

# Broader Regional Market Metrics (CTS)

New York Independent
System Operator
September 2016



# September 2016 Broader Regional Markets Highlights (CTS)

### PJM

- At PJM Keystone, there was an average of 106 MWs<sup>1</sup> per hour of CTS offers and an average of 28 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 71.5% of the real-time intervals, as compared to all other interchange at the interface which flowed in the economic direction in 59.3% of the real-time intervals.

## ISO-NE

- At NE Sandy Pond, there was an average of 1947 MWs<sup>1</sup> per hour of CTS offers, and an average of 977 MWs per hour of CTS schedules.
- Interchange at NE Sandy Pond associated with CTS transactions scheduled only in realtime flowed in the economic direction in 61.9% of the real-time intervals, as compared to all other interchange which flowed in the economic direction in 50.3% of the real-time intervals.

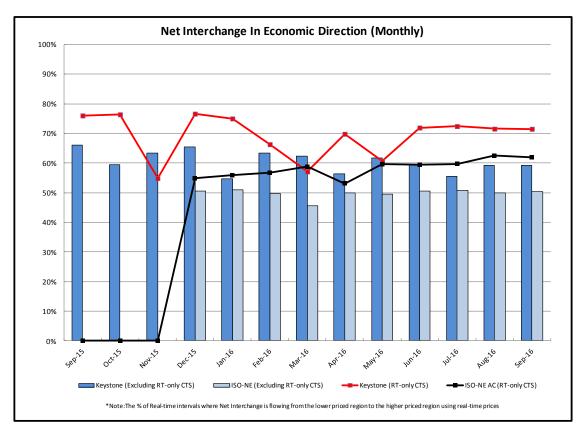
# **Pricing Data<sup>2</sup>**

| Interface  | Max Forecasted<br>Price Spread | Min Forecasted<br>Price Spread | Forecasted Price Spreads minus Real-time Price Spreads |                   |                 |                |                 |        |
|------------|--------------------------------|--------------------------------|--|-------------------|-----------------|----------------|-----------------|--------|
|            |                                |                                | < \$-20  | \$-20 to<br>\$-10 | \$-10 to<br>\$0 | \$0 to<br>\$10 | \$10 to<br>\$20 | > \$20 |
| Keystone   | \$315.80                       | (\$132.33)                     | 4.4%   | 4.9%              | 45.9%           | 36.6%          | 3.4%            | 4.8%   |
| HTP        | \$54.35                        | (\$165.11)                     | 4.6%   | 5.3%              | 45.5%           | 36.6%          | 4.0%            | 4.0%   |
| NEPTUNE    | \$2,675.74                     | (\$143.23)                     | 7.3%   | 6.3%              | 41.2%           | 34.7%          | 5.0%            | 5.6%   |
| VFT        | \$310.77                       | (\$147.33)                     | 4.7%   | 6.0%              | 46.0%           | 35.4%          | 3.9%            | 4.0%   |
| Sandy Pond | \$89.07                        | (\$142.33)                     | 3.7%   | 4.0%              | 34.0%           | 45.2%          | 7.5%            | 5.6%   |

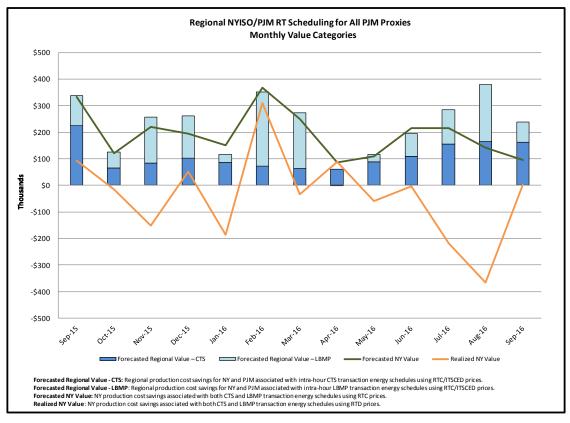
<sup>1.</sup> All MW Values include the absolute sum of both imports + exports. Wheels have been excluded.

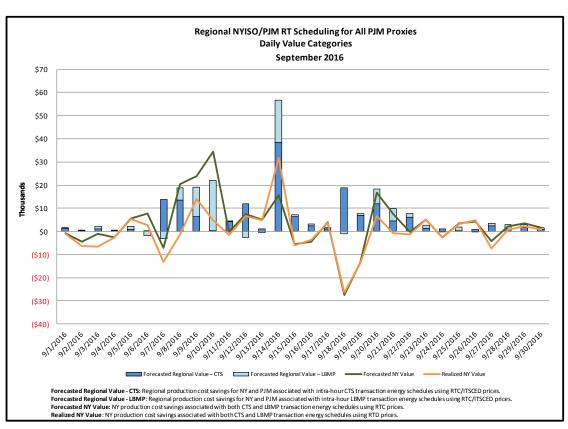
 <sup>&</sup>quot;Forecasted Prices" refer to NYISO's RTC LBMP and RTO's LMP used in RTC. "Real-time Prices" refer to NYISO's RTD LBMP and RTO's Real-time LMP.
 Forecasted Prices are used during NYISO's RTC evaluation to schedule transactions. Real-time Prices are used to settle transactions. Price Spreads are always calculated as NYISO's LBMP minus RTO's LMP.



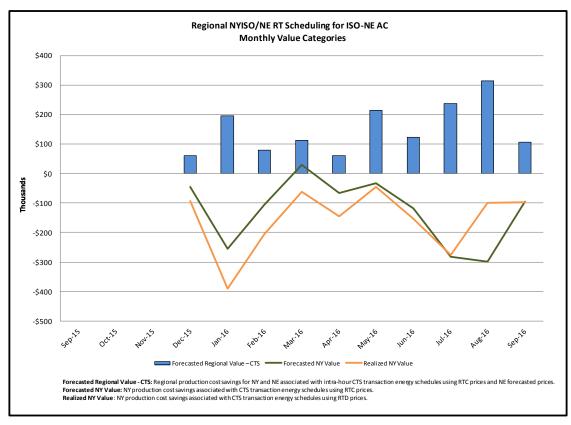


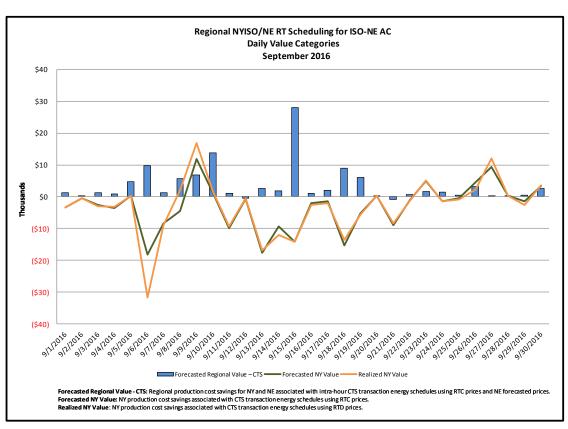














| Regional NYISO RT Scheduling     |   |  |  |  |  |
|----------------------------------|---|--|--|--|--|
| <u>Category</u>                  | <u>Description</u>  |  |  |  |  |
| Forecasted Regional Value - CTS  | Forecasted regional production cost savings from the intra-hour (non-TOH) energy schedule changes <sup>1</sup> 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 <sup>1</sup> on LBMP bids (Intra-hour LBMP Schedule Changes * [NY RTC LBMP - PJM or ISONE's Forecasted LMP]). |  |  |  |  |
| Forecasted NY Value              | Forecasted NY production cost savings from the intra-hour (non-TOH) energy schedule changes <sup>1</sup> 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 <sup>1</sup> on CTS and LBMP bids (Total Intra-hour CTS & LBMP Schedule Changes * NY RTD LBMP).                       |  |  |  |  |

<sup>&</sup>lt;sup>1</sup> 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.



