

PJM/MISO Coordinated Transaction Scheduling

Rebecca Carroll

MIC

December 12, 2014

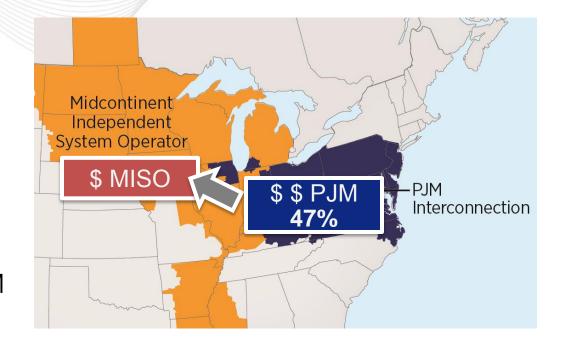
www.pjm.com



MISO-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 MISO/PJM
 interface using an interface bid





Stakeholder Education

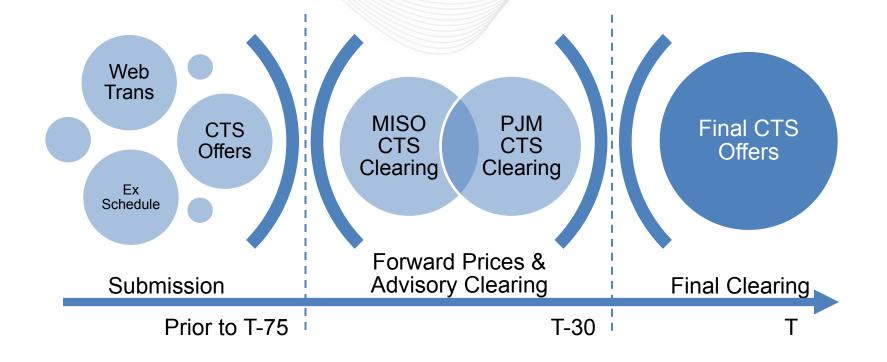
- PJM and MISO have held multiple joint stakeholder meetings to explore the possibility of developing an additional scheduling product
 - Topics included
 - A summary of the background, current issues, objectives and a high level conceptual solution approach for Coordinated Transaction Scheduling (CTS)
 - Characteristics of CTS
 - Market Settlement Impacts
 - MISO Extended LMP Impacts
 - Cost Benefit analysis
 - Meeting materials can be found utilizing the links below
 - April 18, 2014
 - June 10, 2014
 - November 11, 2014



- Market Participants will have the ability to provide one of three types of bids at the common MISO/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 Clearing Process



www.pjm.com 5 PJM©2014



CTS Submission



- Transmission Reservation submitted
 - Valid transmission reservation needed in both MISO and PJM
 - Submission timeline is consistent with all other products
- CTS Transaction and associated E-Tag submitted by T-75
 - Consistent with PJM/NYISO CTS submission timeline
 - Ramp request will be time stamped but transaction will not hold ramp until cleared – between T-30 and T-20
 - No changes by Market Participant after T-75
- CTS Bid Curves
 - Bid Curves will either be submitted via the e-Tag or a newly developed common portal



Forward Prices & Advisory Clearing



- The scheduling process will leverage PJM and MISO's forward price projections
- Advisory schedules, in addition to binding schedules, will be exchanged between PJM and MISO
- The most recently available input data will be used to clear the final as well as the advisory CTS schedules



Final Clearing



- Clearing results for CTS Transactions occurs around T-30
 - Only the common set of cleared transactions will remain scheduled, and others will be Market Adjusted
 - Cleared MW volumes will be available in both webTrans and ExSchedule
 - E-Tags will be updated to reflect clearing results
 - Only one system will be responsible for updating the E-Tag
 - Cleared CTS transactions will be included in the ramp calculation

www.pjm.com 8 PJM©2014



CTS Comparison

Category	PJM/MISO CTS	PJM/NYISO CTS
Transmission Service Request	Required	Required
Ramp Validation	After clearing	After clearing
Submission Timeline	T-75	T-75
Schedule changes	15 minutes	15 minutes
Duration	Hourly	Hourly
Settlement Timeframe	Hourly	Hourly
Make Whole Payment	No	No
Transaction Evaluation	Based on look ahead prices at the seam	Based on look ahead prices at the seam
Clearing Responsibility	MISO and PJM; joint clearing	NYISO



- PJM Committee Timeline for review
 - MIC January/February
 - MRC February/March
 - Approval at Members Committee (MC) April
 - FERC Filing May

