

**To:** Maria Robinson, Director, Grid Deployment Office, U.S. Department of Energy

**From:** Anne George, Vice President External Affairs and Corporate Communications

**Date:** November 22, 2022

**Subject:** Comments on the Consultation Draft of the National Transmission Needs Study

Thank you for the opportunity to comment on the consultation draft of the National Transmission Needs Study. ISO New England (ISO-NE) is providing limited comments on this consultation draft. ISO-NE will review the draft study when it is published in the Federal Register and may provide additional comments during the prescribed comment period.

With regard to the high-level findings for New England, we share the following comments:

**Improve system reliability and resilience.**

- High dependence on natural gas power poses a risk to winter reliability. (§V.a)

*COMMENT: This statement is not complete. High dependence on natural gas for electricity generation alone does not pose a risk to winter reliability. New England has a constrained gas supply system and therefore, during periods of extreme cold, New England does not have sufficient pipeline infrastructure to meet the region's demand for natural gas for both home heating and power generation. This situation leaves the region reliant on deliveries of liquefied natural gas – a globally-traded commodity, as well as in-season replenishment of oil supplies.*

- Improve onshore transmission system reliability by designing a networked transmission system for offshore wind generation. (§V.c)

*COMMENT: This statement appears to be based on a number of non-ISO-NE studies. These studies only show the benefits of offshore transmission, without comparing them to other alternatives such as strengthened onshore transmission.*

- Increased transmission maintenance outages elsewhere in New England can increase reliability commitments in Maine given regional transmission limitations. (§V.d)

*COMMENT: This statement is based on a relatively small number of hours during which maintenance outages occur, and no analysis is provided of the benefits of avoiding these commitments vs. the costs of new transmission to avoid them.*

**Reduce generation curtailments and alleviate regional import capacities.**

- Reduce generation curtailments by increasing transmission system for offshore wind generation in several States. (§V.c & V.d)

*COMMENT: The ISO-NE study that was used to support this statement shows that generation curtailment is only slightly lower in an unconstrained-transmission scenario than in a constrained-transmission study. The statement in the consultation draft is not supported by any cost/benefit analysis of the costs of new transmission vs. the benefits of reduced curtailment.*

**Increase transfer capability with New York to meet future load and generation growth.**

- The real-time, interregional value of transmission between New York and New England was higher than the value of transmission within New England and has been increasing over the past several years. (§IV.b)

*COMMENT: This is an accurate statement, but this is driven more by minimal price differences within New England than by large price differences between New England and New York.*

- Anticipate between 3.4 and 6.3 GW (median 5.2 GW, 255 percent relative to 2020 system) new transfer capability needed with New York in 2035 to meet moderate load and high clean energy futures. (§VI.c)

*COMMENT: This finding is based on capacity expansion modeling similar to that performed in the National Transmission Planning Study (NTPS). Drawing conclusions from this modeling is premature.*

Additional comments on the body of the report:

- On page 24, Figure IV-4: Price differences between nodes may not be a good indicator of congestion, especially when differences are relatively small (on the order of \$0-5/MWh). Locational Marginal Prices (LMPs) often differ by a few dollars across New England due to loss factors, rather than congestion. It appears that many of the price differences in New England are fairly small, and may be related to losses rather than congestion.
- On page 52, Section V.c.1: The section on offshore wind overstates the benefits of transmission, both onshore and offshore. The statement that “spillage is *slightly* lower across OSW penetration levels” (emphasis added) in an unconstrained case does not support “... a *significant* need for transmission expansion” (emphasis added) later in the same sentence. Additionally, Maine’s 2,000 MW target mentioned in this section is related to onshore wind, not offshore wind, and thus is not relevant to this section.
- On pages 54-55, Section V.d.1: This section contains a statement that congestion creates a need for transmission expansion. However, there is no comparison of the cost of congestion with the cost of new transmission infrastructure. If the cost of new transmission significantly exceeds the cost saved through congestion reduction, it is not economically efficient to

build new transmission. This is often the case in New England, where transmission costs are relatively high and congestion is lower than in other parts of the U.S.

- On page 55, Section V.d.1: The last paragraph of this section mischaracterizes the findings of the ISO-NE 2019 Economic Study. The analysis by ISO-NE referenced here was part of an economic study looking at a specific set of possible future system conditions, not existing congestion. Additionally, the ISO-NE study states the following in footnote 33: “This study assumed a Surowiec South interface transfer limit of 1,500 MW. However, the Surowiec South interface transfer limit is expected to increase to 2,500 MW once NECEC and its associated transmission upgrades are in service.”<sup>1</sup> Pointing to this interface as a source of congestion, without acknowledging the upcoming increases in interface capability, is misleading.
- Section VI is based on the same capacity expansion model used in the National Transmission Planning Study. It is premature to state that future transmission is “needed” before the NTPS is complete, and it would make more sense for the National Transmission Needs Study to incorporate the conclusions of the NTPS only after that study is complete and widely accepted.
- Section VI.d International Transfers – The study does not include any additional ties between Canada and New England until 2040 (and only 210 MW in 2040, Table VI-4, pg.90). Some of the New England states have included new transmission connections with Canada to import clean energy as a part of their plan to decarbonize their energy supply. Failure to include these lines can have a significant effect on the needed interregional transfers between New York and New England. Although the last paragraph on pg. 89 states that additional international transfers may reduce the need for New York – New England transfers, readers will likely focus on the 3-6 GW value throughout the report and not factor in this comment.

Thank you for the opportunity to comment on the consultation draft.

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<sup>1</sup> The 2,500 MW interface limit was later increased to 2,800 MW as a result of further study work after the completion of the 2019 Economic Study.