

Broader Regional Markets Report

Rana Mukerji

SENIOR VICE PRESIDENT – MARKET STRUCTURES, NYISO

Business Issues Committee Meeting

October 10, 2018, Rensselaer, NY

DRAFT – FOR DISCUSSION PURPOSES ONLY



#	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

DRAFT – FOR DISCUSSION PURPOSES ONLY



#	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</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

#	Broader Regional Markets Issue	Status
11	<p>Evaluation of Energy Market Offer Cap Differences in offer caps between regions may interfere with economic and reliability driven interchange scheduling</p> <ul style="list-style-type: none"> • 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. The NYISO will notify FERC two weeks prior to the effective date of the tariff revisions. 	ONGOING
12	<p>Reserves Participation in Adjacent Regional Markets Allow MPs to purchase/sell reserves and regulation between the NYISO and adjacent control areas</p>	PENDING
13	<p>Congestion Rent Shortfalls Resulting From External Transmission Outages 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	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. 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.	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

#	Broader Regional Markets Issue	Status
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

#	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> <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. •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. •NYISO considerations regarding PJM pseudo ties were discussed at the April 2, 2018 NYISO-PJM Joint Stakeholder Meeting. 	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.</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

26	<p>External Capacity Resource Performance and Eligibility</p> <p>This endeavor will clarify the minimum deliverability requirements for External Capacity from PJM 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.</p> <ul style="list-style-type: none"> • <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 style="list-style-type: none"> • <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> • <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> • <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> • <i>At the February 21, 2018 ICAPWG/MIWG meeting, the NYISO presented the management response to Analysis Group’s Performance Assurance report; as part of this presentation, the NYISO discussed continuing Deliverability Requirements for Capacity Imports as “External Resource Performance and Eligibility.”</i> • <i>At the April 24, 2018 ICAPWG/MIWG meeting, the NYISO discussed the current Supplemental Resource Evaluation (“SRE”) process for external resources, as well as the existing consequences for external ICAP supplier non-performance.</i> • <i>At the May 31, 2018 ICAPWG/MIWG meeting, the NYISO presented a more detailed overview of the SRE process, as well as a draft proposal regarding SRE process improvements for external Capacity resources.</i> • <i>The NYISO is currently targeting to present the Market Design Concept Proposal for SRE process improvements for external Capacity resources at a joint ICAPWG and MIWG meeting in late July 2018.</i> • <i>At the July 31, 2018 ICAPWG/ MIWG meeting, the NYISO presented its Market Design Concept Proposal for SRE process improvements for external Capacity resources. The NYISO will communicate the next steps for this project after evaluating stakeholder feedback.</i> • <i>The NYISO is currently targeting to continue discussions of this topic with stakeholders at ICAPWG/MIWG in October 2018.</i> 	ONGOING
----	---	---------

#	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.</p> <ul style="list-style-type: none"> <i>On August 20, 2018 the NYISO filed an answer to the IPPNY Complaint with FERC, requesting that the Commission deny the Complaint. IPPNY incorrectly assumes 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 has not shown that transactions across the Zone J Merchant Transmission Facilities are no longer deliverable to the NYCA interface.</i> 	ONGOING
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 an Market-to-Market (“M2M”) Flowgate. If granted, the requested waivers will 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.</p>	ONGOING

The Mission of the New York Independent System Operator is to:

- 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



www.nyiso.com

DRAFT – FOR DISCUSSION PURPOSES ONLY

