

Interconnection Service Capabilities

Updating the Tariff to incorporate the existing procedures for adjusting Interconnection Service amounts after market retirements

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Proposed Tariff Modifications to Describe Adjustments to Interconnection Service Following Partial Market Exits

Tentative Proposed Effective Date: January 2020

- ISO New England (the ISO) recently developed changes to <u>Planning</u> <u>Procedure 10</u> (Planning Procedure to Support the Forward Capacity Market - PP10)
 - These were considered at the February 2019 NEPOOL Participants Committee
- These changes included methodologies to update the levels of Interconnection Service for generators (and External Elective Transmission Upgrades) after the clearing of a Retirement De-List Bid, Permanent De-List Bid or substitution auction demand bid in the Forward Capacity Market (FCM)

- Specifically, these changes were in PP10, Sections 7.7 and 7.8

• The ISO agreed to work with NEPOOL through the stakeholder process to move provisions from PP10 into the Tariff

Proposed Tariff Modifications to Describe Adjustments to Interconnection Service Following Partial Market Exits, cont.

Tentative Proposed Effective Date: January 2020

- At the <u>May 16 Transmission Committee</u> meeting, the ISO described the current rules for Interconnection Service adjustments
- At the <u>July 16 Reliability & Transmission Committee</u> meeting, the ISO outlined the proposed approach to creating the Tariff provisions

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In today's discussion, the ISO will present the draft Tariff redlines

OVERVIEW OF THE TARIFF DEVELOPMENT

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The existing provisions for establishing and adjusting Interconnection Service are in many locations

- The following Tariff and Planning Procedure provisions all include relevant rules:
 - The definition for Capacity Network Resource Capability (CNRC) and Network Resource Capability (NRC) contained in Schedules 22 & 23 of the Open Access Transmission Tariff (OATT) and Capacity Network Import Capability (CNIC) and Network Import Capability (NIC) contained in Schedule 25 of the OATT (See Appendix)
 - The provisions for the establishment of Interconnection Service amounts for existing resources in Section 5.2 of Schedule 22 and Section 1.6 of Schedule 23
 - The Interconnection Service adjustment provisions in Sections 7.7 and 7.8 of PP10
- ISO is proposing a comprehensive set of Tariff updates to organize and consolidate these provisions into a cohesive structure

ISO Proposal – New OATT Section

- A new section II.48 the OATT is proposed to capture the necessary components associated with the establishment and removal of Interconnection Service amounts
 - Establishment for new and existing resources
 - Relinquishment for market exists
- A Tariff organization effort is necessary to create an appropriate location to move the PP10 language regarding relinquishment of Interconnection Service

Associated Tariff and Planning Procedure Changes

- Schedules 22, 23 and 25 will be updated to reflect the removal of language that will be placed in the new OATT section
- PP10 will also be updated to reflect the language removal
 Will be discussed with the Reliability Committee

Winter Capability Adjustments

- During the previous discussions, stakeholders identified that there may be circumstances where the winter capability of their generating facilities after a partial market exit may not be correctly calculated by the formulas currently contained in PP10
- The ISO is proposing a mechanism to establish an exception to the formula-based, proportional winter capability adjustments for a partial retirement
 - The exception will allow generators to provide engineering information to the ISO when they believe that the formula-based calculation does not correctly describe the winter interconnection capability after accounting for the partial retirement
 - Upon review and confirmation by the ISO, the alternative winter interconnection capability would be established

PROPOSED TARIFF REDLINES



Proposed Tariff Changes

Tari	ff Section	Tariff Change	Reason for Change
	T Section 3.1 (a)	II.48.1 Establishing CNR Capability and CNI Capability (a) CNR Capability shall be established as follows: Section 5.2.3 of Schedule 22 and Section 1.6.4.3 of Schedule 23 of this OATT describe the establishment of CNR Capability for a Generating Facility that was treated as an Existing Generating Capacity Resource in the fourth Forward Capacity Auction. For a Generating Facility newly obtaining or increasing CNR Interconnection Service in the fourth Forward Capacity Auction or thereafter, summer CNR Capability shall be established as the highest MW quantity of Capacity Supply Obligation obtained by the Generating Capacity Resource for the summer period and winter CNR Capability shall be established as the higher of (1) the highest MW quantity of Capacity Supply Obligation obtained by the associated Generating Capacity Resource for the winter period and (2) the Generating Facility's summer CNR Capability multiplied by the ratio of the Generating Capacity for the auction in which the entry occurred. Notwithstanding the foregoing, a Generating Facility's CNR Capability shall not exceed its maximum net MW electrical output at the Point of Interconnection at an ambient temperature at or above 90 degrees F for summer and at or above 20 degrees F for winter.	Incorporates the provisions that were previously in the CNR Capability definition in Schedules 22 and 23. Some language clean-up with no change in design.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.1 (b)	(b) CNI Capability shall be established as follows: Summer and winter CNI Capability for an External ETU with CNI Interconnection Service pursuant to Schedule 25 of this OATT shall be established as the total MW quantity of Capacity Supply Obligation(s) obtained by its associated New Import Capacity Resource(s) in the summer and winter periods, respectively. Notwithstanding the forgoing, the CNI Capability shall not exceed the maximum net MW electrical capability at the Point of Interconnection and shall not exceed applicable seasonal equipment ratings determined pursuant to industry standards and consistent with the specifications described in ISO New England Planning and Operating Procedures.	Incorporates the provisions that were previously in the CNI Capability definition in Schedule 25. Some language clean-up with no change in design.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.2 (a)	II.48.2 Establishing NR Capability and NI Capability (a) NR Capability shall be established as follows: Section 5.2.4 of Schedule 22 and Section 1.6.4.4 of Schedule 23 of this OATT describe the establishment of NR Capability for a Generating Facility that was treated as an Existing Generating Capacity Resource in the fourth Forward Capacity Auction. In all other cases, summer and winter NR Capability for a Generating Facility shall be established as the Generating Facility's maximum net MW electrical output at the Point of Interconnection at an ambient temperature at or above 50 degrees F for summer and at or above 0 degrees F for winter. A Generating Facility's summer and winter NR Capability shall be equal to or greater than its summer and winter CNR Capability, respectively.	Incorporates the provisions that were previously in the NR Capability definition in Schedules 22 and 23. Some language clean-up with no change in design.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.2 (b)	(b) NI Capability shall be established as follows: For an External ETU with NI Interconnection Service pursuant to Schedule 25 of this OATT, summer and winter NI Capability shall be established as the maximum net MW electrical capability at the Point of Interconnection and shall not exceed applicable seasonal equipment ratings determined pursuant to industry standards and consistent with the specifications described in ISO New England Planning and Operating Procedures. An External ETU's summer and winter NI Capability shall be equal to or greater than its summer and winter CNI Capability, respectively.	Incorporates the provisions that were previously in the NI Capability definition in Schedule 25. Some language clean-up with no change in design.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.3	II.48.3 Reductions to CNR Capability and CNI Capability : CNR Capability and CNI Capability shall be reduced as follows upon partial or full exit from the Forward Capacity Market as a result of any of the following actions: (1) a voluntary or mandatory termination pursuant to Section III.13.3.4A of the Tariff results in a reduction to summer and winter CNR Capability (or summer and winter CNI Capability) equal to the respective reduction to summer and winter Qualified Capacity described in III.13.3.4A; (2) the failure of the Import Capacity Resource(s) associated with an External ETU to offer into a Forward Capacity Auction in a MW quantity equal to the CNI Capability of the External ETU, as described in Section III.13.1.3 of the Tariff, results in a reduction to summer and winter CNI Capability equal to the respective reduction to summer and winter Capacity Network Import Interconnection Service described in Section III.13.1.3; (3) a failure to operate commercially for a period of three calendar years resulting in retirement pursuant to Section III.13.2.5.2.5.3(d) of the Tariff results in a reduction of summer and winter CNR Capability (or summer and winter CNI Capability) to zero; (4) a full exit from the Forward Capacity Market as the result of the operation of a Retirement De-List Bid or a Permanent De-List Bid, described in Section III.13.2.5.2.5.3 of the Tariff, and/or a substitution auction demand bid, described in Section III.13.2.8 of the Tariff, results in a reduction of summer and winter CNR Capability (or summer and winter CNI Capability) to zero;	Incorporates the provision from PP-10 that identified the full removal of Interconnection Service in the case of a full exit from the Forward Capacity Market. Also identifies other circumstances where Interconnection Service is removed. Some language clean-up with no change in design.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.3, cont.	and a partial exit from the Forward Capacity Market as the result of the operation of a Retirement De-List Bid or a Permanent De-List Bid and/or a substitution auction demand bid results in a reduction of summer and winter CNR Capability (or summer and winter CNI Capability) as described below. (a) Summer CNR/CNI Capability Following Partial Exit Resulting From De-List Bid and/or Substitution Auction Demand Bid: Following the partial exit from the Forward Capacity Market of a Generating Capacity Resource (or an Import Capacity Resource associated with an External ETU) as a result of the operation of a de-list bid and/or a substitution auction demand bid, the summer CNR Capability of the associated Generating Facility (or the summer CNI Capability of the associated External ETU) shall be reduced to equal (1) the associated summer Qualified Capacity (or, where there is more than one Import Capacity Resource associated with an External ETU, the sum of the associated summer Qualified Capacities) for the Forward Capacity Auction in which the partial exit occurred minus (2) the MW quantity that exited the Forward Capacity Market.	Incorporates the provision from PP-10 that identified the partial removal of <u>summer</u> Interconnection Service in the case of a partial exit from the Forward Capacity Market. Some language clean-up with no change in design.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.3, cont.	(b) Winter CNR/CNI Capability Following Partial Exit Resulting From De-List Bid and/or Substitution Auction Demand Bid: Following the partial exit from the Forward Capacity Market of a Generating Capacity Resource (or an Import Capacity Resource associated with an External ETU) as a result of the operation of a de-list bid and/or a substitution auction demand bid, the winter CNR Capability of the associated Generating Facility (or the winter CNI Capability of the associated External ETU) shall be reduced to equal (1) the Generating Facility's summer CNR Capability (or the External ETU's summer CNI Capability) reduced as described in subsection (a) of this Section II.48.3 multiplied by (2) the ratio of the associated winter Qualified Capacity (or, where there is more than one Import Capacity Resource associated with an External ETU, the sum of the associated winter Qualified Capacities) to the associated summer Qualified Capacity (or, where there is more than one Import Capacity Resource associated with an External ETU, the sum of the associated summer Qualified Capacities) for the Forward Capacity Auction in which the partial exit occurred; provided that a different winter CNR Capability value may be established to account for winter capability remaining after the removal of summer capability if the ISO determines that engineering information submitted no later than 10 calendar days after the conclusion of the Forward Capacity Auction supports the use of the different value.	Incorporates the provision from PP-10 that identified the partial removal of winter Interconnection Service in the case of a partial exit from the Forward Capacity Market. Some language clean-up. Design change to allow for adjustment to the calculated winter value.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.4	II.48.4 Reductions to NR Capability and NI Capability: NR Capability and NI Capability shall be reduced as follows for Generating Facilities and External ETUs as a result of any of the following actions: (1) a partial or full voluntary retirement results in partial or full reduction of NR Capability or NI Capability; (2) a failure to operate commercially for a period of three calendar years (as described in Section III.13.2.5.2.5.3(d) of the Tariff) results in a reduction of NR Capability or NI Capability to zero; (3) a full retirement of a Generating Facility or an External ETU as the result of the operation of a Retirement De-List Bid or an unconditional Permanent De-List Bid (as described in Section III.13.1.2.4.1(a) and Section III.13.2.5.2.5.3 of the Tariff) and/or a substitution auction demand bid (as described in Section III.13.2.8 of the Tariff) results in a reduction of NR Capability to zero; and a partial retirement as the result of the operation of a Retirement De-List Bid or an unconditional Permanent De-List Bid and/or a substitution auction demand bid results in a reduction of NR Capability to zero; and a partial retirement as the result of the operation of a Retirement De-List Bid or an unconditional Permanent De-List Bid and/or a substitution auction demand bid results in a reduction of NR Capability or NI Capability as described below.	Incorporates the provision from PP-10 that identified the full removal of Interconnection Service in the case of a full exit from the Forward Capacity Market. Also identifies other circumstances where Interconnection Service is removed. Some language clean-up with no change in design.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.4 (b)	(b) Summer NR/NI Capability Following Partial Retirement: Following the partial retirement of a Generating Facility (or an External ETU) as a result of the operation of a de-list bid and/or a substitution auction demand bid, the summer NR Capability of the Generating Facility (or summer NI Capability of the External ETU) shall be reduced to equal (1) the Generating Facility's summer CNR Capability (or the External ETU's summer CNI Capability) reduced as described in subsection (a) of Section II.48.3 multiplied by (2) the ratio of the Generating Facility's summer NR Capability (or the External ETU's summer NI Capability) prior to the Forward Capacity Auction to the Generating Facility's summer CNR Capability (or the External ETU's summer CNI Capability) prior to the Forward Capacity Auction.	Incorporates the provision from PP-10 that identified the partial removal of <u>summer</u> Interconnection Service in the case of a partial exit from the Forward Capacity Market. Some language clean-up with no change in design.

Tariff Section	Tariff Change	Reason for Change
OATT Section II.48.4 (c)	(c) Winter NR/NI Capability Following Partial Retirement: Following the partial retirement of a Generating Facility (or an External ETU) as a result of the operation of a de-list bid and/or a substitution auction demand bid, the winter NR Capability of the Generating Facility (or winter NI Capability of the External ETU) shall be reduced to equal (1) the Generating Facility's summer NR Capability (or the External ETU's summer NI Capability) reduced as described in subsection (b) of this Section II.48.4 multiplied by (2) the ratio of the Generating Facility's winter NR Capability (or the External ETU'S winter NI Capability) prior to the Forward Capacity Auction to the Generating Facility's summer NR Capability (or the External ETU'S winter NI Capability) prior to the Forward Capacity Auction to the Generating Facility's summer NR Capability value may be established to account for winter capability remaining after the removal of summer capability if the ISO determines that engineering information submitted no later than 10 calendar days after the conclusion of the Forward Capacity Auction supports the use of the different value. However, if the resulting winter NR Capability (or winter NI Capability) is less than the Generating Facility's winter CNR Capability (or winter NI Capability) will be set equal to the CNR Capability (or winter NI Capability) will be set equal to the CNR Capability (or winter CNI Capability).	Incorporates the provision from PP-10 that identified the partial removal of <u>winter</u> Interconnection Service in the case of a partial exit from the Forward Capacity Market. Some language clean-up. Design change to allow for adjustment to the calculated winter value.

Tariff Section	Tariff Change	Reason for Change
CNR Capability Definition – Schedules 22 & 23	Capacity Network Resource Capability ("CNR Capability") – CNR Capability is the MW quantity associated with CNR Interconnection Service, calculated as described in Section II.48 of the Tariff. (i) In the case of a Generating Facility that is a New Generating Capacity Resource pursuant to Section III.13.1 of the Tariff or an Existing Generating Capacity Resource that is increasing its capability pursuant to Section III.13.1.2.2.5 of the Tariff, for Summer, the highest megawatt amount of the Capacity Supply Obligation obtained by the Generating Facility in accordance with Section III.13 of the Tariff, and, if applicable, as specified in a filing by the System Operator with the Commission in accordance with Section III.13.2.2 of the Tariff, net of any megawatt reductions resulting from capacity terminations or retirements (including permanent de list bids) in accordance with Section III.13 of the Tariff, and, for Winter, the Summer CNR Capability multiplied by the ratio of the associated Winter Qualified Capacity divided by the associated Summer Qualified Capacity, or (ii) in the case of a Generating Facility that meets the criteria under Section 16.4.3 of this SGIP, the total megawatt amount determined pursuant to the hierarchy established in Section 1.6.4.3, net of any megawatt reductions resulting from capacity terminations or retirements (including permanent de list bids) in accordance with Section 1II.13 of the Tariff. The CNR Capability shall not exceed the maximum net megawatt electrical output of the Generating Facility at the Point of Interconnection at an ambient temperature at or above 90 degrees F for Summer and at or above 20 degrees F for Winter. Where the Generating Facility includes multiple production devices, the CNR Capability shall not exceed the aggregate maximum net megawatt electrical output of the Generating Facility at the Point of Interconnection at an ambient temperature at or above 90 degrees F for Summer and at or above 20 degrees F for Winter.	Provisions moved to Section II.48 of the OATT.

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Tariff Section	Tariff Change	Reason for Change
NR Capability Definition – Schedules 22 & 23	Network Resource Capability ("NR Capability") – NR Capability is the MW quantity associated with NR Interconnection Service, calculated as described in Section II.48 of the Tariff. The maximum gross and net megawatt electrical output of the Generating Facility at the Point of Interconnection at an ambient temperature at or above 50 degrees F for Summer and at or above 0 degrees F for Winter. Where the Generating Facility includes multiple energy production devices, the NR Capability shall be the aggregate maximum gross and net megawatt electrical output of the Generating Facility at the Point of Interconnection at an ambient temperature at or above 50 degrees F for Summer and at or above 0 degrees F for Winter. The NR Capability shall be equal to or greater than the CNR Capability. In the case of a Generating Facility that meets the criteria under Section 1.6.4.4 of this SGIP, the NR Capability shall equal the total megawatt amount determined pursuant to Section 1.6.4.4.	Provisions moved to Section II.48 of the OATT.

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Tariff Section	Tariff Change	Reason for Change
CNI Capability Definition – Schedule 25	Capacity Network Import Capability ("CNI Capability") shall mean the MW quantity associated with CNI Interconnection Service, calculated as described in Section II.48 of the Tariff., for an External Elective Transmission Upgrade that is a controllable Merchant Transmission Facility or Other Transmission Facility, the aggregate highest megawatt amount of Capacity Supply Obligation obtained by the Import Capacity Resource(s) associated with the External Elective Transmission Upgrade, net of any megawatt reductions, in accordance with Section III.13 of the Tariff. The Capacity Network Import Capability shall be the maximum net megawatt electrical capability at the Point of Interconnection consistent with the Capacity Capability Interconnection Standard and shall not to exceed applicable seasonal equipment ratings determined pursuant to industry standards and consistent with the specifications described in ISO New England Planning and Operating Procedures:	Provisions moved to Section II.48 of the OATT.

Tariff Section	Tariff Change	Reason for Change
CNI Capability Definition – Schedule 25	Network Import Capability ("NI Capability") shall mean the MW quantity associated with NI Interconnection Service, calculated as described in Section II.48 of the Tariff., for an External Elective Transmission Upgrade that is a controllable Merchant Transmission Facility or Other Transmission Facility, the maximum net megawatt electrical capability at the Point of Interconnection consistent with the Network Capability Interconnection Standard and shall be for an amount not to exceed applicable seasonal equipment ratings determined pursuant to industry standards and consistent with the specifications described in ISO New England Planning and Operating Procedures. The Network Import Capability shall be equal to or greater than the Capacity Network Import Capability.	Provisions moved to Section II.48 of the OATT.

Conclusion

- The ISO is proposing a new Section II.48 of the OATT to capture the rules associated with the establishment and relinquishment of Interconnection Service amounts
- The tentative proposed effective date of these revisions is January 2020

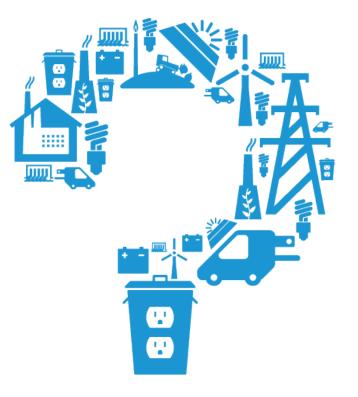
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Tentative Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
Transmission Committee May 16, 2019	Review the effect of new entry and retirements on the level of Interconnection Service
Reliability & Transmission Committee July 16-17, 2019	Discussion of proposed framework
Reliability Committee August 20, 2019	Discussion of proposed PP10 revisions
Transmission Committee August 21, 2019	Discussion of proposed Tariff revisions
Transmission Committee September 17, 2019	Further discussion of proposed Tariff revisionsReview of proposed amendments
Reliability Committee September 25, 2019	Vote on proposed PP10 revisions
Transmission Committee October 10, 2019	Vote on proposed Tariff revisions and any proposed amendments
Participants Committee November 1, 2019	Vote on proposed Tariff and PP10 revisions including any proposed amendments

Questions

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APPENDIX CAPACITY NETWORK RESOURCE CAPABILITY

Current Tariff Rules



Capacity Network Resource (CNR) Capability Schedule 22 Definition

How CNRC is set (increases) For New Generators

• Capacity Network Resource Capability ("CNR Capability") shall mean: (i) in the case of a Generating Facility that is a New Generating Capacity Resource pursuant to Section III.13.1 of the Tariff or an Existing Generating Capacity Resource that is increasing its capability pursuant to Section III.13.1.2.2.5 of the Tariff, for Summer, the highest megawatt amount of the Capacity Supply Obligation obtained by the Generating Facility in accordance with Section III.13 of the Tariff, and, if applicable, as specified in a filing by the System Operator with the Commission in accordance with Section III.13.8.2 of the Tariff, net of

any megawatt amount reductions resulting from terminations, retirements or permanent de-list bids in accordance with Section III.13 of the Tariff, and, for Winter, the Summer CNR Capability multiplied by the ratio of the associated Winter Qualified Capacity divided by the associated Summer Qualified Capacity,

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The ratio used to set Winter CNRC

How CNRC subsequently can be reduced for New Generators

Capacity Network Resource (CNR) Capability Schedule 22 Definition, continued

CNRC grandfathering amounts for Existing Generators

• Capacity Network Resource Capability ("CNR Capability")..,

or (ii) in the case of a Generating Facility that meets the criteria under Section 5.2.3 of this LGIP, the total megawatt amount determined pursuant to the hierarchy established in Section 5.2.3, net of any megawatt amount reductions resulting from terminations, retirements or permanent de-list bids in accordance with Section III.13 of the Tariff.

How CNRC subsequently can be reduced for Existing Generators

The recent PP10 discussions centered on the exact methodology to be used for reductions in the case of retirements or permanent de-list bids

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Capacity Network Resource (CNR) Capability Schedule 22 Definition, continued

- Capacity Network Resource Capability ("CNR Capability").. The CNR Capability shall not exceed the maximum net megawatt electrical output of the Generating Facility at the Point of Interconnection at an ambient temperature at or above 90 degrees F for Summer and at or above 20 degrees F for Winter. Where the Generating Facility includes multiple production devices, the CNR Capability shall not exceed the aggregate maximum net megawatt electrical output of the Generating Facility at the Point of Interconnection at an ambient temperature at or above 90 degrees F for Summer and at or above 20 degrees F for Winter.
- CNR Capability is measured at 90 degrees F in the Summer and 20 degrees F in the Winter

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• Note that NR Capability is measured at 50 degrees F in the Summer and 0 degrees F in the Winter