

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**ISO New England Inc. and
New England Power Pool Participants
Committee**

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Docket No. ER16-2451-000

**MOTION TO INTERVENE AND LIMITED PROTEST OF
THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.**

Pursuant to Rules 211, 212, and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission the “Commission”), 18 C.F.R. §§ 385.211 and 385.214 (2016), the New York Independent System Operator, Inc. (“NYISO”) hereby moves to intervene, and submits a limited protest in the above-captioned proceeding. This filing addresses a single aspect of the “Forward Capacity Market Enhancements” (“FCM Enhancements”) proposed by ISO New England Inc. (“ISO-NE”) and the New England Power Pool Participants Committee.¹ With the exception of the single point addressed herein, the NYISO has no objection to the FCM Enhancements Filing or the timing of its implementation. Although the issue identified here is narrow, it is critically important. If the relief sought by the NYISO is not granted there may be material pricing inefficiencies that could unnecessarily increase costs for New York consumers by hundreds of millions of dollars.

The FCM Enhancements Filing would, among other things, revise the qualification requirements for “Import Capacity Resources” seeking to participate in ISO-NE’s Reconfiguration Auctions (“RAs”) and make the revisions effective on October 19, 2016 (the

¹ *ISO New England Inc. and New England Power Pool Participants Committee, Forward Capacity Market Enhancements, Docket No. ER16-2451-000 (August 19, 2016) (“FCM Enhancements Filing”).*

“RA Import Proposal”).² As discussed below, the proposed effective date of this aspect of the FCM Enhancements creates a substantial risk of unjustifiably increasing New York capacity prices and creating inefficient price signals in the NYISO-administered capacity market. Potentially severe economic consequences for New York consumers can be avoided if the NYISO is allowed a reasonable time to make needed market rule changes to address capacity exports from constrained capacity areas (“Localities”) in the New York Control Area (“NYCA”).³

Specifically, Dr. David B. Patton, the President of Potomac Economics, Ltd., the independent Market Monitoring Unit (“MMU”) for the NYISO,⁴ estimates based on a hypothetical 500 MW sale that inefficient price increases potentially up to \$341 million may occur in New York starting on June 1, 2017,⁵ if the RA Import Proposal becomes effective as requested. As discussed below, the actual impact will depend on multiple variables, chiefly the extent to which capacity from New York Localities is actually sold into ISO-NE’s market. Although such sales are not certain in the next capacity year, the magnitude of the potential impact makes it imperative to address this risk. The NYISO seeks only to avoid *inefficient* and therefore unjustified price increases that could result from the RA Import Proposal.

² See FCM Enhancements Filing at 7-10.

³ Constrained capacity areas in the NYISO’s market are “Localities” in the NYISO’s Services Tariff. Capitalized terms not otherwise defined herein shall have the meaning specified in the NYISO’s Services Tariff.

⁴ See attached affidavit of the MMU’s President, David B. Patton (“Patton Affidavit”) at PP 17-23.

⁵ ISO-NE’s and the NYISO’s capacity years differ by one month. ISO-NE’s Tariff defines “Capacity Commitment Year” as June 1 through May 31. The NYISO’s Market Administration and Control Area Services Tariff (“NYISO’s Services Tariff”) defines a Capability Year as May 1 through April 30. For ease of reference, in this pleading the NYISO uses the term “capacity year” to address the concept in both the NYISO and ISO-NE.

The NYISO is continuing to analyze the implications of this export scenario and is working expeditiously to develop a solution to the inefficient outcomes that could arise under its current market rules. The NYISO has engaged stakeholders on these concerns and is in the early stages of formulating a proposal. The issue is extremely complex, however, and an appropriate solution must address a range of issues, which include capacity market design changes, the calculation of capacity market requirements, generator obligations, New York State Reliability Council (“NYSRC”) requirements, NYISO software requirements, and related timing issues.

The NYISO therefore respectfully requests that the Commission defer the implementation of the RA Import Proposal for one capacity year with respect to generators located in NYCA Localities, *i.e.*, so that it would first apply for capacity commitments beginning June 1, 2018.⁶ This relief would prevent harmful, inefficient economic outcomes in New York during ISO-NE’s 2017/2018 capacity year. The NYISO has tailored its requested relief as narrowly as possible to minimize disruption to ISO-NE’s proposed market enhancements.⁷

The deferral would not affect commitments that have been made or would be able to be made for ISO-NE’s 2018/2019 capacity year. It also would not alter the reasonable expectations

⁶ The NYISO does not contend that any other aspect of the FCM Enhancements proposal should be delayed, including allowing capacity resources located in the NYCA but outside of NYCA Localities from gaining early access to RAs or through capacity supply obligation bilaterals (“CSO Bilaterals”).

⁷ The Commission has, in other contexts, approved RTO or ISO-wide practices as just and reasonable generally, while invalidating the applicability of those very same practices in specific, narrow circumstances because they triggered unjust and unreasonable consequences, or were otherwise unlawful in those circumstances. *Cf. FirstEnergy Services Company v. Midwest Independent Transmission System Operator, Inc.* 153 FERC ¶ 61,101 at PP 117-18 and 164 (2015), *order denying rehearing*, 155 FERC ¶ 61,174 (2016) (holding that presiding judge erred in holding that it would be just and reasonable to apply Schedule 39 cost allocation methodology to two departing transmission owners in circumstances where Schedule 39 was deemed to be inconsistent with the pre-withdrawal tariff, but nonetheless upholding Schedule 39 as a just and reasonable approach for allocating the costs of transmission upgrades to departing transmission owners on a prospective basis).

of generators in NYCA Localities. The request is only that the opportunity for generators in NYCA Localities to import into ISO-NE not be *accelerated* by the FCM Enhancements Filing.⁸

This delayed effective date for one limited aspect of the FCM Enhancements Filing would enable the NYISO to work deliberately to adopt a solution to prevent significant market inefficiencies and adverse consumer impacts in New York. If this request is denied, the NYISO would attempt to fashion an immediate market rule change to try to avoid pricing inefficiencies.

I. COMMUNICATIONS

Communications and correspondence regarding this filing should be directed to:

Robert E. Fernandez, General Counsel
*Raymond Stalter, Director of Regulatory Affairs
*Gloria Kavanah, Senior Attorney
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, N.Y. 12144
Tel: (518) 356-6000
Fax: (518) 356-4702
rfernandez@nyiso.com
rstalter@nyiso.com
gkavanah@nyiso.com

*Ted J. Murphy
Hunton & Williams LLP
2200 Pennsylvania Avenue, NW
Washington, D.C. 20037
Tel: (202) 955-1500
Fax: (202) 778-2201
tmurphy@hunton.com

* persons designated for service.⁹

II. MOTION TO INTERVENE

The NYISO is the independent entity responsible for administering Commission-jurisdictional markets for electricity and capacity, and for maintaining electric reliability in the NYCA. The NYISO and ISO-NE are neighboring control areas. There is substantial interregional trading between the two areas, including exports and imports of capacity. Changes

⁸ Capacity can be exported through participation in annual and monthly reconfiguration auctions, and as proposed in the FCM Enhancements Filing, also annually and monthly through CSO Bilaterals.

⁹ The NYISO respectfully requests waiver of the requirements of Rule 18 C.F.R. § 385.203(b)(3) (2015) to permit service on more than two persons.

to one region's capacity market rules can have substantial impacts on market outcomes in the other.

As discussed below, ISO-NE's proposal to accelerate the eligibility of NYCA capacity suppliers to export capacity to ISO-NE, through RAs and CSO Bilaterals, creates a risk of significant inefficiencies in the NYISO's market. The NYISO therefore has a direct and substantial interest in the outcome of this proceeding that cannot be adequately represented by any other party. It is appropriate and in the public interest that the NYISO be permitted to intervene in this proceeding and participate with full rights as a party.

III. LIMITED PROTEST

A. Background

Under the NYISO's current capacity market design, a generator exporting capacity from a Locality is treated in the capacity market auction as though it no longer exists. This means that its continued operation is not properly reflected in the NYISO's capacity market clearing prices – which would cause them to *inefficiently* increase.

In its 2015 State of the Market Report (“SOM Report”) issued in May 2016, the MMU addressed this issue. It recommended, among other things, that the NYISO “[m]odify the capacity market and planning process to better account for capacity that is exported to neighboring control areas from import-constrained capacity zones.”¹⁰ The SOM Report explained that:

More than 500 MW of capacity was sold from the G-J Locality in each of the last two ISO-NE Forward Capacity Auctions, which will give the associated generator

¹⁰ See *2015 State of the Market for the New York ISO Markets* at xii, 117 (May 2016), available at: <http://www.nyiso.com/public/webdocs/markets_operations/documents/Studies_and_Reports/Reports/Market_Monitoring_Unit_Reports/2015/NYISO%202015%20SOM%20Report_5-23-2016-CORRECTED.pdf>.

Capacity Supply Obligations to New England beginning in June 2018. Currently, NYISO's tariffs and procedures do not specify how it would treat such a generator in its planning process or in its capacity market. However, an efficient market and planning process should recognize that a generator that exports from an import-constrained capacity zone provides more reliability benefit to the NYCA than a generator of the same size that exports to the same market from the Rest of State ("ROS") region. Hence, we recommend that the NYISO's capacity market rules be amended to recognize this value in the spot capacity auctions and other related processes.¹¹

The quoted language uses the term "import-constrained capacity zones" to refer to certain Localities in the NYISO's capacity market. The SOM Report specifically referenced a capacity export ISO-NE awarded to one of the units at the Roseton generating station ("Roseton") of 511 MW in ISO-NE's FCA 9 (2018/2019) and 532 MW in FCA 10 (2019/2020).¹² Roseton is located in the G-J Locality.

The SOM Report emphasized that the NYISO should act promptly because the MMU anticipated that "capacity clearing prices in the Lower Hudson Valley could rise far above competitive levels . . . at least during the two years for which capacity has already been sold into ISO-NE."¹³ The two years referenced are ISO-NE's 2018/2019 and 2019/2020 capacity years. The MMU believed that it was "possible for the NYISO to implement the necessary changes in time to avoid a detrimental effect on the NYISO capacity market" At the time the SOM Report was published it was understood that those detrimental effects would not occur until June 2018.¹⁴ Based on ISO-NE's current market rules, the NYISO also believed that there was sufficient time to resolve this matter.

¹¹ SOM Report at 117.

¹² SOM Report at n. 103.

¹³ SOM Report at 117.

¹⁴ *Id.*

The NYISO began an evaluation of the MMU's recommendation, including a review of its proposed solution and potential alternatives. The issue was identified through the NYISO's project prioritization process as a project to complete in time for the June 1, 2018 start of ISO-NE's 2018/2019 capacity year.

Under ISO-NE's current rules, resources are permitted to sell capacity only in Capacity Commitment Periods for which they have qualified to sell in the FCA. Thus, a generator located in the NYCA that did not qualify for FCA 9 could not participate in RAs that do not correspond to FCA 9; *i.e.*, it would not be able to enter into commitments for periods prior to the June 1, 2018 start of the FCA 9 Capacity Commitment Period. But the FCM Enhancements filing would permit "Import Capacity Resources Backed by One or More External Resources" to participate in earlier RAs and in CSO Bilaterals.¹⁵ If these revisions become effective for ISO-NE's 2017/2018 capacity period, then generators in the NYISO's Localities that qualified under the RA Import Proposal could export capacity to New England as early as June 2017. The RA Import Proposal therefore exposes the New York customers to the serious pricing inefficiencies identified in the SOM Report a year sooner than expected.

B. If Capacity in NYCA Localities Is Allowed to Be Exported to New England Before the NYISO Can Make Necessary Rule Changes, it Could Trigger Market Inefficiencies and Have Significant Consequences for New York Consumers

The SOM Report described the serious pricing inefficiencies that would result if there were capacity exports from a NYCA Locality to an external control area before the NYISO implements a market solution. The Patton Affidavit provides additional information regarding this pricing inefficiency.

¹⁵ See, e.g., proposed sections III.13.4.2.1.2.1.3, III.13.4.2.1.2.1.4, III.13.4.2.1.2.2 3.1, and III.13.4.2.1.2.2 3.2.

If a resource located in a NYISO Locality exports capacity before the NYISO can amend its tariffs, then market clearing prices would signal a need for capacity in the Locality that likely would be substantially in excess of the actual need.¹⁶ An efficient market should, but the NYISO's current market design does not, recognize that a generator that exports capacity from a Locality continues to operate in that Locality. Unless the NYISO's market design is modified, New York consumers could experience hundreds of millions of dollars in inefficient price increases as an unintended consequence of the FCM Enhancements.¹⁷

As the Patton Affidavit explains, the precise impact of the inefficient price increases is difficult to quantify because it is dependent on multiple variables. These variables include the actual volume of sales from a NYISO Locality to ISO-NE, the NYISO's Installed Capacity Demand Curves, and the effect of new entry and retirements. The Patton Affidavit estimates that the inefficient capacity price impacts in the NYCA during the 2017/2018 Capability Year could be up to \$341 million. The estimate assumes that 500 MW of ICAP is exported from the G-J Locality during the 2017/2018 capacity year. It also assumes that the NYISO's 2016/2017 Capability Year parameters continue to apply for the 2017/2018 NYISO Capability Year. These include the supply, Load forecasts, Locational Minimum Installed Capacity Requirements, and locational Equivalent Demand Forced Outage Rate.¹⁸

While other assumptions might yield a higher or lower price impact, Dr. Patton's estimate clearly illustrates the risk of a significant inefficient pricing outcome in New York.

¹⁶ Patton Affidavit at PP 10-13.

¹⁷ As the Patton Affidavit notes the interaction between the RA Impact Proposal and NYISO's capacity market pricing rules is also likely to have impacts on the Long Island and NYCA capacity Market-Clearing Prices. *See* Patton Affidavit at P 23. The NYISO is only seeking to avoid the *inefficient* price impacts.

¹⁸ Patton Affidavit at P 20.

C. The Commission Should Defer the Effectiveness of the RA Import Proposal as Applied to Resources in NYCA Localities Until ISO-NE's 2018/2019 Capacity Commitment Period to Prevent Significant Market Inefficiencies and Harmful Consumer Impacts

The potential market inefficiencies described above must be addressed, but the underlying details and measures to address the problem are extremely complex. The NYISO anticipated addressing this issue during 2017, in time for the June 2018 expected start of capacity exports from Localities. The NYISO considered that schedule to be aggressive but achievable given the high priority of this issue. However, the RA Import Proposal would accelerate the eligibility of exports from New York Localities and significantly reduce the time available for the NYISO to modify its market design. A number of factors that the NYISO must consider in rectifying the deficiency identified by Dr. Patton are outlined below.

Complex issues being considered include the extent to which capacity exported from a Locality can be “replaced” by capacity located in the NYISO’s Rest of State area. The issue of capacity equivalence or “fungibility” could have a material effect on clearing prices and impact consumers throughout New York. The Patton Affidavit discusses this consideration further.¹⁹

The NYISO also must evaluate whether its market mitigation measures should be modified to address exports from constrained Localities to avoid the exercise of market power in different ways than anticipated at the time the NYISO market power rules were developed.²⁰ The Patton Affidavit addresses this concern in more detail.²¹

Market design changes to address inefficient capacity pricing could raise questions regarding assumptions in New York’s planning processes, including setting the statewide Installed Reserve Margin (“IRM”) which is overseen by the NYSRC, and the calculation of

¹⁹ See Patton Affidavit at PP 11-12.

²⁰ These rules are set forth in Section 23.4.5 of the NYISO’s Services Tariff.

²¹ See Patton Affidavit at P 24.

Locational Minimum Installed Capacity Requirements, which are derived from the IRM.²² Thus the NYISO will need to consider the potential reliability implications of any proposed solution.

Developing market rule changes for implementation by the 2017/2018 capacity year would substantially limit the potential solutions that can be considered, and the opportunity for stakeholders to provide input. Presently, the optimal market design is unclear, and options need analyzed and be vetted.

Given the inherent complexity of the issue, the prospects for obtaining the supermajority stakeholder support required for the NYISO to file tariff modifications pursuant to Section 205 of the FPA on such an expedited timetable are uncertain. Nonetheless, the NYISO is, on a parallel track with this filing, pursuing an immediate fix with its stakeholders in the event the Commission denies its request for a deferral. The status of that effort is described below.

While developing a solution on an abbreviated timeline presents a number of technical challenges, as a practical matter, it also decreases the opportunity to build consensus and reduce differences, and increases the likelihood that any resulting proposal would be more broadly contested at the Commission. The NYISO believes it would be more prudent to allow the NYISO an adequate opportunity to work with stakeholders, the NYSRC, and the MMU to fully explore and address issues prior to making a filing.

As noted above, the NYISO originally anticipated modifying its market design so that necessary changes would be effective in time for exports for sales that occurred in FCA 9; *i.e.*, for the 2018/19 capacity year. Given the RA Import Proposal's proposed acceleration, the NYISO has intensified its efforts to develop a timely solution. The NYISO explained the

²² Under Section 215(h)(3) of the Federal Power Act ("FPA"), New York State is authorized to have reliability rules that are more stringent than those adopted by the North American Electric Reliability Organization and the regional reliability entities. Under New York law, the NYSRC is charged with developing such reliability rules.

market design issue to its stakeholders at a meeting of its Installed Capacity Working Group (“ICAP Working Group”) on August 2 and presented the framework of a proposed immediate solution on August 23. The NYISO will further discuss that proposal on September 19. It also discussed the matter with the NYSRC’s Installed Capacity Subcommittee on August 3 and August 30 and is scheduled to do so again on October 5.

In sum, the NYISO has reprioritized and shifted resources away from other projects to focus on this matter. Despite these efforts, it is clear that the timeline introduced by the RA Import Proposal will not permit a full consideration of pricing inefficiencies identified by Dr. Patton and potential solutions. The NYISO therefore respectfully asks that the Commission require ISO-NE to defer the implementation date of the RA Import Proposal for one capacity year solely with respect to resources located in NYCA Localities.

D. The NYISO’s Request for a Deferral is Equitable, Will not Disrupt Reasonable Market Expectations, and is Consistent with Commission Policy Concerning Seams Issues

If NYISO’s request is granted, resources in NYCA Localities would not lose opportunities they currently have under the ISO-NE tariffs. Indeed, the FCM Enhancements Filing, including the RA Import Proposal, only received NEPOOL approval in June 2016. A few resources would not be afforded a *new* opportunity to export capacity to ISO-NE during the 2017/2018 Capacity Commitment Period. The NYISO submits, however, that the potential impact of hundreds of millions of dollars on New York consumers far outweighs a “lost” opportunity for a handful of potential exporters.

As noted above, the NYISO has no objection to the FCM Enhancements Filing overall, or to the merits of the RA Import Proposal. The NYISO does not oppose ISO-NE’s efforts to expand the ability of regional assets to meet its resource adequacy needs. The NYISO is simply

requesting a deferral so that it may develop and implement market rule changes that will avoid pricing inefficiencies and harmful consumer impacts in New York.

The NYISO's request is not unreasonable or inequitable. The Patton Affidavit states that "approving the deferral is substantially superior to allowing this issue to remain unaddressed."²³ The NYISO's understanding is that its requested deferral is not likely to have impacts in New England on the same scale as the potential inefficient capacity price impacts that a deferral would prevent in New York.

The NYISO is working as quickly as practicable to modify its market design and has narrowed this request to minimize any disruption of one narrow element of a broad package of FCM enhancements.

At this time, resources cannot participate in capacity exports prior to the FCA Capacity Commitment Period for which they have qualified. It is the NYISO's understanding that it was only in spring of 2016 that ISO-NE proposed to make earlier RA participation possible. No party could reasonably claim to have a settled expectation that the RA Import Proposal would be accepted by the Commission without modification and made effective in October 2016. In fact, ISO-NE appears to be contemplating a delayed implementation of certain features of the next phase of its planned enhancements to its FCM rules (which have not yet been filed).²⁴

The requested deferral is consistent with Commission policy and precedent, which has recognized that rule changes that implicate inter-regional seams sometimes produce unjust and unreasonable results, and that such results should be minimized.²⁵ If the NYISO had discovered

²³ See Patton Affidavit at PP 27-28.

²⁴ See Christopher Parent, ISO-NE, FCM Enhancements Phase II (July 18-20, 2016), available at: <http://www.iso-ne.com/static-assets/documents/2016/07/07_18_19_20_mc_meeting_materials_1.zip>.

²⁵ For example, the Commission moved to eliminate through-and-out rates in the PJM Interconnection, Inc. and the Midcontinent Independent System Operator, Inc. as part of its effort to

the capacity pricing inefficiency after the RA Import Proposal was implemented the Commission would surely require expedited action to address the matter and to protect New York consumers. In this instance, there is an opportunity to take remedial action to address an unintended but serious market outcome *before* it comes into effect. Moreover, it will be much less disruptive to develop a permanent solution in advance than it would be to try to introduce an emergency remedy after the implementation of the RA Import Proposal.

Accordingly, the NYISO submits that the Commission should grant its requested relief in order to avoid unjust and unreasonable price impacts on New York consumers and that its proposed relief is itself just and reasonable. As noted above, if a deferral is denied, the NYISO will attempt to implement an immediate remedy. But at this time it is uncertain that a measure could be implemented in time; that it could fully account for interrelated economic, reliability, planning, and market power considerations; or that it would not have unintended consequences. In short, although an immediate remedy might be devised, it would be imprudent to rush to introduce one. The better course by far is to allow the NYISO time to develop, test, and implement a solution in 2018.

IV. CONCLUSION

Wherefore, NYISO respectfully requests that the Commission grant its intervention in the above-captioned proceeding and defer for one year the implementation date of the RA Import Proposal with respect to resources located in NYISO Localities. Without Commission action, the implementation of the RA Import Proposal could harm New York consumers by inefficiently

minimize the adverse impact of seams between the two regions, and to facilitate cross-market transactions. At the same time, it implemented a Seams Elimination Cost Adjustment surcharge as a transition mechanism to compensate transmission owners for the elimination of through-and-out rates for cross-border transactions. *See, e.g., Midwest Independent Transmission System Operator, Inc.*, 105 FERC ¶ 61,212 (2003); *Midwest Independent Transmission System Operator, Inc.*, 105 FERC ¶ 61,288 (2003); *Midwest Independent Transmission System Operator, Inc.*, 106 FERC ¶ 61,106 (2004).

increasing capacity prices by potentially hundreds of millions of dollars in the NYISO's 2017/18 Capability Year.

Respectfully submitted,

/s/ *Ted J. Murphy*

Ted J. Murphy
Counsel for the New York Independent System
Operator, Inc.

Dated: September 9, 2016

**UNITED STATES OF AMERICA
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Docket No. ER16-2451-000

**AFFIDAVIT OF
DAVID B. PATTON, PH.D.**

SEPTEMBER 9, 2016

I. Qualifications and Purpose

1. My name is David B. Patton. I am an economist and the President of Potomac Economics Ltd. Our offices are located at 9990 Fairfax Boulevard, Fairfax, Virginia 22030. Potomac Economics is a firm specializing in expert economic analysis and monitoring of wholesale electricity markets. Potomac Economics serves as the independent Market Monitoring Unit (“MMU”) for the New York Independent System Operator, Inc. (“NYISO”). Potomac Economics serves in a substantially similar role for ISO New England (“ISO-NE”), the Midcontinent Independent Transmission System Operator, Inc., and the Electric Reliability Council of Texas.
2. As the MMU for the NYISO, Potomac Economics is responsible for assessing the competitive performance of the markets that the NYISO administers, including the Installed Capacity¹ (“ICAP”) market, and for assisting in the implementation of a monitoring plan to identify and remedy potential market design flaws and abuses of market power. This work has included preparing a number of reports that assess the performance of these markets and providing advice on numerous issues related to market design and economic efficiency. Potomac Economics has similar responsibilities as the External Market Monitor for ISO New England.
3. I have worked as an energy economist for 25 years, focusing primarily on the electric utility and natural gas industries. I have provided strategic advice, analysis, and expert testimony in the areas of electric power industry restructuring, pricing, mergers, and market power. I have also advised Regional Transmission Organizations on transmission pricing, market design, and congestion management issues. With regard to competitive analysis, I have provided expert testimony and analysis regarding market power issues in a number of mergers and market-based pricing cases before the Federal Energy Regulatory Commission (“Commission”), state regulatory commissions, and the U.S. Department of Justice.

¹ Terms with initial capitalization not defined herein have the meaning set forth in the NYISO’s Market Administration and Control Area Services Tariff (“Services Tariff”), and if not defined therein, then as defined in the NYISO’s Open Access Transmission Tariff (“OATT”).

4. Prior to my experience as a consultant, I served as a Senior Economist in the Office of Economic Policy at the Commission, advocating on a variety of policy issues including transmission pricing and open-access policies, market design issues, and electric utility mergers. As a member of the Commission's advisory staff I worked on policies reflected in Order No. 888, particularly on issues related to power pool restructuring, independent system operators, and functional unbundling. I also analyzed the competitive characteristics of alternative transmission pricing and electricity auctions proposed by ISOs.
5. Before joining the Commission, I worked as an economist for the U.S. Department of Energy. During this time, I helped to develop and analyze policies related to investment in oil and gas exploration, electric utility demand side management, residential and commercial energy efficiency, and the deployment of new energy technologies. I have a Ph.D. in Economics and a M.A. in Economics from George Mason University, and a B.A. in Economics with a minor in Mathematics from New Mexico State University.
6. The purpose of this affidavit is to describe an inefficiency in the NYISO's capacity market design that will result in inefficient capacity prices in New York if it is not remedied before capacity exports to New England from constrained areas in New York begin. This affidavit also explains that while the deferral NYISO is seeking in its limited protest is far from ideal, it is preferable to allowing the inefficient costs described in this affidavit to be incurred.

II. Background

7. The NYISO's capacity market is designed to ensure that sufficient capacity is available to reliably meet New York's planning reserve margins. This market provides economic signals that supplement the signals provided by the NYISO's energy and ancillary services markets. In combination, these three sources of revenue provide economic signals for new investment, retirement decisions, and participation by demand response resources.
8. Since their inception, the NYISO capacity auctions have set clearing prices for three distinct locations: New York City, Long Island, and NYCA. Beginning with the Summer

2014 Capability Period, the capacity auctions incorporated an additional capacity Locality in Southeast New York, known as the G-J Locality. By setting a distinct clearing price in each Locality, the capacity market can facilitate investment in areas where it is needed.

9. The fundamental objective of this market is to produce market outcomes that accurately reflect the NYISO's planning needs. As explained below, the NYISO capacity auction rules do not anticipate the clearing price implications of a supplier in a Locality exporting capacity to a neighboring market. Under the current design, such an export will result in market outcomes that are inconsistent with the reliability value of capacity in the local zone (given that the unit will continue to operate and be dispatched by NYISO). The NYISO asks that the Commission delay for one capacity year the implementation of proposed rules recently submitted by ISO-NE and the New England Power Pool that would allow such exports from New York to New England to occur as early as June 2017.²

III. The NYISO's Capacity Market Rules Do Not Properly Account for the Continued Operation of Capacity Exports In Constrained NYCA Localities

10. Potomac Economics' *2015 State of the Market for the New York ISO Markets* ("2015 SOM") noted that more than 500 MW of capacity was sold from the G-J Locality in each of the last two ISO-NE Forward Capacity Auctions, which will transfer the generator's Capacity Supply Obligations to New England beginning in June 2018. However, such a generator would continue to be dispatched by NYISO and would, therefore, continue to satisfy most of the local reliability needs in the zone. Nonetheless, the NYISO's tariffs and procedures do not specify how the NYISO would treat such a generator in its planning process or in its capacity market. By default, the resource will be treated as if it no longer exists, which is inconsistent with operational reality.
11. The capacity market outcomes will only be efficient if the market recognizes the extent to which the exporting unit will satisfy the local needs of the capacity zone, while also recognizing the need to replace this capacity to satisfy the overall NYCA planning needs. To understand why the capacity would need to be replaced from NYCA as a whole, but not

² *ISO New England Inc. and New England Power Pool Participants Committee, Forward Capacity Market Enhancements*, Docket No. ER16-2451-000 (August 19, 2016) ("FCM Enhancements Filing").

need to be replaced entirely from the Locality, it is important to understand how the capacity is actually delivered to New England.

12. When the New York capacity resource is available and New England calls for it, the NYISO will input the export in its real-time dispatch model (“RTD”), which will increase NYISO’s aggregate generator dispatch level by the amount of the export. The increase in output will actually be produced from NYISO’s marginal generating resources (not necessarily from the capacity resource itself). Hence, the NYISO must simply have enough generation in aggregate throughout NYCA to satisfy the export obligation.³ This is the key reason why replacing some of the exported capacity from the Rest of State (“ROS”) region, rather than the Locality, should generally be sufficient to satisfy NYISO’s reliability needs.
13. However, the capacity market rules to efficiently address this situation do not currently exist. A fully efficient structure could likely be developed, moved through the stakeholder process, filed with the Commission, and implemented by the Spring of 2018. However, as discussed in the next section, the filing by ISO-NE accelerates the need to address this issue by one year, to the Spring of 2017.

III. Proposed Capacity Market Rule Changes in New England Would Trigger Inefficient Market Outcomes in the New York ISO a Year Sooner than Expected

14. At the time that the SOM Report was published, it appeared that the capacity market problem associated with not accounting for the continued operation resources exporting capacity from Localities would not be triggered until 2018. That was when the Roseton generating station (“Roseton”), which is located in the G-J Locality, was expected to begin exporting capacity to ISO-NE because it cleared in ISO-NE’s Forward Capacity Auction for the 2018-2019 planning year (“FCA 9”). The SOM Report recommended that the NYISO address the pricing issue stemming from its capacity market rules prior to the June 1, 2018 start of the ISO-NE Capacity Commitment Period associated with FCA 9.

³ It is important to note that the export may affect key constraints on the NYISO system, which should be recognized in the capacity market.

15. However, the FCM Enhancements Filing by ISO-NE proposes changes to ISO-NE's qualification requirements applicable to "Import Capacity Resources" seeking to participate in ISO-NE's Reconfiguration Auctions ("RAs") and Capacity Supply Obligation Bilaterals ("CSO Bilaterals"). ISO-NE's current rules only permit resources that import capacity into New England to participate in RAs that occur in Capacity Commitment Periods for which they have qualified to sell in the FCA. But the FCM Enhancements Filing would permit "Import Capacity Resources Backed by One or More External Resources" that were qualified for other FCMs to participate in earlier RAs and CSO Bilaterals, effective October 19, 2016 (the "RA Import Proposal").
16. Thus, the FCM Enhancements Filing would allow generators in the NYISO's Localities that have qualified as an FCA, such as Roseton in FCA 9, to begin to export capacity to New England as early as June 2017. This would mean that the pricing issues associated with the NYISO's capacity market rules would be triggered a year earlier than previously expected.

IV. The Potential Market Inefficiencies and Associated Costs of this Issue in New York are Large

17. Under the current market rules, allowing a generator in a NYISO Locality to begin exporting capacity in June 2017 could result in inefficient capacity cost increases in the NYISO's 2017/2018 Capability Year of as much as \$341 million.
18. The cost increases occur because the NYISO's auction will clear as if the unit no longer exists in the constrained Locality. In the case of the G-J Locality, the price can rise in both the Lower Hudson Valley (Load Zones G –I) and in New York City (Load Zone J) because the G-J Locality encompasses both areas.
19. Under the NYISO's sloped demand curve, as supply is deemed to have fallen in the Locality, the auction will procure some higher-priced replacement capacity and slide up the demand curve, which results in higher clearing prices that are paid by all consumers. The amount of additional capacity procured and the magnitude of the price increase depends on the offers of other suppliers in the zone and the slope of the demand curve.

20. We worked with NYISO to estimate the maximum exposure of NYISO to inefficient costs that would be borne by NYISO consumers if a generator in Load Zone G (referred to in the table as “Hudson Valley”) sells 500 MW of its capacity to New England in the 2017/2018 planning year. This would affect NYISO’s market for 11 months because NYISO’s planning year begins one month earlier than ISO New England’s. Therefore, the results below show the costs in New York for 11 months and assume NYISO’s current ICAP Demand Curves and supply, and other current Capability Year parameters.
21. To calculate these impacts, we assume that the market will simply clear higher on the demand curve to establish a newer higher price in the G – J Locality. The table below summarizes the clearing prices and costs that would occur in these areas if no actions are taken to address this issue.

	Summer Clearing Prices		Summer Procurement Costs (\$ Millions)		
	No Export	With Export	No Export	With Export	Difference
Hudson Valley	\$9.23	\$12.53	\$273	\$323	\$50
New York City	\$12.21	\$12.53	\$678	\$689	\$11

	Winter Clearing Prices		Winter Procurement Costs (\$ Millions)		
	No Export	With Export	No Export	With Export	Difference
Hudson Valley	\$2.33	\$5.67	\$70	\$153	\$82
New York City	\$2.33	\$5.67	\$141	\$338	\$197
Total Increase					\$341

22. These costs represent the highest potential amount of inefficient costs for three reasons. First, slightly more than 500 MW of capacity in New York could be exported from NYISO’s Localities because of the proposed rule change and it may not all ultimately clear in New England. Second, if capacity is offered in New York between the “no export” price and the “with export” price, such offers would mitigate the price increase and reduce the total cost increase. Third, the firm export to New England that must be supported by the NYISO would ultimately cause NYISO to procure some replacement capacity in the Southeast New York Localities. Hence, some fraction of the \$341 million cost increase

would potentially be efficient. This effect will need to be quantified as part of any long-term solution developed by NYISO and its stakeholders.

23. Costs would also rise outside of the Localities shown in the table (e.g., in the ROS and Long Island areas), but these cost increases are efficient and simply reflect the NYISO's obligation to export the capacity to New England. Replacement capacity should be procured from NYCA as a whole under any long-term solution, which will result in higher prices and costs for customers in the Rest of State (Load Zones G - F) and for all customer's NYCA-wide obligations. It is only the apparent supply reduction in the Localities that needs to be addressed.

V. Incentive Effects of Not Addressing the Issue

24. In addition to the inefficient short-term costs described above, this issue creates adverse incentives for suppliers with other resources in the Locality. The inefficient increase in local capacity prices described in the prior section will increase suppliers' revenues for other resources in the Localities, which can create a large and inefficient incentive for suppliers in NYISO's Localities to export capacity to raise prices. Existing market power mitigation measures only address this potential incentive to a limited extent and do nothing to ameliorate the incentives associated with the exaggerated price effects of exports from the Localities. This underscores that developing and implementing an efficient long-term solution should remain a very higher priority.

VI. The NYISO's Proposal to Defer the Effective Date of the RA Import Proposal

25. The NYISO's limited protest asks the Commission to defer for one capacity year the effective date of the RA Import Proposal, solely with respect to resources located in NYCA Localities; *i.e.*, the ability to make capacity commitments until periods beginning June 1, 2018.
26. The NYISO's limited protest explains that the limited deferral is necessary to allow it a reasonable time to work with its stakeholders to develop a comprehensive and robust solution to the pricing issues triggered by the RA Import Proposal. I agree that the issues

involved in designing, testing, and implementing an efficient long-term solution will be complex. Taken together with the time required to work with stakeholders, develop and file tariff changes, the total time available is not sufficient to implement a solution that efficiently addresses this issue.


27. The requested deferral would allow NYISO customers to avoid the inefficient costs described in the prior section, while providing the time necessary to develop and implement a long-term solution. We recognize that the deferral may have some effect on New England because it would remove some supply from the New England reconfiguration auction that may otherwise clear, which is certainly not ideal. However, because the reconfiguration auction clears only capacity adjustments against the primary set of purchases and sales in the New England's Forward Capacity Auction, it would have a very small effect on New England's customers compared to the cost effects in New York. For example, if the price in the reconfiguration auction clears slightly higher because of the deferral, the New England customers that will settle at that price are generally suppliers that are liquidating capacity positions they previously established in the FCA.
28. Ultimately, it would have been far better for NYISO to develop and implement an efficient solution prior to the upcoming planning year than to defer the ISO New England rule change. However, approving the deferral is substantially superior to allowing this issue to remain unaddressed.

VII. Conclusion

29. As described above, if the RA Import Proposal is made effective as proposed in October 2016, it may result in inefficient capacity price outcomes in the NYISO in 2017. These outcomes could unnecessarily increase New York capacity costs by hundreds of millions of dollars in the 2017/18 Capability Year. Although it is not ideal, deferring the implementation of the RA Import Proposal with respect to generators located in constrained NYCA Localities for one year is reasonable to avoid these inefficient price outcomes.
30. This concludes my affidavit.

ATTESTATION


I am the witness identified in the foregoing affidavit. I have read the affidavit and am familiar with its contents. The facts set forth therein are true to the best of my knowledge, information, and belief.



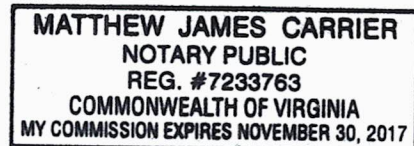
David B. Patton

September 9, 2016

Subscribed and sworn to before me
this 9th day of September, 2016 in Fairfax, VA



Notary Public



My commission expires: November 30, 2017

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 9th day of September 2016.

/s/ Joy A. Zimmerlin

Joy A. Zimmerlin
New York Independent System Operator, Inc.
10 Krey Blvd.
Rensselaer, NY 12144
(518) 356-6207