

Broader Regional Markets Report

Rana Mukerji

SENIOR VICE PRESIDENT – MARKET STRUCTURES, NYISO

Business Issues Committee Meeting

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| # | Broader Regional Markets Issue | Status |
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| 1 | Market-to-Market Coordination-PJM Implement mechanism to allow dispatch of generation in neighboring control area to more cost effectively address transmission constraints. The NYISO and PJM activated market-to-market coordination on January 15, 2013. | COMPLETE |
| 2 | Interface Pricing Implement mechanism to represent incremental power flows at external proxies for scheduling and pricing decisions. On March 13, 2013, FERC approved the NYISO's proposed interface pricing tariff revisions. | COMPLETE |
| 3 | 15-minute scheduling with PJM Implementation of intra-hour schedule changes at external proxy. The NYISO activated 15-minute scheduling at Keystone on June 27, 2012, Neptune on October 30, 2012, Linden VFT on November 28, 2012 and HTP on June 3, 2013. | COMPLETE |
| 4 | Coordinated Transaction Scheduling (CTS) with PJM Incorporate prices from neighboring control area into dispatch to allow MPs to schedule transactions based on price differences between regions. The NYISO activated CTS with PJM on November 4, 2014. | COMPLETE |
| 5 | Coordinated Transaction Scheduling (CTS) with ISO-NE Incorporate prices from neighboring control area into dispatch to allow MPs to schedule transactions based on price differences between regions. The NYISO activated CTS with ISO-NE on December 15, 2015. | COMPLETE |

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| 6 | <p>Asymmetric Capability Year Impact on Inter-Area Capacity Sales</p> <p>On February 3, 2010, FERC approved tariff revisions necessary to support the Capability Year adjustment election for holders of UDRs. On February 25, 2015, the Analysis Group presented the findings of its capacity market assessment, concluding that development of a forward capacity market structure is not warranted at this time.</p> | COMPLETE |
| 7 | <p>Coordination of Regional Day Ahead Electric Market Timing with Gas Day</p> <p>FERC directed the ISOs and RTOs to consider changes to the timing of their Day-Ahead Markets in response to changes to the gas nomination timeline. The NYISO's existing Day-Ahead scheduling practices satisfy FERC's timing requirements.</p> | COMPLETE |
| 8 | <p>Michigan-Ontario PAR Cost Allocation</p> <p>Proposal by MISO and ITC to allocate 30.9% of the cost of ITC's Michigan Ontario PARs to New York. On September 22, 2016, FERC rejected the MISO/ ITC proposal and ruled in favor of the NYISO and PJM. The NYISO completed issuance of refunds associated with this issue in May 2017 as part of the August 2016 Final Bill Close-out.</p> | COMPLETE |
| 9 | <p>Five-minute Transaction Scheduling with Hydro Quebec</p> <p>Implement economic scheduling of interchange across controllable interties via the 5 minute Real-Time Dispatch ('RTD') at the HQ Chateauguay proxy</p> | PENDING |
| 10 | <p>15-Minute Transaction Scheduling with Ontario</p> <p>Implementation of intra-hour schedule changes at external proxy</p> <ul style="list-style-type: none"> ♦ IESO has indicated that other priorities will delay the quarter hour scheduling timeline. NYISO and IESO have agreed to revisit prioritization discussions upon resolution of those factors. | PENDING |

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| 11 | <p data-bbox="239 225 919 265">Evaluation of Energy Market Offer Cap</p> <p data-bbox="239 282 2168 322">Differences in offer caps between regions may interfere with economic and reliability driven interchange scheduling</p> <ul data-bbox="257 368 2142 875" style="list-style-type: none"> <li data-bbox="257 368 2142 546">• On November 17, 2016, FERC issued Order No. 831 requiring, among other matters, the NYISO to 1) cap each resource's incremental energy offer at the higher of \$1,000/MWh or that resource's verified cost-based incremental energy offer, and 2) cap verified cost-based incremental energy offers at \$2,000/MWh when calculating LBMPs <li data-bbox="257 554 2142 646">• On November 9, 2017 FERC issued both Order No. 831-A (ruling on rehearing requests) and an Order ruling on the NYISO's Offer Cap compliance filing <li data-bbox="257 654 2142 782">• FERC accepted the NYISO's Offer Cap compliance filing but instructed the NYISO to submit a compliance filing within 30 days to (1) permit after-the-fact recovery of verified avoidable costs as uplift, and (2) to limit recovery of "adders above cost" (which NYISO does not use) to no more than \$100/MWh <li data-bbox="257 789 2142 875">• <i>On February 1, 2018, FERC accepted the NYISO's December 8, 2017 compliance filing. The NYISO will notify FERC two weeks prior to the effective date of the tariff revisions.</i> | ONGOING |
| 12 | <p data-bbox="239 896 1174 936">Reserves Participation in Adjacent Regional Markets</p> <p data-bbox="239 953 1888 993">Allow MPs to purchase/sell reserves and regulation between the NYISO and adjacent control areas</p> | PENDING |
| 13 | <p data-bbox="239 1029 1556 1069">Congestion Rent Shortfalls Resulting From External Transmission Outages</p> <p data-bbox="239 1086 2155 1172">Reductions in transmission capacity external to New York may result in congestion shortfalls. There is currently no mechanism to assign these costs to an external responsible party</p> | PENDING |

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| 14 | Elimination of Rate Pancaking Reciprocal elimination of fees on export transactions can increase interregional transmission scheduling efficiency. Rate pancaking between NYISO and ISO-NE has already been eliminated. | PENDING |
| 15 | Capacity Imports from Ontario Ontario has expressed an interest in pursuing eligibility for imports from Ontario to qualify to provide capacity in NY. The NYISO and IESO signed a Memorandum of Understanding on August 25, 2016 regarding capacity imports from the IESO Control Area | COMPLETE |
| 16 | Buy-Through of Congestion Buy-through of Congestion would provide a scheduling and settlement mechanism to account for costs in control areas that are not specified on the contract path <ul style="list-style-type: none"> • <i>The Lake Erie ISOs and RTOs agree that implementing Buy-Through of Congestion is not necessary at this time</i> • <i>On January 29, 2018, FERC accepted the NYISO's motion, filed March 27, 2017, to terminate its obligation to submit annual informational filings on NYISO's implementation of interface pricing and congestion management and market-to-market coordination initiatives with its neighboring RTOs/ISOs.</i> | COMPLETE |
| 17 | Reciprocal Capacity Wheeling with New England Identify the scope of issues pertaining to auction structure, timing, planning, operations, IRM/LCR, cost allocation and other impact areas in NY and ISO-NE markets | PENDING |
| 18 | Addressing Control Area to Control Area Capacity Transactions Identify and alleviate barriers to capacity market import and export transactions | PENDING |
| 19 | Future of the ConEd/ PSEG Wheel The ConEd/ PSEG wheel agreement expired on April 30, 2017. The NYISO and PJM worked together to identify market design changes necessary to address the expiration of this agreement. The NYISO and PJM implemented the new protocol on May 1, 2017 | COMPLETE |

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| 20 | <p>RTC-RTD Forward Horizon Coordination Improvements The NYISO aims to improve modeling consistency between RTC and RTD and evaluate improvements to look-ahead evaluations to facilitate more efficient RTC-RTD scheduling and price convergence</p> <ul style="list-style-type: none"> •The NYISO provided an initial presentation on this topic to stakeholders at the April 5, 2016 MIWG meeting •An update on this effort was provided at the September 29, 2016 MIWG meeting •The NYISO presented an overview of the RTC-RTD convergence analysis at the December 5, 2017 MIWG meeting. •A whitepaper detailing the RTC-RTD convergence analysis was posted on December 20, 2017. The paper identifies promising efforts to explore further and/or continue in 2018 to aid RTC-RTD convergence. •On January 16, 2018, the NYISO presented a summary of the RTC-RTD Convergence Study recommendations at MIWG. | ONGOING |
| 21 | <p>Settlement Intervals and Shortage Pricing in Markets Operated by RTOs and ISOs On June 16, 2016, FERC issued Order No. 825 regarding the alignment of settlement and dispatch intervals for energy, operating reserves, and intertie transactions. The NYISO submitted its required compliance filing to FERC on January 11, 2017. FERC accepted the NYISO’s compliance filing on February 24, 2017</p> | COMPLETE |
| 22 | <p>Impact to NYISO Capacity Market of ISO-NE’s Proposed Revisions to the Qualification Requirements for Import Capacity Resources Seeking to Participate in ISO-NE’s Reconfiguration Auctions and Bilateral Transactions The proposed effective date of ISO-NE’s proposed revisions to the qualification requirements for “Import Capacity Resources” to participate in ISO-NE’s Reconfiguration Auctions and bilateral transactions creates a substantial risk of unjustifiably increasing New York capacity prices and creating inefficient price signals in the NYISO-administered capacity market. At the August 22, 2017 ICAPWG meeting, Atlantic Economics presented an alternative approach for calculating Locality Exchange Factors; the NYISO indicated its willingness to further evaluate the suitability of the alternative approach proposed by Atlantic Economics in the future, but does not intend to pursue changes to the currently effective Locality Exchange Factor calculation methodology at this time.</p> | COMPLETE |

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| 23 | <p>PJM Proposal for Pro-Forma Pseudo-Tie Agreements</p> <p>PJM has asked the NYISO to review its proposed <i>pro forma</i> pseudo-tie agreement that would apply to NYCA Generators that sell all or a portion of their capacity to PJM. PJM would provide commitment and dispatch instructions to pseudo-tied generators; such generators would be committed and dispatched to meet PJM’s needs, rather than the NYISO’s needs. The NYISO has concerns about using PJM’s proposed pseudo-tie agreement for Generators located in the NYCA. The NYISO is prepared to work with PJM to evaluate potential alternate solutions that would be acceptable to both parties.</p> <ul style="list-style-type: none"> •The NYISO discussed this topic at the February 22, 2017 MC meeting and the February 28, 2017 MIWG meeting •NYISO submitted comments to FERC in response to PJM’s March 9, 2017 filing to modify its rules governing generation resources physically located outside the PJM region that sell capacity to PJM •On May 8, 2017, the NYISO submitted comments in response to Potomac Economics’ Section 206 complaint regarding PJM’s pseudo-tie requirements for external capacity resources •On September 1, 2017, the NYISO submitted a protest in response to PJM’s August 11, 2017 filing regarding pseudo-tie requirements for external capacity resources. •On November 17, 2017, the FERC issued an Order in Docket No. ER17-1138 accepting many of PJM’s proposed pseudo-tie rules, effective May 9, 2017. •Discussions between the NYISO and PJM to further consider the matter are ongoing. | ONGOING |

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| 24 | <p>NYISO/PJM Ramapo PAR Cost Allocation</p> <p>The NYISO and PJM have initiated a joint stakeholder process to consider modifying their Joint Operating Agreement (JOA) to include an appropriate cost recovery and sharing mechanism for the purchase, installation, and maintenance of transmission equipment for transmission facilities that provide benefits to both ISOs.</p> <ul style="list-style-type: none"> •NYISO and PJM presented on this topic as part of a joint meeting on March 10, 2017 •The NYISO presented a proposal at the April 10, 2017 MIWG meeting for cost recovery under the NYISO tariffs; PJM and the NYISO held a joint meeting to further discuss this issue on April 18, 2017 •Stakeholders approved the NYISO’s proposal for Ramapo Phase Angle Regulator cost recovery under the NYISO tariffs at the May 31, 2017 Management Committee meeting •On June 21, 2017, the NYISO filed proposed revisions to OATT Rate Schedule 1 regarding cost recovery for the Ramapo PARs •On September 15, 2017, FERC accepted the NYISO’s proposed revisions to OATT Rate Schedule 1 regarding cost recovery for the Ramapo PARs, as filed by the NYISO on June 21, 2017. •The NYISO is currently in discussions with PJM regarding cost sharing for the replacement of PAR 3500, and plans to conduct a future joint NYISO/PJM stakeholder meeting to further discuss the issue. | ONGOING |
| 25 | <p>Ramapo PAR MW Adjustment in the Day-Ahead Market</p> <p>Since 2013, the Phase Angle Regulators (PARs) at Ramapo have been operated in real-time to meet a target flow that includes 80% of Rockland Electric Company (RECo) load. To better align the Day-Ahead Market (DAM) and Real-Time Market, the NYISO intends to include a MW adjustment to the Ramapo PARs’ schedule in the DAM related to RECo load deliveries. The Ramapo PAR MW Adjustment in the DAM was implemented beginning with the June 14, 2017 market day.</p> | COMPLETE |

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| 26 | <p data-bbox="84 87 2346 254">Deliverability Requirements for Capacity Imports</p> <p data-bbox="84 254 2346 268">This endeavor will clarify the minimum deliverability requirements for External Capacity from PJM into the NYISO ICAP market. The NYISO will be evaluating the deliverability requirements for the PJM Interface as part of this effort.</p> <ul data-bbox="84 268 2346 836" style="list-style-type: none"> <li data-bbox="84 268 2346 368">• <i>At the October 11, 2017 ICAPWG meeting, the NYISO provided an overview of the current approach applied to assess the deliverability of external resources into the NYCA for purposes of qualifying as eligible capacity in the NYISO ICAP market.</i> <ul data-bbox="180 368 2346 568" style="list-style-type: none"> <li data-bbox="180 368 2346 568">• <i>The NYISO also presented a modification in the documentation requirements for capacity imports across the PJM AC ties; the planned effective date for this change is May 1, 2018. The process change will require submission of documentation on the day the ICAP Spot Market Auction results are posted to demonstrate that external resources with capacity awards relating to imports across the PJM AC ties have firm transmission service for the month.</i> <li data-bbox="84 582 2346 725">• <i>At the November 30, 2017 ICAPWG meeting, the NYISO presented further information regarding the documentation requirements for capacity imports across the PJM AC ties, including an example of the type of documentation that could be used for satisfying the required demonstration of firm transmission service for the obligation month.</i> <li data-bbox="84 739 2346 836">• <i>At the January 17, 2018 BIC meeting, the NYISO received approval of ICAP Manual revisions regarding the documentation requirements for capacity imports across the PJM AC ties, which will become effective May 1, 2018.</i> | ONGOING |
| 27 | <p data-bbox="84 836 2346 886">Investigating Refinements to Locality Exchange Factors</p> <p data-bbox="84 886 2346 1158">At the August 22, 2017 ICAPWG meeting, Atlantic Economics presented an alternative approach for calculating Locality Exchange Factors. The NYISO is considering whether the Atlantic Economics proposal or an alternate formula-based model may be viable and feasible. The NYISO has engaged GE to investigate the viability of potential refinements to the current methodology for determining Locality Exchange Factors.</p> | ONGOING |

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| 28 | <p data-bbox="84 315 547 368">New Jersey BPU Complaint</p> <p data-bbox="84 368 2333 529">On December 22, 2017, the New Jersey Board of Public Utilities filed a complaint with FERC against PJM, NYISO, Con Edison, Linden VFT, Hudson Transmission Partners (“HTP”) and NYPA. The complaint challenges PJM’s and NYISO’s implementation of the mutual benefits provisions of their Joint Operating Agreement (“JOA”) and requests amendments to the JOA to impose charges.</p> <ul data-bbox="84 529 2333 681" style="list-style-type: none"> <li data-bbox="84 529 2333 681">• On December 28, 2017, the NYISO jointly filed with other respondents to the complaint in order to request an extension of the answer deadline to February 23, 2018. The New Jersey BPU did not oppose the request, and the Commission granted the extension. | ONGOING |

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- Serve the public interest and
- Provide benefit to stakeholders by
 - Maintaining and enhancing regional reliability
 - Operating open, fair and competitive wholesale electricity markets
 - Planning the power system for the future
 - Providing factual information to policy makers, stakeholders and investors in the power system



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