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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc	)	**Docket No. ER22-705-000**

MOTION TO INTERVENE AND COMMENTS
OF THE NYISO MARKET MONITORING UNIT

Pursuant to Rules 212 and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission, 18 C.F.R. §§ 385.212 and 214 (2019), Potomac Economics respectfully moves to intervene in the above-captioned proceeding concerning the New York Independent System Operator's ("NYISO's") filing on December 22, 2021. The NYISO's filing proposed modifications to the market power mitigation measures related to uneconomic production. The proposed changes will modify the existing measures to (i) address gaps that could allow for the exercise of market power and (ii) better account for generators with zero, or even negative, marginal costs.

Potomac Economics is the Market Monitoring Unit ("MMU") for NYISO and is responsible for monitoring the electricity markets. As the MMU, we identify rule changes that would enhance market efficiency and competition. Potomac Economics has a unique perspective and responsibility that cannot be represented by any other party. It should therefore be permitted to intervene herein.

I. NOTICE AND COMMUNICATIONS

All correspondence and communications in this matter should be addressed to:

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II. BACKGROUND AND SUMMARY OF PROPOSAL

The NYISO proposes to amend the market power mitigation measures to better address uneconomic over-production where a generator can profit from over-producing and being paid to relieve the resulting congestion in real-time. The proposed changes also account for the possibility that generators can have negative marginal costs—a condition that was much less common when the existing provisions were adopted. The NYISO's proposed changes are described below, which we find to be reasonable and beneficial.

First, it proposes to modify the definition of uneconomic production in the market power mitigation measures to use language consistent with the definitions of the economic and physical withholding provisions.[1] This language states that "the ISO shall consider a Market Party's or its Affiliates' conduct to be inconsistent with competitive conduct if the conduct would not be in the economic interest of the Market Party or its Affiliates in the absence of market power." This language provides an objective standard for evaluating justifications provided by generators for conduct that may be anticompetitive.

Second, the NYISO proposes to modernize the conduct test to account for generators with negative marginal costs.[2] The current conduct threshold of 20 percent of the reference level implicitly assumes that a generator's marginal cost must be positive (otherwise the conduct test

[1] See proposed MST 23.2.4.1.3.
[2] See proposed MST 23.3.1.3.1.1.

would be higher than the generator's marginal cost). The proposed conduct test would recognize this by setting the conduct threshold at 80 percent *below* the reference level, which produces a logical result whether the reference level is positive or negative. The proposed conduct threshold would also have a lower bound of $25/MWh, which would ensure a reasonable margin for generators with a marginal cost close to $0. For example, a generator with a marginal cost reference level of $1/MWh would not fail the conduct test unless it is producing at an offer less than -$24/MWh. Otherwise, this generator would fail the conduct test if it offers less than 20 cents per MWh – only 80 cents less than its marginal costs.

Third, the NYISO proposes to modify the impact test to address the incentives for uneconomic overproduction that are most likely to occur in the NYISO market.[3] The current test only addresses uneconomic over-production that causes high prices on the opposite side of a constraint. The proposed test reflects that a generator can also benefit from causing congestion that substantially lowers real-time prices on its side of the constraint (e.g., when the generator is buying out of a day-ahead energy sale).

Fourth, the NYISO proposes to modify the financial sanction that is applied to a firm that is found to violate the mitigation measure.[4] The proposed sanction addresses the potential to gain from low prices by setting the sanction to 150 percent of the price impact times the over-production quantity. The modified rule will be effective in addressing conditions where a generator might have an incentive to over-produce while not being excessively punitive.

[3] See proposed MST 23.3.2.1.1.1 and proposed MST 23.2.1.2.1 for Constrained Areas.
[4] See proposed MST 23.4.3.3.2.

III. COMMENTS ON THE NYISO PROPOSAL

These comments are organized as follows. Section A discusses the conditions that would give a generator an opportunity and incentive to create congestion to earn profit. The proposed changes to the impact test are needed to address this incentive. Section B discusses changes in pricing during transmission constraint violations that have increased the potential for the exercise of market power in recent years. Section C discusses why the conduct test is just and reasonable.

A. Illustration of Incentive for Uneconomic Over Production

The current rule addressing uneconomic over-production targets strategies that would cause congestion that results in high prices. However, the following example illustrates how a generator could benefit from causing low prices as well. Uncompetitive conditions can arise for brief periods when a generator causes congestion by over-producing. Suppose a generator (that does face significant competition) is located in a net exporting region ("Region A") which exports 600 MW to the adjacent to a net importing region ("Region B") in the day-ahead market. Suppose the LMP in both regions is $30/MWh, reflecting that there are no transmission constraints from region A to region B. Suppose a line goes out after the day-ahead market which reduces transfer capability from Region A to Region B to just 350 MW. After the line goes out, the ISO must reduce output at Region A by 250 MW to relieve the transmission constraint.

If the generator offers energy at its short-run marginal cost of $20/MWh, the real-time LMP in Region A will drop to $20/MWh, and the generator will buy back 250 MW of its day-ahead sale at the real-time LMP of $20/MWh. In this case, the generator will earn a net profit of $0 in real-time, since its real-time purchase of $5,000/hour (= $20/MWh x 250 MW) will net out its production cost savings of $5,000/hour (= $20/MWh x 250 MW).

However, if the generator reduces its real-time offer of $5/MWh, it will set a real-time LMP of $5/MWh. In this case, it will buy back its day-ahead sale for $1,250/hour (= $5/MWh x 250 MW), while its production cost savings will still be $5,000 for a net profit of $3,750/hour. If the generator does not face competition in Region A, there is nothing to prevent it from offering *negative* $1000/MWh and being paid $250,000/hour (= 1000/MWh x 250 MW) to "buy" its day-ahead obligation in real-time while also saving $5,000 in production costs for a net profit of $255,000/hour. In this case, a generator that does not face competition has strong incentives to drive real-time LMPs to arbitrarily low levels.

B. Enhancements to RT Pricing May Increase Opportunities to Exercise Market Power

As the NYISO's MMU, we evaluate the competitive performance of the NYISO markets. The energy market has performed competitively in recent years because the conduct of suppliers was generally consistent with expectations in a competitive market. The mitigation measures have been generally effective in limiting or deterring anticompetitive conduct. However, since 2017, we have recommended modifying the market power mitigation rules to address the incentive for a supplier to over-produce to create or exacerbate transmission congestion. This incentive is illustrated in the previous section.

We first introduced this recommendation in 2017 because of a key change in the market that occurred in June 2017. Specifically, the NYISO made significant improvements to the pricing of congestion during real-time transmission shortages (i.e., when transmission flows cannot be brought below the applicable transfer limit in the real-time market software). The change led to more efficient and transparent congestion prices by reducing the frequency of

constraint relaxation.[5] Now that constraint relaxation is used much less frequently, a generator that produces uneconomically to load a constraint has a greater ability to drive locational congestion prices to very low levels.

C. The Proposed Conduct Test is Just and Reasonable

The proposed modification to the conduct test is just and reasonable. The current conduct threshold is 20 percent of the generator's marginal cost reference level, so a $35/MWh generator would fail the conduct test if it offered at less than $7/MWh. This is reasonable in a system where all resources have non-negative marginal costs, but if the generator has a negative marginal cost, the current provision produces a nonsensical conduct threshold that is actually higher than the generator's reference level (e.g., a generator with a marginal cost of *negative* $20/MWh would be subject to a conduct threshold at *negative* $4/MWh).

The proposed conduct threshold would better account for generators with low or negative marginal cost because it is the greater of 80 percent or $25/MWh *below* the reference level. This would produce the same value for a positive marginal cost generator in the example above (e.g., $7/MWh for a $35/MWh unit), but it would produce a more appropriate value for a generator with a low or negative marginal cost.

When setting the level of the conduct threshold, it is important to balance the risk of over-mitigation against the risk of under-mitigation. The NYISO's proposed conduct threshold provides a reasonable amount of flexibility to generators whose marginal cost may fluctuate in

[5] Constraint relaxation has a significant effect on pricing in such circumstances. When a transmission constraint violation occurs and the constraint is relaxed, the market software raises the constraint limit far enough for the software to solve the constraint. When the constraint is not relaxed, the software sets the violated constraint price based on the level of the Graduated Transmission Demand Curve ("GTDC"). Thus, if a generator self-schedules and it leads to an overload of a transmission constraint, constraint relaxation would raise the limit such that congestion prices would not necessarily reflect the resulting congestion (and the operator would have to take some other action to secure the transmission facility). However, if constraint relaxation is not used, a generator that self-schedules uneconomically is more likely to cause extreme congestion pricing.

real-time. To further reduce the likelihood of mitigating competitive behavior, the NYISO also has mitigation consultation procedures that further limit the potential for excessive mitigation. If a generator fails conduct and impact, the generator still has an opportunity to consult with the NYISO's Market Mitigation and Analysis department ("MMA") before mitigation is imposed. Therefore, if a generator faces conditions that limit its flexibility to reduce output, the generator has the opportunity to present this to MMA before mitigation is imposed. For example, if a generator faces a gas balancing limitation which limits its ability to reduce output in some hours or it faces extraordinary balancing costs, these can be considered in the consultation process. Hence, the rule and procedures provide significant protections that should prevent mitigation that is unwarranted.

IV. CONCLUSION

The current market power mitigation rules were designed to address uneconomic over-production by conventional generators over-producing to create congestion that leads to high prices in other areas. The proposed changes update the rules to address strategies to profit from low prices and to properly evaluate generators with low or negative marginal costs. For these reasons, we respectfully recommend that the Commission accept the proposed revisions.

Respectfully submitted,

/s/ David B. Patton

David Patton
President
Potomac Economics, Ltd.

January 12, 2022

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 12th day of January 2022 in Fairfax, VA.

/s/ David B. Patton

Document Content(s)