

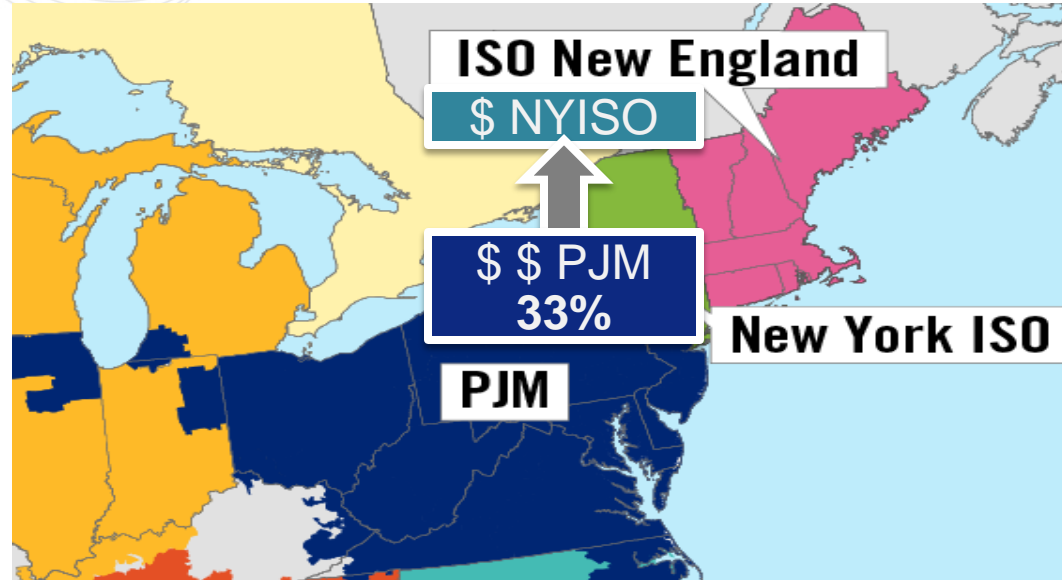


# PJM/NYISO Coordinated Transaction Scheduling

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Market Reliability Committee  
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The objective of Coordinated Transaction Scheduling (CTS) is to improve interchange scheduling efficiency

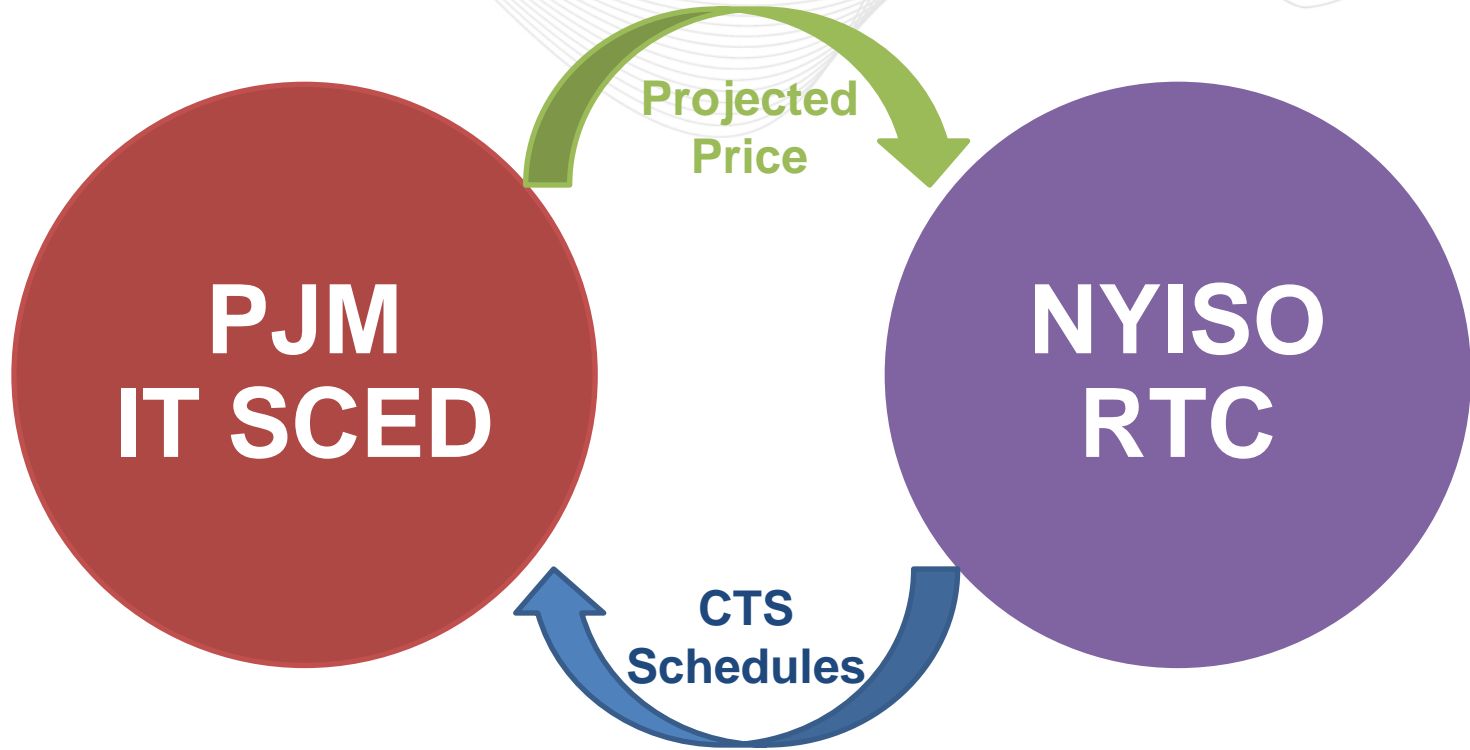
- Increase alignment of energy scheduling with interface prices
- Adds the option for Market Participants to schedule energy transactions across the NYISO/PJM interface using an interface bid



- Market Participants will have the ability to provide one of three types of bids at the common NYISO/PJM interfaces
  - Hourly evaluations of traditional wheel-through transactions (existing)
  - Intra-hour evaluations of traditional LMP Bid/Offer (existing)
  - Intra-hour evaluations of CTS Interface Bid/Offer (new)

- PJM and NYISO have held multiple joint stakeholder meetings to explore the possibility of developing an additional scheduling product
  - Topics included
    - A summary of the background, current issues, objectives and a high level conceptual solution approach for Coordinated Transaction Scheduling (CTS)
    - Characteristics of CTS
    - Market Settlement Impacts
    - Cost Benefit analysis
  - Meeting materials can be found utilizing the link below
    - [PJM/NYISO Interchange Coordination Initiative meeting materials](#)
  - Two Webinars were held May 28 and July 10 specifically targeted at discussing Coordinated Transaction Scheduling
  - Survey of PJM stakeholders on CTS issued July 23 and closed July 29

- CTS Interface Bids may have up to four distinct bid curves with up to eleven \$/MW pairs
  - one for each 15-minute scheduling interval of the hour
  - Must be submitted according to NYISO's current market rules
    - 75 minutes prior to the market hour
- Intra-hour schedules established 15-minutes sooner than current intra-hour scheduling process
- CTS Interface bids will be scheduled based on the projected price difference between PJM and NYISO at the interface



	% Occurrence by Interval			
\$ Difference	1 (30 Min)	2 (45 Min)	3 (90 Min)	4 (135 Min)
>20	8	9	9	9
10 to 20	5	5	5	5
5 to 10	7	7	8	9
-5 to 5	65	66	63	58
-10 to -5	5	5	6	7
-20 to -10	4	3	4	5
< -20	6	4	6	8

**Note: Data referenced in the chart above is from August 2012 through February 2013. The pricing point used is representative of the NYISO Interface price.**

- Cost benefit analysis was performed using a supply curve based approach to approximate the amount of MWs that need to be moved in each ISO to simulate various price alignment scenarios
- An iterative approach was used to determine the movement each RTO would make along their supply curve to decrease price separations between the areas
  - 200 MW, 300 MW, and 400 MW restrictions were imposed from the original starting point

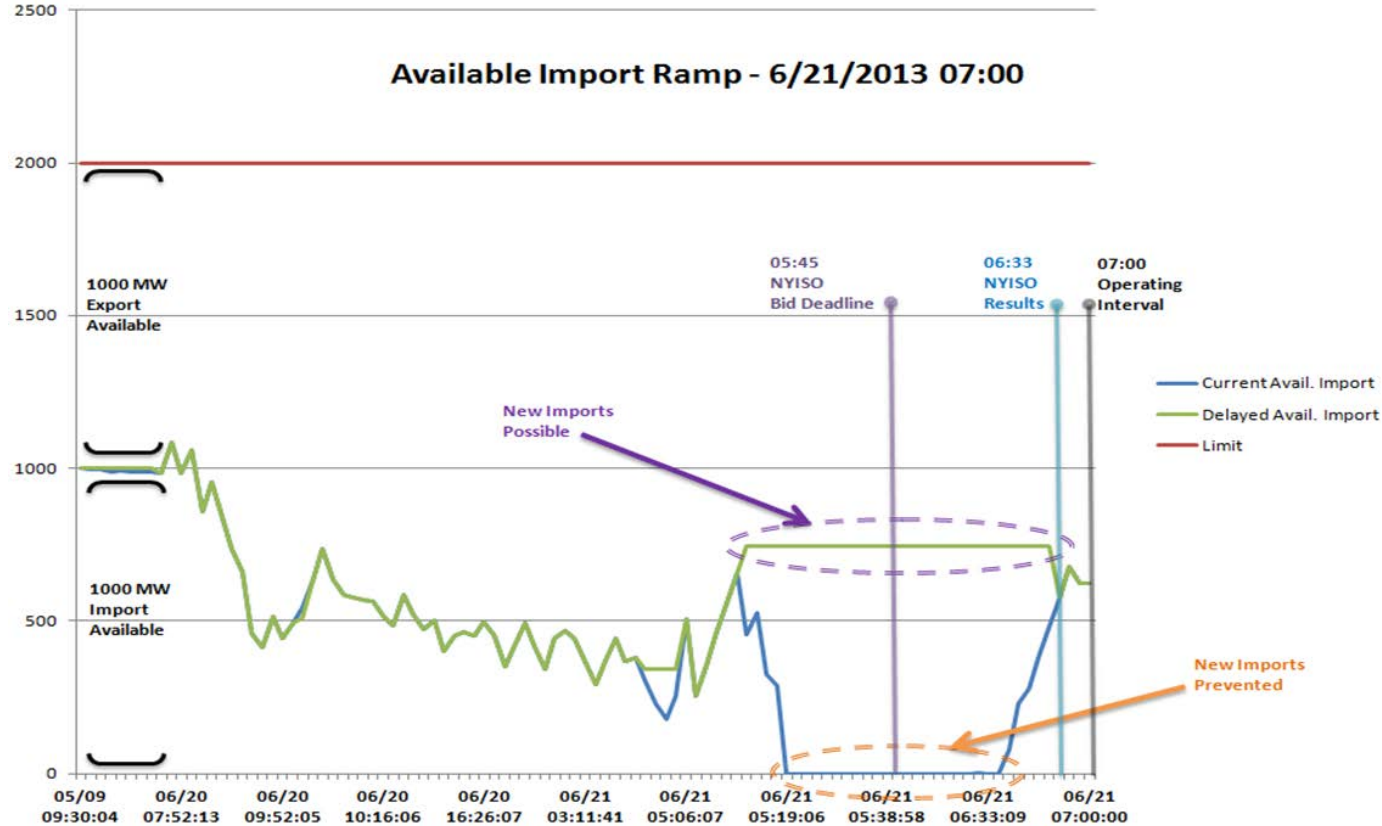
	<i>\$5 Scenario</i>	<i>\$10 Scenario</i>	<i>\$15 Scenario</i>
<i>200 MW Total</i>	\$13,526,755	\$10,707,010	\$8,904,755
<i>300 MW Total</i>	\$19,988,383	\$15,831,229	\$13,156,922
<i>400 MW Total</i>	\$26,259,087	\$20,805,915	\$17,293,692



- Proposed requirement uses both historical and forecasted prices
  - Due to levels of historical variances between forecast and actual prices
- Credit requirement for a bid at a node would be the greater of
  - The 97<sup>th</sup> percentile historical (prior year) hourly price for the node
    - Calculated in two-month blocks (Jan-Feb, Mar-Apr, ...)
    - Calculated separately for peak and off-peak hours
    - Consistent with what PJM does today for virtual bids
  - The 15-minute IT SCED price forecast for the node
    - May be a forecast run prior to the one used for actual clearing

- Credit requirements would be added for the current day and three prior calendar days and compared against credit available
  - Additional bids causing the credit requirement to exceed credit available would be rejected
  - Once cleared data is available, requirements for uncleared bids would be removed and remaining credit will be released
- Credit available would be from the same underlying pot as virtual transactions but would be set aside separately in each Participant's account within eCredit
- Minimum participation requirements same as for virtual transactions

- PJM to exclude NY interface transactions from the Ramp calculation until NYISO economic evaluation process is complete.
- NYISO to provide results to PJM at T-50 (50-minutes before real-time), curtail tags and restrict large swings in ramp between T-45 and T-0.



Coordinated Transaction Schedule Survey Question	Yes	No	% Yes
Are you opposed to the CTS proposal overall?	12	70	14.63%
Do you support the CTS proposal without transmission service fee elimination and keeping current transaction settlement time frames at the hourly level?	59	23	71.95%
Do you support the elimination of Schedule 7 or 8 transmission service fees within PJM if NYISO eliminates the equivalent fees for transactions?	23	59	28.05%
Do you support the exemption of BOR charges for CTS transactions only if NYISO eliminates the equivalent fees for CTS transactions?	10	72	12.20%
Do you support the elimination of other transmission service fees within PJM if NYISO eliminates the equivalent fees for transactions?	11	71	13.41%
Keeping the existing hourly PJM settlements for interchange transactions in place?	62	20	75.61%
Implementing 15-minute settlements for CTS transactions only?	7	75	8.54%
Implementing 15-minute settlement for all transactions?	21	61	25.61%
Do you support the CTS proposal without transmission service fee elimination, with BOR exemptions, and keeping current transaction settlement time frames at the hourly level?	1	81	1.22%
Do you support the CTS proposal without transmission service fee elimination and changing the settlement time frame from hourly to 15 minutes for CTS transactions only?	2	80	2.44%
Do you support the CTS proposal without transmission service fee elimination and changing the settlement time frame from hourly to 15 minutes for all interchange transactions?	4	78	4.88%
Do you support the CTS proposal with transmission service fee elimination and keeping current transaction settlement time frames at the hourly level?	9	73	10.98%
Do you support the CTS proposal with BOR exemptions and changing the settlement time frame from hourly to 15 minutes for CTS transactions only?	7	75	8.54%
Do you support the CTS proposal with BOR exemptions and changing the settlement time frame from hourly to 15 minutes for all interchange transactions?	7	75	8.54%
Do you feel you have been provided with enough information to make a decision on whether to support the CTS proposal with any of the options listed above?	49	33	59.76%

- CTS will require changes to the PJM Tariff and Operating Agreement with respect to:
  - Definitions;
  - Look-ahead price concept;
  - Bid/offer requirements and mechanisms;
  - Credit requirements and mechanisms;
  - Clearing mechanisms

# Proposed Timeline

