UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc.	)	Docket No. EL15-37-000
	)	Docket No. ER16-120-000

MOTION TO INTERVENE OUT OF TIME
AND COMMENTS OF POTOMAC ECONOMICS, LTD.

Pursuant to Rules 212 and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("FERC" or "Commission"), 18 C.F.R. §§ 385.212 and 214 (2007), Potomac Economics respectfully moves to intervene in the above-captioned proceeding concerning the October 19, 2015 filing ("the NYISO's Filing") by the New York Independent System Operator, Inc. ("NYISO") in response to the Commission's order dated February 19, 2015, *New York Independent System Operator, Inc.*, 150 FERC ¶ 61,116 (2015) ("RMR Order").

We are filing these comments to identify elements of the NYISO wholesale markets that should be enhanced in order to minimize the use of out-of-market Reliability Must Run ("RMR") contracts to maintain transmission security and reliability in the planning horizon. The NYISO's Filing addressed the process and compensation for generators that are being evaluated for a potential RMR contract. However, the NYISO's Filing did not identify any market design enhancements that would help reduce the need for RMR contracts. In addition, we provide comments on the market design enhancement proposed by Entergy in its November 30 filing in this docket ("the Entergy Filing").

I. NOTICE AND COMMUNICATIONS

All communications, correspondence, and documents related to this proceeding should be directed to the following persons and such persons should be placed on the official service list maintained by the Commission's Secretary for this proceeding:

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II. MOTION TO INTERVENE

Potomac Economics is the Market Monitoring Unit ("MMU") for the NYISO. In this role, we are responsible for monitoring and evaluating the performance of the NYISO's capacity, energy, and ancillary services markets. We also are responsible for recommending market design changes to improve the performance of the markets and evaluating design changes proposed by the NYISO or market participants. As the MMU, Potomac Economics has a unique responsibility to ensure the efficiency and integrity of the NYISO power markets. Potomac Economics' interests, therefore, cannot be adequately represented by any other party.

Good cause also exists to permit Potomac Economics' motion to intervene out of time as it has a significant interest in this proceeding.[1] Permitting Potomac Economics to intervene at this time will not prejudice any party in the proceeding as the Commission has not yet acted on the NYISO's filing. Potomac Economics agrees to accept the record in this case as developed to date. For these reasons, Potomac Economics respectfully requests that the Commission grant this motion for leave to intervene out of time in this proceeding.

III. BACKGROUND AND INTRODUCTION

In recent years, the NYISO has found it challenging to retain generation needed to satisfy local transmission security planning requirements without the use of out-of-market contracts. This raises significant concerns about the capability of the NYISO markets to establish price signals that facilitate efficient entry and exit decisions to satisfy all of its reliability needs, including its transmission security needs.

The NYISO Filing included provisions that are designed to provide just and reasonable compensation when an out-of-market contract is necessary to retain existing generation. Nevertheless, it is still important from a market design perspective to minimize the use of RMR contracts, which should only be used as a last resort when a specific planning requirement can only be met by a single resource. In these comments, we discuss three market design enhancements that would, if adopted, minimize the need for RMR contracts. Two of these enhancements have been discussed in our State of the Market Reports and other assessments of market performance. The third market design enhancement was put forward in Entergy's Filing in this docket on November 30.

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[1] *See, e.g.*, 18 C.F.R. § 385.214(d) (2007) (requirements for motion for late intervention); *Consolidated Gas Supply Corp.*, 20 FERC ¶ 61,305, at 61,599 (1992) (factors considered by Commission in determining whether good cause exists to permit late intervention).

IV. COMMENTS

The primary goal of wholesale market design is to provide market-based incentives for investment and operation that efficiently satisfies electricity demand and reliability requirements. Hence, the need for an out-of-market RMR contract indicates at least a partial failure of the market to provide price signals that accurately reflect the value of resources that are critical for satisfying reliability needs.

Ideally, the use of RMR contracts should be limited to situations where a particular reliability need can only be met by a single supplier. This is because the market solution for a need that can only be met by a single supplier provides the same result as an RMR contract with that supplier. However, if multiple existing or new suppliers contribute to satisfying a reliability need, having an RMR contract with one of the suppliers is discriminatory and will not provide efficient incentives to investors and existing suppliers.

The best way to limit the proliferation of RMR contracts is to ensure that the market provides efficient price signals for resources that contribute to reliability in local areas. At least three market design enhancements have been identified that would result in more efficient locational pricing outcomes, thereby minimizing the need for out-of-market RMR contracts. These three enhancements are discussed in Sections A and B of these comments.

A. Market Incentives for Satisfying Transmission Security Planning Criteria

Entergy's Filing included a study by Pterra of local transmission security planning requirements in the NYCA. In the first section of its study, Pterra's replicated the transmission security analyses that are performed as a part of the biennial Reliability Needs Assessment. Such transmission security analyses form the basis of the NYISO's determinations that the retirement of a particular resource will or will not result in a criteria violation. Pterra was able to replicate

the analyses whereby the NYISO identified 27 separate N-1-0 and N-1-1 constraint violations in Zones A, B, and C that would result from the retirement of the Dunkirk and Cayuga plants.

The second section of Pterra's study examined whether these constraint violations could only be avoided by retaining capacity at the Dunkirk and Cayuga plants or whether they could also be avoided with capacity at other plants in Zones A, B, and C. Pterra demonstrated that capacity at other plant locations is a feasible substitute for capacity at the Dunkirk and Cayuga plants. The implication is that the transmission security planning violations that have led to out-of-market contracts are not so localized that only a single supplier contributes to satisfying the reliability need. Rather, there are multiple generators that contribute to satisfying these criteria.

A key implication is that while the NYISO's new RMR provisions may be open to all generators on a non-discriminatory basis, the out-of-market compensation will only be provided to some of the suppliers that contribute to satisfying transmission security needs. In other words, the generator that enters into an RMR agreement with the NYISO will receive more compensation than similarly situated generators that provide a comparable reliability service.

In some cases, it may be impossible to compensate two or more resources that contribute to satisfying a transmission security requirement on a comparable basis. However, the Pterra study suggests that such circumstances should be rare. The third section of the Pterra study illustrates a market process whereby local N-1-1 transmission security requirements could be reflected in the NYISO capacity market and marginal cost-based capacity prices could be derived from competitive resource offers.

In general, we have always supported aligning market requirements and reliability requirements. This has included pricing RTOs' transmission security needs if and when possible. For example, in our role as External Market Monitor for ISO New England, we advocated for locational capacity market requirements based on the more stringent of: (a)

resource adequacy requirements or (b) N-1-1 transmission security requirements. This is because sufficient capacity must be available to meet both requirements, so setting market requirements to satisfy the lower requirement will predictably lead to out-of-market purchases and distorted capacity prices. Ultimately, ISO-NE addressed these problems by explicitly considering resource adequacy and transmission security needs when setting local zonal capacity requirements.

Likewise, we believe it would be advisable for the NYISO to evaluate the feasibility of locational capacity market improvements that would include all locational planning needs, including the design proposed by Pterra and Dr. Shanker in the Entergy filing.

B. Other Recommendations to Limit the Use of RMR Contracts

Recent State of the Market Reports have included two significant market design enhancements that would reduce the need for RMR contracts in New York. First, we have recommended pre-defining interfaces in the capacity market that may limit the deliverability of new and existing capacity resources, including the set of interfaces that are studied in the resource adequacy portion of the Reliability Needs Assessment. Pre-defining the interfaces that could potentially bind would ensure that the capacity market would be capable of reflecting in market clearing prices any emergent resource adequacy issue that could arise in the future. For example, if a large unit retires unexpectedly and causes a resource adequacy violation, the capacity market would immediately reflect the change in supply and establish prices that facilitate efficient investment and retirement decisions to address the violation. In contrast, the current capacity market will likely not trigger the creation of a local capacity zone a resource adequacy need emerges in a case like this.[2] If it is triggered, the process to create the zone will

[2] New Capacity Zones are only created to address a deliverability issue, not a reliability issue.

require three or more years so the market will not likely be effective in facilitating timely responses by market participants to address the resource adequacy issue.

Second, we have recommended that the NYISO model 115kV transmission constraints in upstate New York in the day-ahead and real-time markets. In 2015, the Dunkirk and Cayuga units have been dispatched out-of-merit for transmission security for a total of over 4,800 unit-hours. There are other less-expensive units that help alleviate these transmission security issues, but such units do not receive compensation for doing so (except when those units must also be dispatched out-of-merit). The wholesale market provides no market incentives for resources that help manage congestion on the 115kV system in up-state New York. The market also does not allocate congestion costs to external transactions that increase congestion on the 115kV system (as it does with 230kV and 345kV facilities that are modeled in the day-ahead and real-time markets) because these costs are not included in LBMPs at the external proxy buses.

Implementing the second recommendation would improve compensation for resources that contribute most to satisfying transmission security needs. It is no coincidence that the units that have been retained in service through out-of-market contracts to maintain transmission security (i.e., Dunkirk and Cayuga) are among the units most frequently dispatched out-of-merit for transmission security. If the cost of maintaining security in the day-ahead and real-time markets was reflected in LBMPs, these units would receive a larger share of the revenues necessary to keep them in service. Even if this would not always eliminate the need for an RMR contract, modeling these constraints would reduce the magnitude of RMR contract payments.

C. Benefits of Efficient Capacity Price Signals

Efficient locational pricing in the capacity and energy markets would lead to more efficient operations and investment signals. More than 17 GW of non-hydro generating capacity is over 40 years old, so much of the fleet is likely to be repowered or replaced in the coming

years. Hence, efficient entry and exit decisions are critically important if New York is to maximize the benefits of wholesale market restructuring.

Although local transmission security issues alone are unlikely to justify building a new generator, it would be beneficial for developers to consider how a hypothetical new generation investment would affect transmission security in the operating and planning horizons. Investment opportunities vary in a multitude of ways including size, proximity to fuel supplies, land acquisition costs, etc. Hence, if a developer derives no incremental financial benefit from placing a generator in an area that would contribute to satisfying NYISO's transmission security needs, the developer will ignore such considerations and may place a generator where it would tend to exacerbate security concerns.

We recognize that a large share of transmission security planning violations can be resolved most economically with transmission upgrades. Even when this is the case, efficient pricing of local transmission security issues will provide clearer economic signals of the need for transmission investment. Additionally, it will allow such investment to more directly compete with generation that may address the same need and, ideally, the generation investment (in new or existing resources) would prevail when it is the lowest-cost means for satisfying the need. Finally, better signals will enable the NYISO's transmission planning processes to quantify more accurately the benefits of transmission investment for maintaining transmission security in the operating and planning timeframes.

V. CONCLUSIONS AND RECOMMENDATIONS

Using RMR contracts to retain capacity and other out-of-market actions should be as limited as possible. The Entergy Filing shows that in the situations where out-of-market contracts have been used to satisfy local transmission security requirements, similarly situated units have not received compensation on a comparable basis.

We respectfully recommend the Commission require the NYISO work with its stakeholders to evaluate market improvements that would more completely price its local reliability requirements. This evaluation should include at least the following three potential improvements:

- Model up-state 115kV transmission constraints in the day-ahead and real-time markets to allow the markets to manage the flows and price the congestion.
- Implement a more dynamic locational capacity framework that would include pre-defining capacity interfaces/zones that may limit the deliverability of capacity resources. These interfaces should include those used in the resource adequacy portion of the reliability needs assessment.[3]
- The NYISO should evaluate the feasibility of pricing its local transmission security constraints in the capacity market. The solution recommended in the Entergy Filing should be evaluated along with others that may be feasible.

We recognize that implementing these enhancements would require significant effort, since they would likely require expanding NYISO's market power mitigation rules and the implementation of new market software and processes. Nonetheless, these enhancements are likely to be highly beneficial in promoting efficient investment and decisions, and avoiding reliance on out-of-market RMR contracts.

WHEREFORE, for the foregoing reasons, Potomac Economics, Ltd. respectfully requests the Commission to grant its motion to intervene in this proceeding and consider these comments.

Respectfully submitted,

/s/ David B. Patton

David Patton, President
Potomac Economics, Ltd.

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[3] We also have recommended NYISO enhance the procedures for setting local capacity requirements to lower the costs of satisfying the NYISO's locational planning needs. See the *2014 State of the Market Report*.

CERTIFICATE OF SERVICE

I hereby certify that I have this day e-served a copy of this document upon all parties listed on the official service list compiled by the Secretary in the above-captioned proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated this 17th day of December 2015 in Fairfax, VA.

/s/ David B. Patton

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