

PJM/NYISO Coordinated Transaction Scheduling

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NYISO-PJM Interchange Optimization

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





- Enhance scheduling flexibility across the interface
 - Allow participants' ability to further utilize the available transfer capability across the interface for scheduling interchange transactions
- Increase economic efficiency of real-time energy interchange across the interface
 - Lower overall operating costs across the two markets
 - Improve price signals
 - Improve convergence of average real-time prices at the seam
- Improve manageability of operational issues associated reliability coordination
 - Reduce volatility and unpredictability interchange to improve confidence in resource commitment and dispatch for meeting reliability goals



Stakeholder Education

- 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



- 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/Offers (existing)
 - Intra-hour evaluations of CTS Interface Bid/Offers (new)



- 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

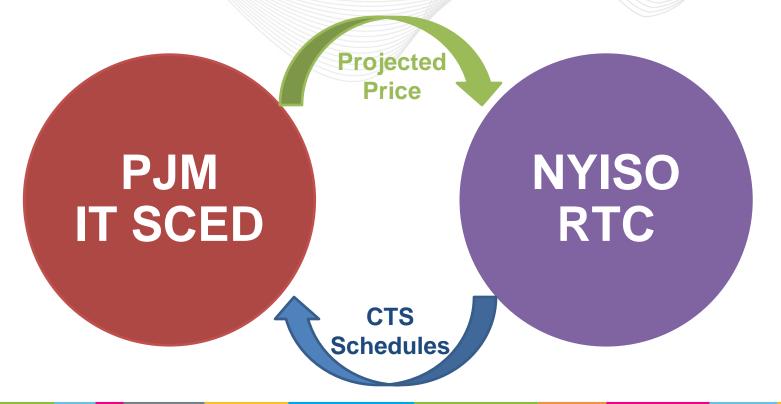


CTS Scheduling Process

- Schedules will be set every 15 minutes for the target time 30 to 45 minutes out from when the system information is gathered by the dispatch software ("initialization")
- The scheduling process will leverage PJM's existing Intermediate Term Security Constrained Economic Dispatch (IT SCED) that has a 2 hour look-ahead capability
- The most recently available information on prices from IT SCED will be used by the Real Time Commitment (RTC) for the binding schedules as well as in the advisory schedules
- Each RTC will also provide information on expected schedules to PJM and that information will be used in subsequent IT SCED runs



CTS Information Flow



CTS Credit Requirements

- 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 97th 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



CTS Credit Requirements

- 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



CTS Transactions will be settled in the same manner as traditional transactions

- Background
 - Stakeholders requested PJM and NYISO to investigate elimination of fees associated with external transactions
 - PJM currently does not support the elimination of Schedule 7 and 8 Fees (i.e. Regional Through and Out Rates) until NYISO and PJM reach additional agreements on Interregional Planning and Regional Transmission Enhancement Cost Allocation
 - Maintains the realization of benefits from transmission system upgrades by the RTO funding the upgrades
 - PJM and NYISO are continuing discussions but no date certain at this point on when an agreement may be reached
 - Stakeholders were also not supportive of the proposal to exempt CTS transactions from BOR charges in PJM



- CTS Transactions will be settled on an hourly basis consistent with the current PJM Energy Market settlements
- Background
 - PJM offered proposals to change the settlement timeframe for CTS transactions only or for all interchange transactions from hourly settlement to 15 minute settlement to align with interchange scheduling time frames
 - Stakeholder feedback via the July CTS survey indicated stakeholders were not in favor of this change