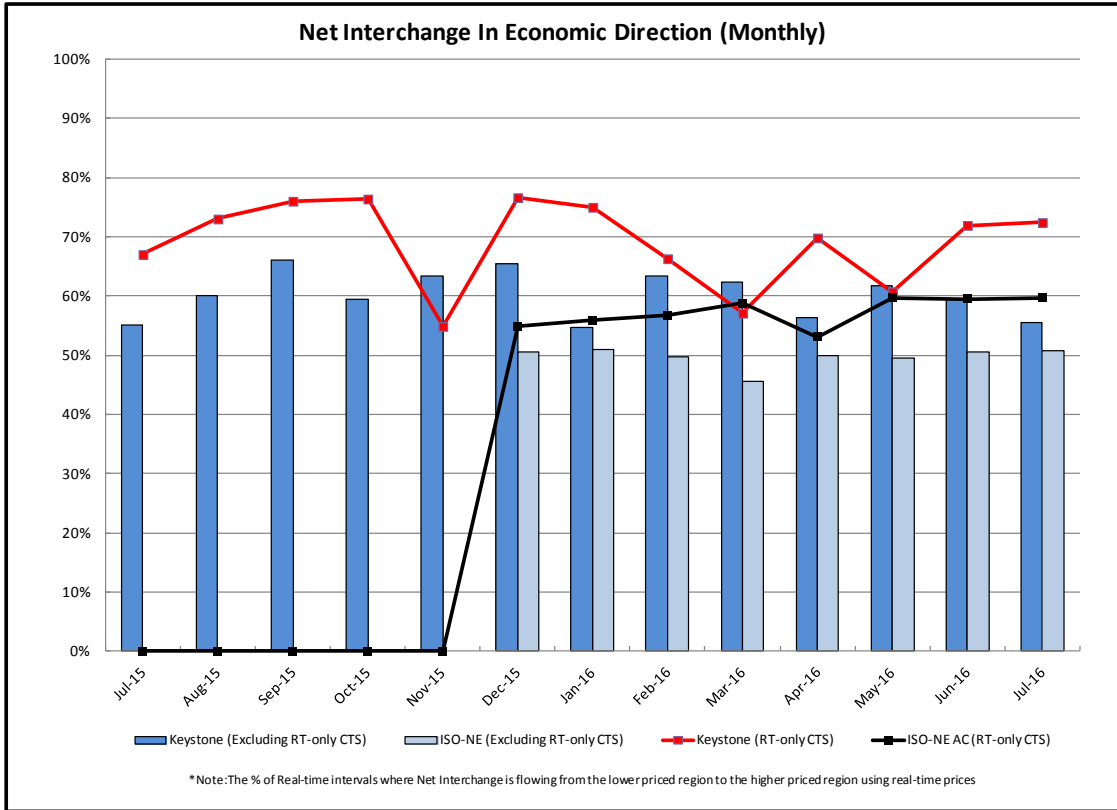
- PJM
 - At PJM Keystone, there was an almost 50% decline in CTS Offers and an almost 50% increase in schedules from last month’s levels, with an average of 97 MWs¹ per hour of CTS offers and an average of 26 MWs per hour of CTS schedules.
 - Interchange at PJM Keystone associated with CTS transactions scheduled only in real-time flowed in the economic direction in 72.4% of the real-time intervals, as compared to all other interchange at the interface which flowed in the economic direction in 55.5% of the real-time intervals.
 - There was \$0.22M in production cost increase associated with real-time transaction scheduling with PJM (\$0.21M forecasted savings at time schedules were set). Year-to-date, there is a NY production cost increase of \$.11M (\$1.39M forecasted savings).

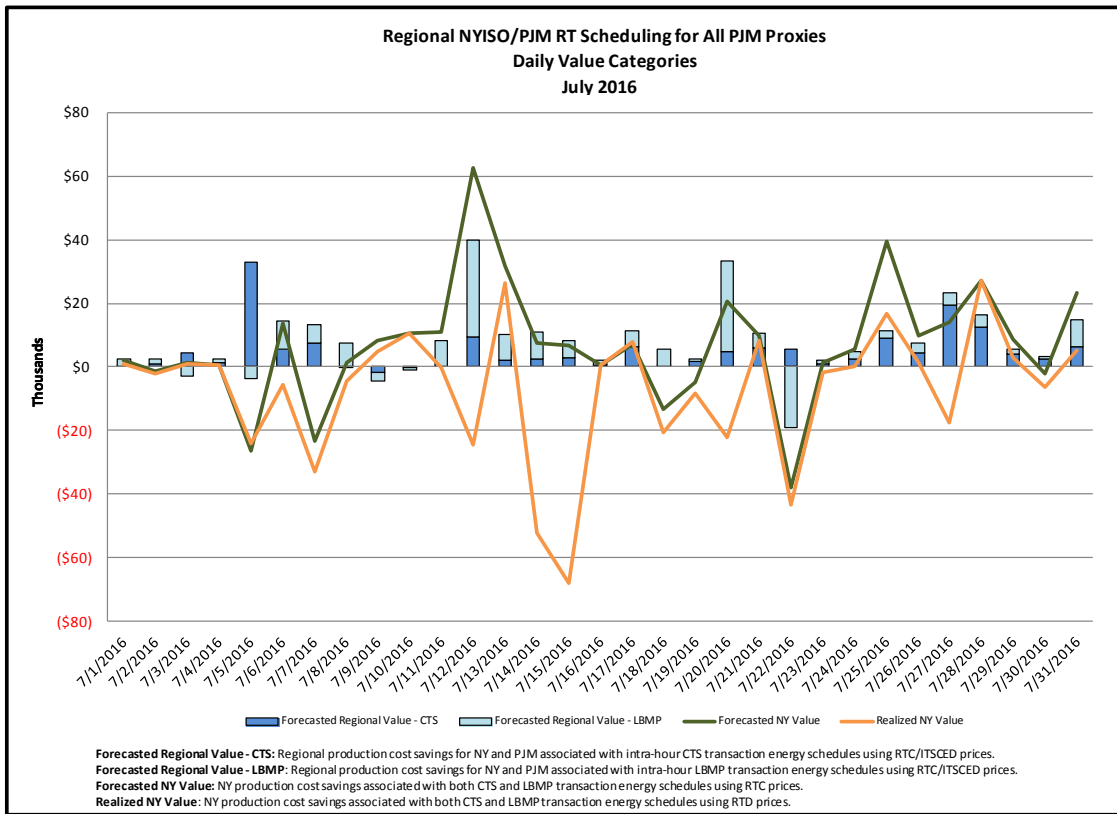
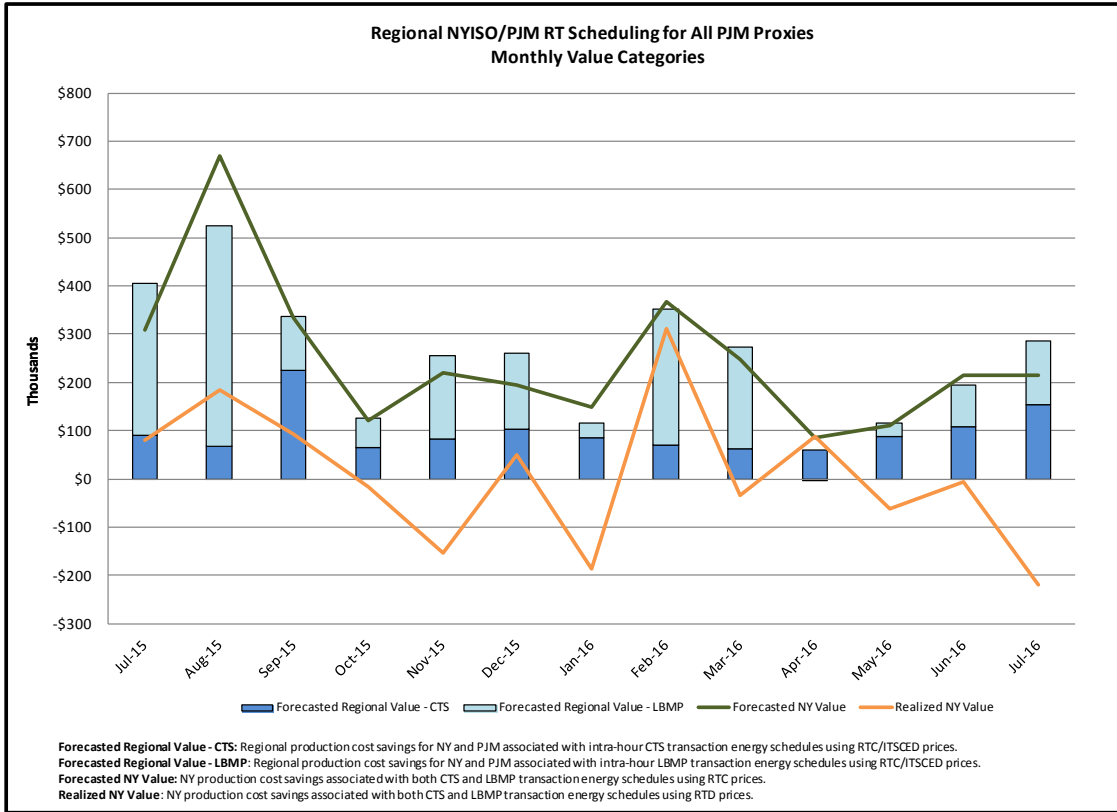
- ISO-NE
 - At NE Sandy Pond, there was an average of 1603 MWs¹ per hour of CTS offers, and an average of 737 MWs per hour of CTS schedules, similar to last month.
 - Interchange at NE Sandy Pond associated with CTS transactions scheduled only in real-time flowed in the economic direction in 59.7% of the real-time intervals, as compared to all other interchange which flowed in the economic direction in 50.8% of the real-time intervals.
 - There was a \$0.28M production cost increase associated with real-time transaction scheduling with NE (\$0.28M forecasted increase at the time schedules were set). Year-to-date, there is a NY production cost increase of \$1.28M (\$0.83M forecasted increase).

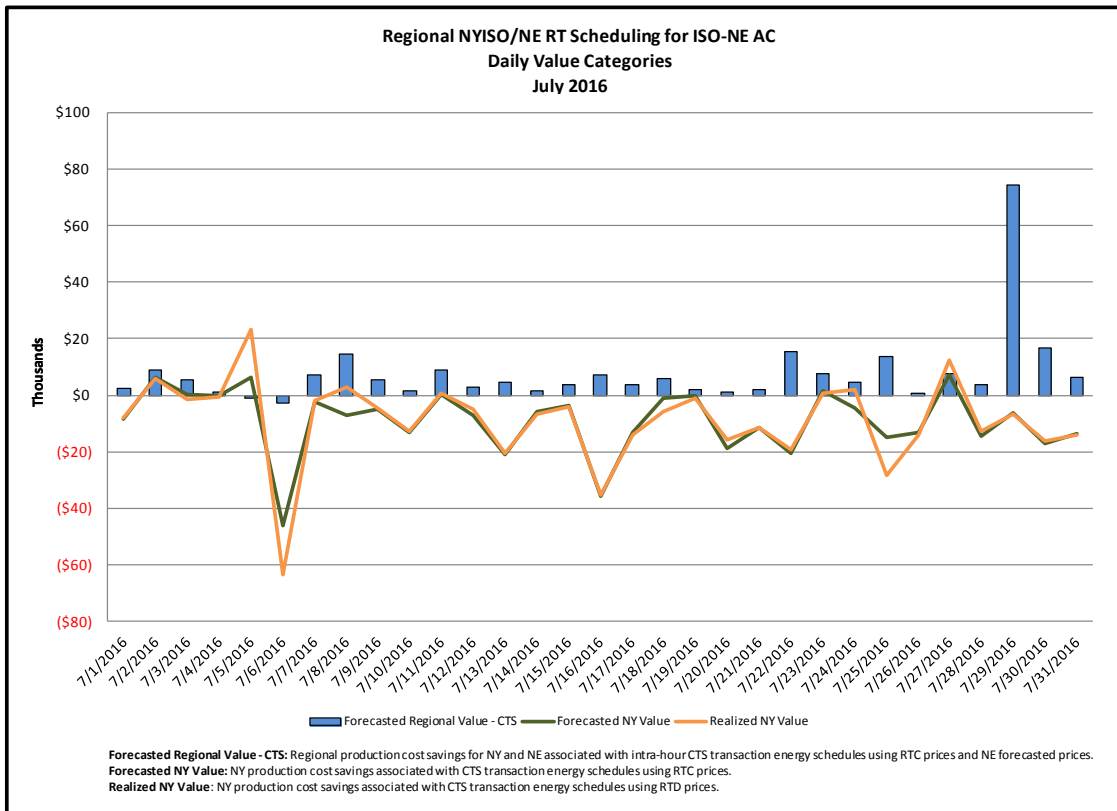
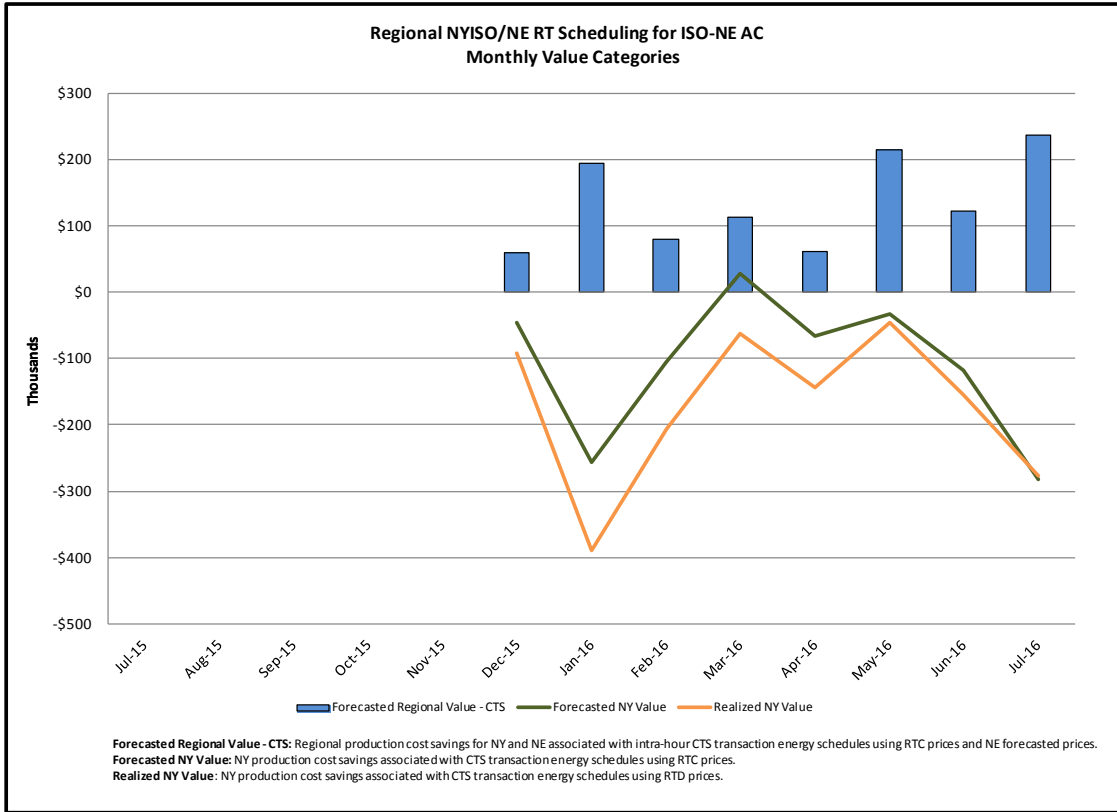
Pricing Data²

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	\$354.00	(\$191.45)	5.2%	5.9%	44.4%	34.8%	3.0%	6.7%
HTP	\$882.14	(\$188.14)	4.8%	6.4%	45.8%	34.8%	3.4%	4.8%
NEPTUNE	\$3,596.51	(\$186.99)	7.8%	5.8%	42.3%	32.4%	3.8%	7.9%
VFT	\$875.35	(\$187.17)	5.6%	6.9%	44.8%	34.2%	3.4%	5.0%
Sandy Pond	\$164.12	(\$999.00)	7.6%	5.9%	32.6%	38.8%	8.7%	6.5%





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.

