

Appendix I

Deliverability Constraint Analysis

Bidders shall submit a study that includes the analysis outlined in this document for each submitted bid from such bidder. The analysis can be provided as an individual study or included as a scenario in a broader interconnection study. Bidders must report all thermal overloads and/or voltage issues and the associated conditions (e.g. generator dispatches, contingencies) but are not required to propose upgrades to resolve the issues identified in this analysis.

This analysis is intended to inform production cost simulations performed during the bid evaluation process. Therefore, the generator dispatch conditions and associated redispatch requirements are purposefully not aligned with any existing ISO-NE interconnection standards. Bidders may not fulfill the requirements of this analysis with any studies that conform only to ISO-NE interconnection standards.

Study Requirements

Unless otherwise stated, all study assumptions shall align with Section 2 (“Requirements for Interconnection Studies”) of ISO New England Planning Procedure 5-6.

The requirements of this study shall not be met with an Overlapping Impact Test as described in ISO New England Planning Procedure 10.

The generator under study shall not be studied at any value other than the maximum value in its proposed generation profile.

Load Level

The study must include a Peak load case, a Light Load case, and a case with Minimum Load. Study case topology and demand shall align with the 10-year study cases in the 2022 ISO-NE Transmission Planning Base Case Library¹. Table 2 lists the reference cases for each of the Peak Load, Light Load, and Minimum Load study cases.

Reference Section 2.2 of the April 4, 2022 edition of the ISO New England Transmission Planning Technical Guide for additional information.

Generator Dispatch

Table 1 lists the generator dispatch that must be studied at all load levels described in the previous section for both pre-project and post-project cases, where pre-project cases do not include the generator under study. The generators in Table 1 shall **not** be re-dispatched as described in Section 3.3 (“Steady-State Redispatch”) of ISO New England Planning Procedure 5-6. However, bidders may dispatch generators within a small tolerance (e.g. <2%) of the values shown in Table 1 in order to secure study cases.

¹ https://www.iso-ne.com/static-assets/documents/2022/11/final_summary_document_for_2022_tp_base_case_library.pdf

The generator under study must be dispatched at the maximum value in its proposed generation profile, regardless of the nameplate capacity of the ISO-NE interconnection request(s) associated with the bid.

Table 1 - Generator Dispatch (MW) for all pre-project and post-project cases

Plant	Dispatch Level (MW)
QP 624	720
QP 700	712
QP 781	634
QP 837, QP 1116	1080
QP806, QP 1109	1183
Millstone 2	872
Millstone 3	1225

Table 2 - Reference Cases from the ISO-NE Transmission Planning Base Case Library

Load Level	Study Files in Base Case Library
Peak	Year 10 (2032) summer mid-day peak load high renewables case – 90/10 summer peak load with high renewables - 2032_NA_DPK_HiRe
Light	Year 10 (2032) spring nighttime minimum load high renewables case – Fixed load level of 7,680 MW with high renewables - 2032_NA_Nmin_HiRe
Minimum	Year 10 (2032) spring mid-day minimum load case – Fixed load level of 12,000 MW (before reductions due to PV) with PV dispatched to 90% - 2032_NA_DMin

All other dispatch assumptions must align with ISO New England Planning Procedure 5-6. All dispatch assumptions must be fully documented.

Transmission Topology

The following projects and their associated network upgrades must be included in the case topology:

- QP 624 – Upgrades identified in System Impact Study dated 1/21/2019
- ~~QP 700 – Upgrades identified in System Impact Study dated 10/6/2020~~
- QP 781 – Upgrades identified in System Impact Study dated 5/11/2020, updated to reflect modifications presented at the June 2022 Reliability Committee meeting-
- ~~QP 837 – Upgrades identified in Feasibility Study dated 5/19/2021~~
- ~~All upgrades identified in the First Cape Cod Resource Integration Study~~

Formatted: Indent: Left: 0.82", No bullets or numbering

Formatted: Indent: Left: 0.83", No bullets or numbering

All other case topology assumptions should align with the cases that would be used for a System Impact Study for the generator under study.

Steady State Analysis

Unless otherwise state in this document, all steady state analysis assumptions shall align with Section 3 ("Steady-State Analysis") of ISO New England Planning Procedure 5-6. Bidders shall run N-1

and N-1-1 analyses on all cases and clearly report all load flow results. Bidders shall report all overloaded elements and the associated first and second contingency, if relevant.

Bidders are not required to resolve overloaded conditions through redispatch or transmission solutions. Bidders shall maintain the dispatch levels shown in Table 1 and report all associated thermal overloads.

Stability Analysis

Stability analysis is not required for this study.

Short Circuit Analysis

Short circuit analysis is not required for this study.