

Broader Regional Markets Report

Rana Mukerji

SENIOR VICE PRESIDENT – MARKET STRUCTURES, NYISO

Management Committee Meeting

January 26, 2022, Rensselaer, NY

| # | Broader Regional Markets Issue | Status |
|---|---|----------|
| 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 |

| # | Broader Regional Markets Issue | Status |
|----|--|----------|
| 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 (HQ)</p> <p>Implement economic scheduling of interchange across controllable inerties via the 5-minute Real-Time Dispatch (RTD) at the HQ Chateauguay proxy. The NYISO presented the 5-minute transaction scheduling study at the November 3, 2020 MIWG meeting. The study evaluates the feasibility of more frequent transaction scheduling, describes current bidding and scheduling practices for external transactions, and identifies key concepts that would need to be addressed in the market design.</p> | PENDING |
| 10 | <p>15-Minute Transaction Scheduling with Ontario</p> <p>Implementation of intra-hour schedule changes at external proxy</p> | PENDING |
| | <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. | |

| # | Broader Regional Markets Issue | Status |
|----|--|----------|
| 11 | <p>Evaluation of Energy Market Offer Cap</p> <p>Differences in offer caps between regions may interfere with economic and reliability driven interchange scheduling. 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. 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. 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. On February 1, 2018, FERC accepted the NYISO’s December 8, 2017 compliance filing. On December 19, 2018, the NYISO implemented software to comply with Order No. 831, while requesting a limited waiver to resolve an outstanding implementation issue. On January 27, 2019, the NYISO implemented software to resolve the prior issue and terminate the ongoing need for the requested waiver.</p> | COMPLETE |
| 12 | <p>Reserves Participation in Adjacent Regional Markets</p> <p>Allow MPs to purchase/sell reserves and regulation between the NYISO and adjacent control areas. Implementation of 5-minute transaction scheduling, the study of which is described in item 9 of this report, is a prerequisite to considering whether reserves and regulation can be provided across control areas.</p> | PENDING |
| 13 | <p>Congestion Rent Shortfalls Resulting From External Transmission Outages</p> <p>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 |

| # | Broader Regional Markets Issue | Status |
|----|---|----------|
| 14 | <p>Elimination of Rate Pancaking</p> <p>Reciprocal elimination of fees on export transactions can increase interregional transmission scheduling efficiency. Rate pancaking between NYISO and ISO-NE has already been eliminated.</p> | PENDING |
| 15 | <p>Capacity Imports from Ontario</p> <p>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</p> | COMPLETE |
| 16 | <p>Buy-Through of Congestion</p> <p>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. The Lake Erie ISOs and RTOs agree that implementing Buy-Through of Congestion is not necessary at this time. 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.</p> | COMPLETE |
| 17 | <p>Reciprocal Capacity Wheeling with New England</p> <p>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</p> | PENDING |
| 18 | <p>Addressing Control Area to Control Area Capacity Transactions</p> <p>Identify and alleviate barriers to capacity market import and export transactions</p> | PENDING |
| 19 | <p>Future of the ConEd/ PSEG Wheel</p> <p>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</p> | COMPLETE |

| # | Broader Regional Markets Issue | Status |
|----|---|---------|
| 20 | <p>RTC-RTD Forward Horizon Coordination Improvements</p> <p>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. •The NYISO released the Reliability and Market Considerations for a Grid in Transition report in December 2019. This report discusses, among other issues, intra-day unit commitment and dispatch considerations that could assist with maintaining sufficient ramp capability to balance variations in intermittent resource output, and potentially improve coordination between RTC and RTD. •At the December 7, 2020 MIWG meeting, the NYISO presented its Proposed Approach for Considering Grid in Transition Recommendations. This presentation included, among other items, considering improvements that would contribute toward RTC-RTD convergence. •At the April 6, 2021 MIWG meeting, the NYISO led a learning session on the Real-Time Market, as well as a discussion of forecast latency. The presentation reviewed how RTC and RTD function and interact and discussed the inputs that inform commitment and dispatch decisions. | ONGOING |

| # | Broader Regional Markets Issue | Status |
|----|---|----------|
| 21 | <p>Settlement Intervals and Shortage Pricing in Markets Operated by RTOs and ISOs</p> <p>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</p> <p>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 |

| # | Broader Regional Markets Issue | Status |
|----|--|---------|
| 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> <hr/> <ul style="list-style-type: none"> •<i>The NYISO discussed this topic at the February 22, 2017 MC meeting and the February 28, 2017 MIWG meeting</i> •<i>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</i> •<i>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</i> •<i>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.</i> •<i>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.</i> •<i>Discussions between the NYISO and PJM to further consider the matter are ongoing.</i> •<i>In a February 5, 2018 order accepting PJM's pro forma pseudo tie agreement, FERC stated that a pseudo-tied resource would have to obtain NYISO's permission to pseudo-tie and NYISO is under no obligation to approve a request that fails to accord with its market design.</i> •<i>NYISO considerations regarding PJM pseudo ties were discussed at the April 2, 2018 NYISO-PJM Joint Stakeholder Meeting.</i> | ONGOING |

| # | Broader Regional Markets Issue | Status |
|----|--|----------|
| 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. On November 8, 2019, Con Edison filed with FERC a notice of termination of the 1993 PAR Facilities Agreement. In its filing, Con Edison noted that ongoing recovery of the Ramapo PAR costs from NYISO Transmission Customers would continue to be governed by Rate Schedule 1 of the NYISO OATT. On December 23, 2019, FERC issued an order accepting the notice of termination.</p> | COMPLETE |
| 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 |

| # | Broader Regional Markets Issue | Status |
|----|--|----------|
| 26 | <p>External Capacity Resource Performance and Eligibility</p> <p>This endeavor will clarify the minimum deliverability requirements for External Capacity into the NYISO ICAP market. The NYISO will also continue to evaluate what, if any, additional performance requirements and obligations are needed for deliverability to the NYCA border for purposes of external resource eligibility to sell capacity into the NYISO. This project will also review the performance requirements for external capacity resources in an effort to seek to ensure these resources are providing reliability value for consumers that is comparable to internal resources. Manual revisions addressing the documentation requirements for capacity imports across the PJM AC ties to demonstrate they have obtained firm transmission service were approved by stakeholders at the January 17, 2018 BIC meeting. At the May 20, 2019 MC meeting, stakeholders approved enhancements to the performance requirements for external capacity suppliers in response to a Supplemental Resource Evaluation (“SRE”); the proposal was accepted by FERC and became effective on August 12, 2019. Deliverability requirements for Hydro Quebec (“HQ”) capacity suppliers was discussed with stakeholders at the August 29, 2019 ICAPWG/MIWG meeting. At the September 11, 2019 BIC meeting, stakeholders approved manual revisions addressing deliverability requirements for resources selling capacity from ISO-NE and Ontario.</p> | COMPLETE |

| # | Broader Regional Markets Issue | Status |
|----|--|----------|
| 27 | <p>Investigating Refinements to Locality Exchange Factors</p> <p>At the August 22, 2017 ICAPWG meeting, Atlantic Economics presented an alternative approach for calculating Locality Exchange Factors. The NYISO engaged GE to investigate the viability of potential refinements to the current methodology for determining Locality Exchange Factors. The NYISO has been working with GE since 2016 to explore multiple probabilistic techniques and has been unable to identify a viable alternative probabilistic methodology that possesses the desired transparency and stability characteristics, while sustaining reliability. Fundamentally, it appears that GE MARS is not structured to model the impact of a relatively small sale, modeled in significantly more detail than the rest of the system, with any degree of accuracy or stability. The NYISO has become convinced that the stability and transparency of the current approach is preferable to a probabilistic approach. The NYISO has communicated with stakeholders that further work on this effort is unlikely to yield an implementable methodology and continued investigation of a probabilistic approach is not warranted at this time.</p> | COMPLETE |
| 28 | <p>New Jersey BPU Complaint</p> <p>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 challenged PJM’s and NYISO’s implementation of the mutual benefits provisions of their Joint Operating Agreement (“JOA”) and requested amendments to the JOA to impose charges. On February 23, 2018, the NYISO filed an answer to the NJBPU Complaint. On May 24, 2018, FERC issued an order denying the complaint filed by the NJBPU. The Commission found that since the Bergen-Linden Corridor Project was planned by PJM, and without a voluntary commitment to share cost responsibility by NYISO, it is just and reasonable for the costs of the project to be allocated solely within PJM. FERC’s Order stated that the Commission found none of the NJBPU’s claims to be persuasive.</p> | COMPLETE |

| # | Broader Regional Markets Issue | Status |
|----|---|----------|
| 29 | <p>PSE&G Complaint Against Con Edison regarding the B and C Lines</p> <p>On May 3, 2018, Public Service Electric and Gas Company (PSE&G) filed a Complaint against Consolidated Edison Company of New York, Inc. (Con Edison) concerning two transmission lines, B3402 Hudson-to-Farragut (“B line”) and C3403 Marion-to-Farragut (“C line”). PSE&G alleges that underwater portions of the lines may have been permanently damaged, and should be removed; however, the Complaint acknowledged that a prior leak in the B line has been repaired. On June 6, 2018, the NYISO filed a protest with FERC indicating that removal of the B and C lines would undermine resilience in both New Jersey and New York. On September 6, 2018, FERC issued an order dismissing PSE&G’s Complaint. FERC determined that it did not have exclusive jurisdiction over the dispute raised in the Complaint, and declined to exercise primary jurisdiction over the matter.</p> | COMPLETE |
| 30 | <p>IPPNY Complaint</p> <p>On July 31, 2018, the Independent Power Producer’s of New York (IPPNY) filed a complaint with FERC requesting that the Commission direct the NYISO to not allow resources in the PJM market to sell ICAP into Zone J using certain UDR facilities. On August 20, 2018 the NYISO filed an answer to the IPPNY Complaint with FERC, requesting that the Commission deny the Complaint, as IPPNY incorrectly assumed that transactions across the Zone J Merchant Transmission Facilities would be subject to curtailment on the same basis as non-firm service within PJM, and IPPNY had not shown that transactions across the Zone J Merchant Transmission Facilities were no longer deliverable to the NYCA interface. On September 20, 2018 the NYISO filed an answer to IPPNY’s September 5, 2018 answer. The NYISO argued that IPPNY, in its answer, inappropriately applied previous FERC proceedings to the issue at hand, and attempted to incorrectly characterize an earlier FERC ruling. On December 19, 2019, FERC issued an order denying the IPPNY Complaint.</p> | COMPLETE |

| # | Broader Regional Markets Issue | Status |
|----|--|----------|
| 31 | <p>NYISO and PJM JOA Waiver Request</p> <p>On September 17, 2018, the NYISO and PJM filed with FERC a joint request for waiver of the Joint Operating Agreement (JOA) to permit the RTOs to add the East Towanda – Hillside Tie Line as a Market-to-Market (“M2M”) Flowgate. The requested waivers enable PJM to conduct redispatch operations to control flows to the more restrictive rating on the NYISO side of the East Towanda–Hillside Tie Line without violating the PJM Tariff, for a limited period of time, while NYISO and PJM work to develop a permanent solution. On August 28, 2019, FERC issued an order accepting the proposed NYISO-PJM JOA revisions. The revisions to address the previously approved waiver were effective on September 26, 2019.</p> | COMPLETE |
| 32 | <p>Relocating the IESO Proxy Bus</p> <p>The NYISO’s market software currently uses the BRUCE station as the proxy bus to schedule transactions with Ontario’s Independent Electricity System Operator (IESO). Analysis of the actual historical delivered energy from transactions between IESO and NYISO indicates that revising the proxy bus location used for IESO scheduling may better align the power flow results with real-time operations. The IESO proxy bus change from the Bruce 500 kV station to the Beck 220 kV station was implemented on April 21, 2020.</p> | COMPLETE |

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation