ISO new england

memo

To: NEPOOL Markets Committee

From: Mark Karl, Vice President, Market Development and Settlements

Date: November 6, 2019

Subject: Energy Security Improvements: Planned Scope of Mitigation-Related Work for Day-Ahead Ancillary Services

At the October 2019 Markets Committee meeting, the ISO indicated that it plans to undertake mitigation-related analyses as part of the Energy Security Improvements (ESI) initiative to establish new ancillary services in the day-ahead market. This memo provides additional information on the ISO's mitigation-related work plans.

As summarized below, the ISO expects to discuss conceptual mitigation designs with stakeholders ahead of the ESI design filing in April 2020. To allow adequate time for a full assessment and stakeholder review of any detailed mitigation proposal, the ISO expects its mitigation-related work to continue well into 2020. Therefore, any FERC filing of mitigation-related rules would be made after the April 2020 filing.[1]

Planned Scope of Mitigation-Related Work. The ISO's current plans for the analysis and design of market mitigation measures have three components, or steps. These are:

- Conceptual mitigation design discussions
- Market power assessment (MPA) analysis
- Detailed mitigation design and associated market rule development

The ISO anticipates undertaking the first two steps concurrently, as some overlap in their timing is feasible and will facilitate progress. The third step would proceed subsequently given its dependence on the prior two steps.

We summarize the purpose, content, and timing of each of these three steps next.

[1] See *Comments of ISO New England Inc. on Motion for Extension of Time of the New England States Committee on Electricity*, Docket No. EL18-182-000 at p 3 (commenting that "it is unlikely that the additional time would allow for a complete mitigation design that has been fully vetted and is ready for filing. Traditionally, these rules require detailed modeling work.").

Conceptual Mitigation Design Discussions

In prior Markets Committee discussions, stakeholders and the ISO have noted that there are a number of possible approaches to mitigation that might be tailored to the relevant circumstances. Noting stakeholders' earlier request for Potomac Economics, as External Market Monitor (EMM), to share its perspectives on mitigation for co-optimized day-ahead (DA) markets, the ISO has asked David Patton to return and discuss this topic further with stakeholders.

We anticipate Dr. Patton to address, in part:

- How mitigation of co-optimized DA energy and ancillary services are implemented in other regional markets where Potomac Economics is also the EMM, and the EMM's perspective on the effectiveness of these mitigation measures in those markets;
- Whether and how the mitigation-related lessons from those regions could be usefully applied to the co-optimized DA energy and ancillary services market proposed by the ISO;
- Any expectations regarding potential competitiveness of the proposed DA energy and ancillary services market in New England, given the information presently available and Potomac Economics's experience; and
- Its perspectives on must-offer requirements (for resources with Capacity Supply Obligations).

The External Market Monitor is not responsible for developing detailed proposals for possible future mitigation rules. Rather, these conceptual mitigation design discussions are intended to facilitate understanding of how mitigation approaches can address potential market power, while enabling competition to set price when competitive conditions prevail. We also expect these discussions may enable the ISO and stakeholders to more fully understand practical implementation issues that may arise with particular mitigation approaches.

The ISO's Market Development, Internal Market Monitor, and External Market Monitor staff will work closely together throughout this process.

Market Power Assessment Analysis

Concurrent with discussions regarding conceptual mitigation approaches, the ISO will conduct a market power assessment (MPA) analysis. The central purpose of an MPA analysis is to determine, quantitatively, whether market power is an empirically-supported concern. If so, an MPA analysis helps to identify the specific conditions, frequency, and extent to which individual participants may be able to profitably exercise market power.

This information is a useful input into the design of mitigation rules and procedures, in order to (1) identify the specific conditions when participants might profitably exercise market power, and (2) avoid applying

mitigation inefficiently (*i.e.,* when competitive conditions should prevail).[2]

In the ESI context, an MPA analysis involves conducting detailed day-ahead (DA) market simulations, with the new ESI products/constraints modeled as proposed, for sample days when the exercise of market power might be profitable (absent measures to mitigate it). This analysis is time-consuming and technical, in part because of the need to evaluate, qualitatively, the effect of potential market power on multiple product prices (*i.e.*, energy and ancillary services), and because of the substitution facilitated by the proposed co-optimized DA clearing engine when any one product's offer prices rise.

As the ISO's work on the MPA analysis proceeds, we anticipate reviewing its implications with stakeholders.

Detailed Mitigation Design and Mitigation-Related Market Rule Development

Following the MPA analysis and conceptual mitigation discussions, development of detailed mitigation measures applicable to day-ahead ancillary services may be appropriate. Consistent with the results of the MPA analysis, the ISO would develop a mitigation-related proposal and associated market rules for stakeholders' consideration and discussion, taking account of the lessons and stakeholder observations during the EMM's conceptual design discussion.

This stage of the process is expected to involve:

- **Developing and justifying** a detailed mitigation design, including any applicable inputs, parameter values, or other procedures necessary to complete a mitigation design;
- **Testing** the detailed mitigation design (using the MPA simulation models) to assess whether it achieves its intent;
- **Writing** the market rules, including revisions or changes necessitated to any existing energy market mitigation rules (since it will now be an integrated DA energy and ancillary services market).

The ISO anticipates coordinating with stakeholders on each of these elements, reviewing results, and incorporating feedback, with the goal to develop an effective and workable outcome.

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We welcome stakeholder feedback on this present plan of work, and expect to provide updates to the Markets Committee as our efforts proceed.

[2] As Section III.A.2.4.1 of the ISO Transmission, Markets, and Services Tariff states, "mitigation measures are intended to minimize interference with open and competitive markets, and thus to permit to the maximum extent practicable, price levels to be determined by competitive forces under the prevailing market conditions."