PUBLIC VERSION

November 4, 2014

**VIA ELECTRONIC FILING**

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
Room 1A-East, First Floor
888 First Street, NE
Washington, DC 20426

**Re: ISO New England Inc., Docket No. ER15-**
**Informational Filing for Qualification in the Forward Capacity Market**
**COMMENT DUE DATE OF NOVEMBER 19, 2014 PURSUANT TO THE TARIFF**

Dear Secretary Bose:

Pursuant to Section III.13.8.1 of the ISO New England Transmission, Markets and Services Tariff (the "Tariff"),[1] ISO New England Inc. (the "ISO") hereby submits privileged and public, (*i.e.*, redacted copy) versions of this informational filing for qualification in the Forward Capacity Market ("Informational Filing") for the 2018-2019 Capacity Commitment Period. The Tariff allows parties to comment on or challenge determinations provided in the Informational Filing. Pursuant to Tariff Section III.13.8.1(b), any comments or challenges to the ISO's determinations must be filed with the Federal Energy Regulatory Commission ("FERC" or "Commission") no later than 15 days from the date of this Informational Filing. **Accordingly, the ISO requests that the Commission issue a notice requiring that any comments or protests be filed on or before November 19, 2014.**

In accordance with Tariff Section III.13.8.1(b), if the Commission does not issue an Order **within 75 days** after the date of this filing directing otherwise, the determinations described in the Informational Filing and any elections pursuant to Tariff Section III.13.1.2.3.2.1.1 shall be used in conducting the ninth Forward Capacity Auction ("FCA"), which will be held beginning on February 2, 2015, and will procure the needed capacity for the six state New England Control Area for the 2018-2019 Capacity Commitment Period. This Informational Filing details determinations made by the ISO with respect to that FCA and provides supporting documentation for such determinations.

[1] Capitalized terms used but not otherwise defined in this filing have the meanings ascribed thereto in the Tariff..

For all de-list bids rejected by the Internal Market Monitor ("IMM"), privileged Attachment E of this Informational Filing includes the IMM's determination of the resource's de-list bid.[2] Participants were notified of the IMM's final determinations in their Qualification Determination Notifications ("QDNs"), which were provided to Lead Market Participants on September 26, 2014.

With respect to de-list bids, no later than seven calendar days after the issuance of the QDN by the IMM, a resource may elect to submit revised prices for the Static De-list Bid for the resource at prices equal to or less than the IMM's determined bid price. A resource making such an election is prohibited from challenging the IMM's determinations regarding the resource's net risk-adjusted going forward costs and opportunity costs.[3] If no such election is made, the Existing Generating Capacity Resource will be entered into the FCA as described in section III.13.2.3.2(c) (that is, as if no Static De-list Bid had been submitted) or as otherwise directed by the Commission.[4]

## I. COMMUNICATIONS

The ISO is the private, non-profit entity that serves as the regional transmission organization ("RTO") for New England. The ISO operates and plans the New England bulk power system and administers New England's organized wholesale electricity market pursuant to the Tariff and the Transmission Operating Agreement with the New England Participating Transmission Owners.

All correspondence and communications in this proceeding should be addressed to the undersigned as follows:

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## II. BACKGROUND AND OVERVIEW

[2] Section III.13.1.2.3.2.1.1 of the Tariff addresses the IMM's review of de-list bids.

[3] Section III.13.1.2.3.2.1.1.2(c) of the Tariff

[4] *Id.*

The Tariff requires the ISO to make a filing setting forth specific information related to the FCA.[5] The Informational Filing includes the locational capacity requirements of the ninth FCA based upon the topology of the transmission system, and specifically which Capacity Zones are to be modeled in the auction. The Tariff also requires the ISO to identify the multipliers applied in determining the appropriate Capacity Values for Demand Resources, as well as specify the resources accepted or rejected in the qualification process for participation in the ninth FCA.

The ISO has reviewed all resources participating in the ninth FCA. These include Existing and New Generating Capacity Resources, Import Capacity Resources and Demand Resources.[6][7] Pursuant to the Tariff, the Informational Filing must include the results of the IMM's review of certain offers and bids, *e.g.*, Existing Capacity Resources that seek to permanently or statically de-list above $3.94/kW-month,[8] and new resources that have requested to submit offers below the relevant Offer Review Trigger Prices ("ORTPs").[9] Further, the Tariff sets forth a specific process for review of the offers and bids submitted by various types of resources. This filing is the ISO's fulfillment of these requirements.

The Tariff requires the Informational Filing to include the transmission interface limits used in the process of selecting which Capacity Zones will be modeled in the ninth FCA; which existing and proposed transmission lines the ISO determines will be in service by the start of the 2018-2019 Capacity Commitment Period; the expected amount of installed capacity in each modeled Capacity Zone during the 2018-2019 Capacity Commitment Period; the Local Sourcing Requirement for each modeled import-constrained Capacity Zone; and the Maximum Capacity Limit for each modeled export-constrained Capacity Zone.

In accordance with Tariff Section III.12.4, the ISO will model four Capacity Zones in the ninth FCA: Southeastern Massachusetts/Rhode Island ("SEMA/RI"), Connecticut, Northeastern Massachusetts/Boston ("NEMA/Boston") and Rest of Pool. The Rest of Pool Capacity Zone includes Maine, Western/Central Massachusetts ("WCMA"), New Hampshire and Vermont. As in previous auctions, the NEMA/Boston and Connecticut zones have been determined to be import-constrained zones by the Capacity Zone objective

[5] Section III.13.8.1(a) of the Tariff.

[6] Demand Response Resource Sub-types include: On Peak Demand Resource ("On Peak"), Seasonal Peak Demand Resource ("Seasonal Peak"), Demand Response Capacity Resource ("DRCR" or "RTDR") and Real-time Emergency Generation ("RTEG").

[7] Except where noted otherwise, values in this filing are represented in FCA Qualified Capacity ("FCA QC") megawatts. Resources were required to submit Financial Assurance by October 27, 2014. Resources that have not submitted Financial Assurance by this deadline have five Business Days (5) to cure their Financial Assurance, but due to timing, resources that have failed to pay Financial Assurance by this deadline are included in this filing.

[8] Section III.13.1.2.3.2.1.1 of the Tariff.

[9] Section III.13.1.1.2.2.3 of the Tariff.

criteria and, for the first time, the combined zones of Southeast Massachusetts and Rhode Island SEMA/RI [10] have also been determined to be import-constrained by the Capacity Zone objective criteria and will be modeled as a single Capacity Zone in the 2018-2019 Capacity Commitment Period's FCA. Accordingly, Connecticut, SEMA/RI, and NEMA/Boston will be modeled as import-constrained Capacity Zones. The ISO also determined that there are no export-constrained Capacity Zones for the 2018-2019 Capacity Commitment Period and, therefore, Maximum Capacity Limits were not established for the 2018-2019 Capacity Commitment Period's FCA.[11]

The Tariff also requires that the Informational Filing include the loss multiplier used to derive the Capacity Value for Demand Resources.[12] For the ninth FCA, this multiplier is 1.08.

Specific statistics related to the ninth FCA are as follows:[13]

- The Installed Capacity Requirement ("ICR") for the 2018-2019 Capacity Commitment Period is 35,142 MW. After accounting for 953 MW of Hydro Quebec Interconnection Capability Credits ("HQICCs"), 34,189 MW remain to be procured in the FCA. The ISO has submitted the 2018-2019 ICR for Commission review in another proceeding.[14]

- Qualified Existing Capacity Resources for the 2018-2019 Capacity Commitment Period consist of 29,727 MW[15] from Existing Generating Capacity Resources (intermittent and non-intermittent); 89 MW from Existing Import Capacity

[10] The Commission accepted the SEMA/RI zonal boundary in a letter order dated May 29, 2014 in Docket No. ER14-1939-000.

[11] Maximum Capacity Limits were calculated to determine whether there are export-constrained Capacity Zones for the 2018/2019 Capacity Commitment Period. The ISO found that there are no export-constrained zones and, for that reason, there was no need to establish Maximum Capacity Limits for the 2018/2019 Capacity Commitment Period.

[12] Pursuant to Section III.13.8.1(a)(v) of the Tariff.

[13] Values in this Transmittal Letter are rounded to eliminate decimals. Resources in the attachments are rounded to three decimal places.

[14] *ISO New England Inc.*, Filing of Installed Capacity Requirement, Hydro Quebec Interconnection Capability Credits and Related Values for the 2018-2019 Capacity Commitment Period, filed on November 4, 2014 ("2018-2019 ICR Filing").

[15] Consistent with how resources are treated within the FCA, this value, and all other Existing Generating Capacity values shown within this filing, includes adjustments for significant increases in capacity qualified through the New Capacity Qualification Process pursuant to Section III.13.1.2.2.5 of the Tariff. Significant Increases can be found in Attachment F. Due to a change in a resource's Interconnection Agreement, the qualified summer and winter capacity values illustrated in this filing will be reduced by approximately 2 MW prior to the commencement of the ninth FCA.

Resources;[16] and 2,740 MW from Existing Demand Resources,[17] totaling 32,555 MW of Existing Capacity.[18]

- A total of 8,301 MW of de-list bids were submitted for the ninth FCA. Subsequently, 97 MW of these de-list bids were later converted into Non-Price Retirement Requests. In total, 41 existing resources submitted Non-Price Retirement Requests.[19] In addition, participants who submitted de-list bids are entitled to withdraw those bids or reduce the bids following receipt of the QDN. Attachment E of this Informational Filing provides details regarding post QDN reductions or withdrawals.

- Approximately 8,547 MW[20] of new resources were qualified.[21]

Overall, the qualification process for the ninth FCA resulted in approximately 8,547 MW[22] of new resources, and 32,555 MW of existing resources competing to provide 34,189 MW, after accounting for HQICCs, to the New England control area for the 2018-2019 Capacity Commitment Period.

## III. FILING CONTENTS AND REQUEST FOR PRIVILEGED TREATMENT

This Informational Filing includes the following materials:

- This transmittal letter – PUBLIC

- Attachment A: Existing Transmission Lines – PUBLIC

- Attachment B: Proposed Transmission Lines – PUBLIC

[16] Section IV.C.1 of this Transmittal Letter.

[17] *Id.*

[18] Non-Price Retirements are represented as Existing Qualified Capacity Resources. A resource qualified to participate in the FCA may change ownership on a monthly boundary. Changes in Lead Market Participant effective after the creation of this filing letter may not be reflected in the applicable numbers in this Filing and the attachments.

[19] Section IV.C.1.b of this Transmittal Letter.

[20] Summer Qualified Capacity.

[21] As of the issuance of the Qualification Determination Notifications. New Real-Time Emergency Generation Projects are represented as New in the megawatt totals as well as Attachment D, even though these resources are treated as existing capacity in the auction.

[22] Summer Qualified Capacity.

- Attachment C: Existing Generating, Import, and Demand Resource Capacity[23] – PUBLIC

- Attachment D: New Generating, Import, and Demand Resource Capacity – CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE

- Attachment E: Summary of All De-List Bids Submitted – CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE

- Attachment F: Significant Increases – CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE

- Attachment G: Major Elements In The Determination of Expected Net Revenues – Generation – CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE

- Attachment H: Major Elements In The Determination of Expected Net Revenues - Demand Resources – CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE

- Attachment I: Notifications sent to resources that were not qualified to participate in the FCA – CONTAINS PRIVILEGED INFORMATION – DO NOT RELEASE

- Attachment J: Methodology used by IMM in establishing an alternative de-list bid value when the IMM rejected some or all of the components of the participant-submitted de-list bids [NOTE: This document was included as attachment B to each QDN letter of rejected de-list bids by the IMM.] - PUBLIC

Section III.13.8.1 (a) of the Tariff requires the ISO to file the determinations in Sections III.13.8.1(a) (vi-viii) as confidential. These determinations are provided in Attachments D-H. Additionally, Attachment I includes notifications sent to resources that were not qualified to participate in the FCA. The notifications only went to the Project Sponsor and include a detailed explanation of the ISO's determination not to qualify a particular resource, which includes confidential information.[24] Therefore, the ISO requests that the Commission provide privileged treatment to Attachments D through I, as indicated above.

[23] Included in this filing are Existing Capacity Resources that cleared as Out-Of-Market Resources in the sixth and/or seventh FCA. The summer and winter qualified capacity associated with these resources has been adjusted accordingly.

[24] Because the information is commercially sensitive, the Commission has granted the ISO's requests to treat this information as confidential in Informational Filings for previous FCAs. *See, Order Accepting Informational Filing*, 138 FERC ¶ 61,196 (2012). This information is also confidential pursuant to Section III.13.8.1 (a) of the Tariff.

The privileged Attachments have been marked: **"Contains Privileged Information - Do Not Release."** The ISO is filing one version of the Informational Filing that includes the privileged information, which should not be released to the public. A public, redacted version of this Informational Filing, which does not include the privileged attachments, is also filed herewith.

Pursuant to Section III.13.8.1 (a) of the Tariff, the ISO will publish the confidential information in Attachments D-H, no later than 15 days after the ninth FCA.

## IV. INFORMATIONAL FILING

### A. Inputs Used to Model the FCA

Tariff Section III.13.8.1(a)(i-iv) requires the ISO to address in the Informational Filing the following inputs used to model the FCA: the Capacity Zones modeled in the FCA; the transmission interface limits used to model the Capacity Zones in the FCA; the existing and proposed transmission lines that will be in service by the start of the Capacity Commitment Period; the expected amount of Installed Capacity in each modeled Capacity Zone; the Local Sourcing Requirement for each modeled import-constrained Capacity Zone; and the Maximum Capacity Limit for each modeled export-constrained Capacity Zone.

Contemporaneously with this filing, the ISO is filing its annual ICR Filing with the Commission in which it submits for approval the 2018-2019 Capacity Commitment Period values for the ICR and the Local Sourcing Requirements.[25] Given that the ICR Filing provides a comprehensive explanation of these values, the ISO does not repeat in detail those findings here.

The proposed ICR for the New England region for the 2018-2019 Capacity Commitment Period is 35,142 MW. The net amount of capacity to be purchased in the FCA to meet the ICR, after deducting 953 MW of interconnection capability credit associated with the HQICCs, is 34,189 MW ("NICR").[26]

#### 1. Existing and Proposed Transmission Lines and Transmission Interface Limits

Pursuant to Section III.13.8.1(a)(iii) of the Tariff, the ISO is required to provide the existing and proposed transmission lines that the ISO determines will be in service by the start of the 2018-2019 Capacity Commitment Period. Section III.12.6.2 of the Tariff establishes the initial threshold for transmission projects to be considered in service. Under

[25] *See* footnote 15 *supra.*

[26] NICR stands for Net Installed Capacity Requirement.

this threshold, transmission projects submit critical path schedules, and must demonstrate that they are meeting certain milestones in the critical path schedule. Section III.12.6.2 of the Tariff also requires a statement from a company officer of the relevant transmission owner verifying that the critical path schedule submitted to the ISO is achievable.

For transmission projects that satisfy the threshold specified under Section III.12.6.2 of the Tariff, the ISO considers additional factors set forth in Section III.12.6.3 to determine if the project can be included in the network model for the relevant Capacity Commitment Period. The ISO has determined that the existing and proposed transmission lines listed in Attachments A and B will be in service by the start of the Capacity Commitment Period associated with the ninth FCA.

The Informational Filing also identifies the transmission interface limits used in the process of determining the Local Sourcing Requirements and the Maximum Capacity Limit used in selecting the Capacity Zones modeled in the FCA.[27] Pursuant to Section III.12.5 of the Tariff, the ISO determines the transmission interface limits using network models that include existing and proposed transmission lines that the ISO concludes will be in service no later than the first day of the relevant Capacity Commitment Period. The ISO has calculated the transmission interface limits using a model that includes the existing and proposed transmission lines included in Attachments A and B. The following transmission interface limits were used in the process of calculating the Local Sourcing Requirements: the transmission interface limit from Maine to New Hampshire of 1,900 MW; the transmission interface limit of the Boston import area of 4,850 MW, the transmission interface limit of the SEMA/RI import area of 786 MW, and the transmission interface limit of the Connecticut import area of 2,950 MW. The transmission interface limits were determined consistent with Section 4 of ISO New England Planning Procedure No. 3 - Transmission Transfer Capability.

### 2. Capacity Zones

In accordance with Tariff Section III.12.4, the ISO will model four Capacity Zones in the ninth FCA: SEMA/RI, Connecticut, NEMA/Boston and Rest of Pool. There are no export-constrained Capacity Zones for the ninth FCA. Connecticut, SEMA/RI and NEMA/Boston will be modeled as import-constrained Capacity Zones. These four Capacity Zones will also be modeled in subsequent reconfiguration auctions and Capacity Supply Obligation Bilaterals.

### 3. Local Sourcing Requirements and Maximum Capacity Limit

The Tariff requires the ISO to provide the Local Sourcing Requirement and Maximum Capacity Limit for each modeled import-constrained and export-constrained

[27] Section III.13.8.1(a)(ii) of the Tariff.

Capacity Zone.[28] These values are used to determine the amount of capacity needed in each Load Zone. The Local Sourcing Requirement is the minimum amount of capacity that must be electrically located within an import-constrained Load Zone.[29] Import-constrained Load Zones are areas within New England that may not have adequate local resources and transmission import capability to reliably serve local demand. The ICR Filing describes the methodology used to calculate the Local Sourcing Requirements.[30] The 2018-2019 Capacity Commitment Period Local Sourcing Requirements for the Connecticut, SEMA/RI and NEMA/Boston Load Zones are 7,331 MW, 7,479 MW and 3,572 MW, respectively.[31]

The Maximum Capacity Limit is the maximum amount of capacity that can be procured in an export-constrained zone to meet the ICR.[32] As explained in the ICR Filing, for the ninth FCA, there are no export constrained Capacity Zones.[33] Accordingly, no Maximum Capacity Limit was established for the ninth FCA.

### 4. The External Interface Limits

The ISO has calculated the following external interface capabilities to be used for the purpose of calculating tie benefits and in the conduct of the ninth FCA: for Hydro-Quebec to New England interfaces, the Highgate import capability is 200 MW and the HQ Phase II import capability is 1,400 MW; for the New Brunswick to New England interface, the import capability is 700 MW; and for the New York to New England AC interface, the import capability is 1,400 MW and the direct current Cross Sound Cable import capability is zero MW. These values are the same as those used in the calculation of Tie Reliability Benefits, for determining the ICR, and were reviewed as part of the stakeholder process.

After accounting for the following Tie Reliability Benefits; 148 MW from Quebec over Highgate; 953 MW from Quebec over the HQ Phase II interface; 523 MW from New Brunswick over the New Brunswick to New England interface; and 346 MW from New York over the New York to New England AC interfaces, the maximum amount of import capacity resources that can be purchased over each interface without exceeding the external interface capabilities is 52 MW for the Highgate Interface; 447 MW for the HQ Phase II Interface; 177 MW for the New Brunswick to New England interface; 1,054 MW for the New York to New England AC interfaces, and 0 MW for the Cross Sound Cable.[34] For the ninth Forward Capacity Auction, there were no Export De-List Bids reduced or limited by export limits from New England to a neighboring Control Area.

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[28] Section III.13.8.1(a)(iv) of the Tariff.

[29] Section III.12.2 of the Tariff.

[30] ICR Filing at pp. 14-16.

[31] *Id.* at p. 2.

[32] Section III.12.2 of the Tariff.

[33] ICR Filing at pp. 6-7.

[34] Pursuant to Section III.12.10 of the Tariff.

### B. Capacity Value of Demand Resources

Section III.13.8.1(a)(v) of the Tariff requires that the Informational Filing provide the multipliers applied in determining the Capacity Value of a Demand Resource, as described in Section III.13.7.1.5.1. For the ninth FCA, the multiplier is 1.08, which represents avoided peak transmission and distribution losses.

### C. List of Resources Accepted and Rejected

Section III.13.8.1(a)(vi) of the Tariff requires that the Informational Filing list the resources that are accepted and rejected in the qualification process to participate in the FCA. Further, Section III.13.8.1(a)(vii) requires the ISO to provide the IMM's determinations regarding requests from new capacity resources to submit prices in the FCA below the relevant ORTP, including information regarding each of the elements considered in the IMM's determination (other than revenues from ISO-administered markets) and whether that element was included or excluded in the determination of whether the offer is consistent with the resource's long run average costs net of expected revenues other than capacity revenues. Additionally, Section III.13.8.1(a)(viii) requires the IMM to provide an explanation of reasons for rejecting de-list bids.[35] Finally, Section III.13.8.1(a) provides that the determinations in Sections III.13.8.1 (a)(vi-viii) be filed as privileged with the Commission.

Lead Market Participants for existing resources were notified of their resource's initial Qualified Capacity on May 9, 2014. Each Project Sponsor or Lead Market Participant of a potential new capacity resource was notified of its QDN on September 26, 2014. Copies of the QDNs for resources that were not fully qualified to participate in the auction and for resources with rejected IMM de-list bids and offers below the relevant ORTP are attached hereto as privileged Attachment I. Because the notifications contain commercially sensitive information, the ISO has requested that the Commission treat the information in Attachment I as privileged. Summary explanations for the rejections are provided in privileged Attachments D, G and H, which will be made public no later than 15 days after the FCA.[36]

#### 1. Existing Resources

An Existing Capacity Resource may be an Existing Generating Capacity Resource, an Existing Import Capacity Resource, or an Existing Demand Resource. A total of 32,555 MW of Existing Capacity Resources qualified for the ninth FCA; representing 29,727 MW from Existing Generating Capacity Resources, 89 MW from Existing Import Capacity

[35] Pursuant to Section III.13.2.5.2.5 of the Tariff, all de-list bids are also subject to reliability review.

[36] Section III.13.8.1 (a).

Resources, and 2,740 MW from Existing Demand Resources. Attachment C shows the Existing Capacity Resources qualified for the ninth FCA.

### a. Existing Resources That Submitted De-List Bids

Market Participants with Existing Capacity Resources may opt out of the capacity market by submitting a de-list bid. For the ninth FCA, a total of 8,301 MW of pre-auction de-list bids were submitted Pursuant to Section III.13.1.2.3.2 of the Tariff, the IMM must review Export Bids and Static and Permanent De-list Bids submitted by Market Participants above the Dynamic De-list Bid Threshold of $3.94/kW-month.[37] For each participant that is a pivotal supplier, the IMM must determine if the de-list bid submitted by the participant is consistent with the four cost components comprising a de-list bid: (1) the participants' net going forward costs for the resource; (2) the participant's reasonable expectations of the resource's Capacity Performance Payments; (3) the participant's reasonable risk premium; and (4) opportunity costs.

In April and May 2014, the IMM held multi-day de-list bid review and ORTP training for Market Participants. De-list bids for existing resources and offers below ORTPs for new resources were due by mid-June 2014. The IMM reviewed each de-list bid and the supporting cost information. The IMM then engaged in an iterative review process, by first inviting participants to present their submissions in person, then evaluating submissions, and sending participant-specific questions and requests for additional information in July and August. The IMM issued preliminary determinations in mid-September, and then incorporated the additional feedback from participants into the final determinations where possible. Participants were notified of the IMM's final determinations in QDNs issued on September 26, 2014.

If the IMM determined that the de-list bid is consistent with the resource's net going forward costs, reasonable expectation of the resource's Capacity Performance Payments, reasonable risk premium assumptions, and reasonable opportunity costs, the bid will be entered into the FCA as described in Section III.13.2.3.2.(b) of the Tariff. If the IMM determined that the participant's de-list bid is inconsistent with reasonable estimates of any of those four elements of the de-list bid, and if the participant is a pivotal supplier, as defined in Section.III.13.1.2.3.2 of the Tariff, then the de-list was rejected and replaced with the IMM's determined de-list bid. For the ninth FCA, all participants with existing resources are pivotal suppliers and are therefore subject to review by the IMM.

A participant that has had its de-list bid rejected by the IMM may elect to accept the IMM determined bid, to submit revised prices for the de-list bid for the resource at prices equal to or less than the IMM's determined bid price, or to withdraw the de-list bid. A participant making any of these elections is prohibited from challenging the IMM's determined de-list bid. If no such election is made, the participant may challenge the

[37] See Sections III.13.1.2.3.2.1.1. and III.13.1.4.1.1. of the Tariff.

IMM's determination and propose a different de-list bid detailing the bid and its justification based on the resource's net going forward costs, reasonable expectations about the resource's Capacity Performance Payments, reasonable risk premium assumptions, and reasonable opportunity costs pursuant to Section III.13.8.1(b) of the Tariff.

Attachment J contains the approach and methodology followed by the IMM in establishing an alternative de-list bid value when the IMM rejected some or all of the components of the participant-submitted de-list bids. This document was included as attachment B to each QDN letter of rejected de-list bids by the IMM.

#### i. Accepted De-List Bids

Section III.13.8.1(a) of the Tariff requires the ISO to file the de-list bids accepted by the IMM as confidential. Accordingly, the IMM accepted de-list bids are included in privileged Attachment E. In accordance with Sections III.13.8.1(a), the ISO will make this Attachment public no later than 15 days after the FCA.

#### ii. Rejected De-List Bids

Section III.13.8.1(a) of the Tariff requires the ISO to file the de-list bids rejected by the IMM as confidential. Accordingly, the IMM rejected de-list bids are included in privileged Attachment E.

### b. Non-Price Retirements

A Non-Price Retirement Request is a binding request to retire the capacity of a resource and supersedes any prior de-list bid for the same Capacity Commitment Period.[38] Approval of Non-Price Retirement Requests is subject to reliability review under the Tariff.[39] During the qualification process for the 2018-2019 Capacity Commitment Period, 41 Non-Price Retirement Requests for approximately 464 MW were submitted to the ISO. See the following link for details: http://www.iso-ne.com/system-planning/resource-planning/nonprice-retirement**.**

## 2. New Resources

A New Capacity Resource may be a New Generating Capacity Resource, a New Import Capacity Resource or a New Demand Resource. All Project Sponsors of new resources must have submitted a New Capacity Show of Interest Form, and, at a later date, a New Capacity Qualification Package, in order to be eligible to participate in the FCA. A new resource is required to demonstrate in the New Capacity Show of Interest Form and

[38] Pursuant to Sections III.13.1.2.3.1.5 and III.13.1.4.1.1 of the Tariff, a resource may retire a portion of its capacity.

[39] Section III.13.2.5.2.5 of the Tariff.

the New Capacity Qualification Package that it can produce or curtail a specific megawatt value for the relevant Capacity Commitment Period.

### a. Accepted New Resources

Attachment D, which pursuant to Section III.13.8.1(a) of the Tariff is filed as privileged, lists the new Generating, Import and Demand Resources qualified to participate in the ninth FCA. Resources that were qualified but withdrew by the relevant deadline are excluded.[40] In addition, for those resources that have been qualified as incremental new capacity, only the incremental megawatt amount is shown. Pursuant to the Tariff, new Real-Time Emergency Generation resources are treated as Existing Capacity Resources for purposes of running the FCA.[41]

Not included in the values in Attachment D is an additional 5 MW of capacity that was inadvertently not qualified due to an update in the ISO's evaluation tool. Due to the timing of the update, the ISO was not able to include the 5 MW of capacity in the QDNs issued to these resources on September 26, 2014. Accordingly, the ISO requests that the Commission allow the ISO to qualify these resources at the additional 5 MW capacity value. More detail on these resources is included in Attachment D. If the Commission approves the new qualification values for these resources specified in Attachment D, the affected resources will need to pay the FCM deposit for the additional values, along with the remaining financial assurance, no later than January 16, 2015.

### b. Rejected New Resources

The ISO undertook a detailed analysis of each project to ascertain whether it met all of the qualification criteria for the ninth FCA. This analysis involved a careful review of the interconnection of the resource and associated transmission upgrades that would be necessary to qualify a Generating Capacity Resource and careful review of Project Descriptions, Measurement and Verification Plans, Customer Acquisition Plans, and, Funding Plans. The ISO provided guidance to Market Participants and publicly posted the deadline in advance of the New Capacity Qualification Deadline. In accordance with Tariff Section III.13.1.1.2.3, the ISO worked in consultation with the applicable Transmission Owner in reaching each determination involving that Transmission Owner's assets. Similarly, the ISO consulted with Demand Resource Market Participants and sought to ascertain clarity on project submittals where needed.

As a general matter, several participants have had the non-commercial portion of their existing Demand Resources terminated for failing to meet Critical Path Schedules. Many of these same participants also sought to qualify additional capacity

[40] Section III.13.1.1.2 of the Tariff.

[41] Section III.13.1.4.1.3 of the Tariff.

even though they failed to deliver capacity from their existing Demand Resource projects. As a result, these proposed demand resources were denied qualification of the full amount of their proposed projects because the participant did not sufficiently demonstrate that the resources could be developed on top of existing monitored projects and their capability of delivering new capacity to the system.

Section III.13.8.1 (a) of the Tariff requires the ISO to file, as confidential, resources rejected in the qualification process, with the exception of new resources rejected due to the overlapping interconnection impacts analysis. Accordingly, rejected new resource projects are provided in privileged Attachment D. New resources rejected due to the overlapping interconnection impact analysis are described below.

**Exelon Generation Company, LLC.**

The Everett Peaker - 345 kV project requested to be qualified with a summer Qualified Capacity of 194.800 MW and requested winter Qualified Capacity of 205.100 MW in the NEMA/Boston Load Zone. The initial interconnection analysis, including the analysis of overlapping interconnection impacts, determined several transmission elements to be overloaded after the addition of the Everett Peaker - 345 kV project. The ISO has determined that the upgrades required to eliminate these overloads cannot be reasonably expected to be completed by the start of the 2018-2019 Capacity Commitment Period.

The Everett Peaker - 115 kV project requested to be qualified with a summer Qualified Capacity of 194.800 MW and requested winter Qualified Capacity of 205.100 MW in the NEMA/Boston Load Zone. The initial interconnection analysis, including the analysis of overlapping interconnection impacts, determined several transmission elements to be overloaded after the addition of the Everett Peaker - 115 kV project. The ISO has determined that the upgrades required to eliminate these overloads cannot be reasonably expected to be completed by the start of the 2018-2019 Capacity Commitment Period.

**Hawkes Meadow Energy, LLC.**

The Hawkes Meadow Energy Station project requested to be qualified with a summer Qualified Capacity of 451.000 MW and requested winter Qualified Capacity of 481.000 MW in the NEMA/Boston Load Zone. The initial interconnection analysis, including the analysis of overlapping interconnection impacts, determined several transmission elements to be overloaded after the addition of the Hawkes Meadow Energy Station project. The ISO has determined that the upgrades required to eliminate these overloads cannot be reasonably expected to be completed by the start of the 2018-2019 Capacity Commitment Period.

The following new resource project in Maine was not qualified because the overlapping interconnection impact analysis determined that the addition of the project would overload the Orrington South interface. Due to the complexity of the transmission planning analyses necessary to fully identify the upgrades and the amount of additional transfer capability necessary to allow the new resource to qualify north of the Orrington South interface, the ISO determined that the upgrades are not expected to be in place prior to the start of the 2018-2019 Capacity Commitment Period. It is important to note that the resource did not request a preliminary overlapping interconnection impact analysis pursuant to Schedules 22 or 23 of the ISO Tariff (the Large/Small Generator Interconnection Procedures) to identify potential upgrades necessary for the resource to qualify for participation in the FCA.[42] Resources that are not qualified to participate in the FCM may still be built and operated in the energy and other ancillary markets. In fact, several of the resources that have not been qualified for previous FCAs because of the Orrington South interface constraint, have nonetheless built their projects and are providing energy (but not capacity) to the ISO Control Area.

**NextEra Energy Power Marketing, LLC.**

The PineTree Landfill gas to energy project requested to be qualified with a summer Qualified Capacity of 0.800 MW in the Maine Load Zone. The overlapping interconnection impact analysis determined that the Orrington South interface would be overloaded after the addition of the PineTree Landfill gas to energy project. Due to the complexity of the transmission planning analyses necessary to fully identify the upgrades and the amount of additional transfer capability necessary to allow new resources to qualify north of the Orrington South interface, the ISO has determined that the upgrades are not expected to be in place prior to the start of the 2018-2019 Capacity Commitment Period.

### c. Requested Prices below the relevant Offer Review Trigger Price

Pursuant to Section III.A.21.2 of the Tariff, the IMM reviews requests submitted by a new capacity resource to submit offers in the FCA below the ORTP for the applicable resource type, using an iterative process that follows the same timeline as the de-list bid review process. If the IMM determines that the requested offer price is inconsistent with the IMM's capacity price estimate, then the resource's New Resource Offer Floor Price will be set to a level that is consistent with the capacity price estimate, as determined by the IMM.[43] The IMM's capacity price estimate is derived by entering all relevant resource costs and non-capacity revenue data, as well as assumptions regarding depreciation, taxes, and discount rate into the capital budgeting model used to develop the relevant ORTP and calculating the break-even contribution required from the Forward Capacity Market to yield a discounted cash flow with a net present value of zero for the project.

[42]Section 7.3 of Schedule 22 of the Open Access Transmission Tariff.

[43] Section III.13.A.21.2(b)(iv) of the Tariff.

Section III.13.8.1(a)(vii) requires the ISO to provide the IMM's determinations regarding requested offer prices below the relevant ORTP, including information regarding each of the elements considered in the IMM's determination (other than revenues from ISO-administered markets) and whether that element was included or excluded in the determination of whether the offer is consistent with the resource's long run average costs net of expected revenues other than capacity revenues (the IMM's capacity price estimate). Pursuant to Section III.13.8.1(a) of the Tariff, the IMM determinations regarding requested offers below the relevant ORTP and the information regarding each of the elements considered in the IMM's determination (other than revenues from ISO-administered markets) are filed as privileged in Attachments D, G and H. Section III.13.8.1(a) of the Tariff also requires the ISO to file the Generating Capacity Resource supply offers[44] and New Demand Resource offers evaluated by the IMM as confidential. Accordingly, the IMM evaluated New Generating Capacity Resources supply offers[45] and New Demand Resource offers are included in the privileged Attachments G and H. These attachments will be made public no later than 15 days after the FCA. [46]

### i. Renewable Technology Resources

Pursuant to Section III.13.1.1.1.7 of the Tariff, seven resources, totaling approximately 79 MW, were designated as Renewable Technology Resources. This total is less than the 200 MW Renewable Technology Resource maximum allowed, and therefore was not prorated. The ORTP for these resources has been updated to $0/kW-Month.

## V. SERVICE

The ISO has served via electronic mail the foregoing document and attachments upon the Governance Participants posted on the ISO's website at http://www.iso-ne.com/committees/directory/default/committee.action?committeeId=1.

## VI. CONCLUSION

In this Informational Filing, the ISO has presented all of the information required by Section III.13.8.1 of the Tariff. The ISO has reviewed and set forth the characteristics of the transmission system, and Capacity Zones that will be modeled for the auction. The ISO has also calculated and presented a multiplier for Demand Resources as required by the Tariff. The ISO and the IMM, as appropriate, have reviewed a large number of offers and bids and determined which should qualify for the FCA pursuant to the Tariff, and have

[44] The megawatt values presented in this table are offered megawatts and may differ from the FCA Qualified Capacity megawatts found in Attachment D.

[45] The megawatt values presented in this table are offered megawatts and may differ from the FCA Qualified Capacity megawatts found in Attachment D.

[46] Section III.13.8.1(a) of the Tariff.

provided their determinations herein as required by the Tariff. Overall, 32,555 MW of existing and approximately 8,547 MW[47] of new resources have qualified to participate in the ninth FCA and will compete in the auction to meet a NICR of 34,189 MW.

Respectfully submitted,

By: */s/ Kevin W. Flynn*

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Attachments

[47] Summer Qualified Capacity.

# Attachment A: Existing Transmission Lines

# Attachment A
# Existing Transmission Lines

See “ISO-New England Pool Transmission Facilities (2014) Final" available at:
http://www.iso-ne.com/static-assets/documents/trans/planning/ptf_cat/2014_ptf_catalog.pdf

# Attachment B: Proposed Transmission Lines

# Attachment B
# Proposed Transmission Lines

See “2018-2019 FCM New Transmission Project Tracker" available at:
http://www.iso-ne.com/markets-operations/markets/forward-capacity-market

# Attachment C: Existing Generating, Import, and Demand Resource Capacity

**Attachment C**
**Existing Generating, Import, and Demand Resource Capacity**

| Summary of Existing Resources | | | |
|---|---|---|---|
| **Type** | **Sub-type** | **Count** | **FCA Qualified Capacity (MW)** |
| **DR** | On Peak | 67 | 1,527.912 |
| | RTDR | 58 | 623.043 |
| | RTEG | 25 | 244.030 |
| | Seasonal Peak | 7 | 344.581 |
| | **DR Totals** | **157** | **2,739.566** |
| **Gen** | Intermittent | 308 | 903.208 |
| | Non Intermittent | 255 | 28,823.590 |
| | Significant Increase | 1 | - |
| | **Gen Totals** | **564** | **29,726.798** |
| **Import** | Resource Backed | 3 | 88.800 |
| | Pool Backed | - | - |
| | **Import Totals** | **3** | **88.800** |
| **TOTALS** | | **724** | **32,555.164** |

| Mutually Exclusive | | |
|---|---|---|
| | **Total Count** | **Final Qualified Capacity (MW)** |
| **New Resources** | **0** | **-** |
| **Existing Resources** | **0** | **-** |

**Mutually Exclusive Resources are resources that will clear as either new or existing, but not both.**

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 1 | DR | ON_PEAK | 12696 | 7.9 MW CHP Plant | Rest-of-Pool | .Z.NEWHAMPSHIRE | 10.800 |
| 2 | DR | ON_PEAK | 12694 | Acushnet Company - Ball Plant II - Combined Heat and Power Project | SEMA-RI | .Z.SEMASS | 2.111 |
| 3 | DR | ON_PEAK | 12590 | Ameresco CT DSM | Connecticut | .Z.CONNECTICUT | 5.387 |
| 4 | DR | ON_PEAK | 16687 | Bangor Hydro OP | Rest-of-Pool | .Z.MAINE | 11.232 |
| 5 | DR | ON_PEAK | 12749 | Bridgewater Correctional Complex Cogeneration | SEMA-RI | .Z.SEMASS | 1.412 |
| 6 | DR | ON_PEAK | 12822 | Burlington Electric Department - On-Peak Efficiency | Rest-of-Pool | .Z.VERMONT | 5.622 |
| 7 | DR | ON_PEAK | 12597 | Cambridge Energy Alliance-1 | NEMA-Boston | .Z.NEMASSBOST | 0.653 |
| 8 | DR | ON_PEAK | 12598 | Cambridge Energy Alliance-2 | NEMA-Boston | .Z.NEMASSBOST | 4.736 |
| 9 | DR | ON_PEAK | 12705 | Cape Light Compact Energy Efficiency Portfolio | SEMA-RI | .Z.SEMASS | 30.377 |
| 10 | DR | ON_PEAK | 9100 | CL&P Connecticut Portfolio | Connecticut | .Z.CONNECTICUT | 10.967 |
| 11 | DR | ON_PEAK | 9127 | CL&P CT Portfolio - 2007 | Connecticut | .Z.CONNECTICUT | 0.000 |
| 12 | DR | ON_PEAK | 9115 | CL&P Dist Gen 2007 | Connecticut | .Z.CONNECTICUT | 0.293 |
| 13 | DR | ON_PEAK | 12583 | CL&P Distributed Generation FCM 2010 | Connecticut | .Z.CONNECTICUT | 34.232 |
| 14 | DR | ON_PEAK | 9109 | Commercial Energy Efficiency | Rest-of-Pool | .Z.VERMONT | 0.085 |
| 15 | DR | ON_PEAK | 12584 | Conservation and Load Management Program | Connecticut | .Z.CONNECTICUT | 5.863 |
| 16 | DR | ON_PEAK | 12779 | CPLN CT On-Peak | Connecticut | .Z.CONNECTICUT | 1.004 |
| 17 | DR | ON_PEAK | 12832 | CPLN MA NEMA OP | NEMA-Boston | .Z.NEMASSBOST | 6.561 |
| 18 | DR | ON_PEAK | 12835 | CPLN MA SEMA OP | SEMA-RI | .Z.SEMASS | 0.230 |
| 19 | DR | ON_PEAK | 12838 | CPLN MA WC OP | Rest-of-Pool | .Z.WCMASS | 7.692 |
| 20 | DR | ON_PEAK | 12843 | CPLN RI OP | SEMA-RI | .Z.RHODEISLAND | 0.280 |
| 21 | DR | ON_PEAK | 12786 | CSG Aggregation of DG and 24 hr lighting EE - NEMA1 | NEMA-Boston | .Z.NEMASSBOST | 12.318 |
| 22 | DR | ON_PEAK | 12791 | CSG Aggregation of DG and 24 hr lighting EE - SEMA1 | SEMA-RI | .Z.SEMASS | 1.517 |
| 23 | DR | ON_PEAK | 12799 | CSG Aggregation of DG and 24 hr lighting EE - WCMA1 | Rest-of-Pool | .Z.WCMASS | 1.053 |
| 24 | DR | ON_PEAK | 12790 | CSG Aggregation of DG and 24 hr lighting EE -RI | SEMA-RI | .Z.RHODEISLAND | 0.217 |
| 25 | DR | ON_PEAK | 12586 | Efficiency Maine Residential Efficient Products | Rest-of-Pool | .Z.MAINE | 39.815 |
| 26 | DR | ON_PEAK | 35453 | Efficiency Maine Trust | Rest-of-Pool | .Z.MAINE | 21.306 |
| 27 | DR | ON_PEAK | 16651 | Efficiency Maine Trust Efficient Products | Rest-of-Pool | .Z.MAINE | 49.992 |
| 28 | DR | ON_PEAK | 37112 | Efficiency Maine Trust FCA6 | Rest-of-Pool | .Z.MAINE | 1.890 |
| 29 | DR | ON_PEAK | 38057 | Efficiency Maine Trust FCA6 B | Rest-of-Pool | .Z.MAINE | 52.652 |
| 30 | DR | ON_PEAK | 14579 | FGE Energy Efficiency Portfolio 2011 | Rest-of-Pool | .Z.WCMASS | 0.222 |
| 31 | DR | ON_PEAK | 15586 | Gardner Wind Turbine | Rest-of-Pool | .Z.WCMASS | 0.318 |
| 32 | DR | ON_PEAK | 12753 | MA SEMA state colleges | SEMA-RI | .Z.SEMASS | 0.147 |
| 33 | DR | ON_PEAK | 9122 | ngrid nema odr eeproject_1 | NEMA-Boston | .Z.NEMASSBOST | 3.862 |
| 34 | DR | ON_PEAK | 9114 | ngrid nh odr eeproject_1 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.703 |
| 35 | DR | ON_PEAK | 9116 | ngrid ri odr eeproject_1 | SEMA-RI | .Z.RHODEISLAND | 7.032 |
| 36 | DR | ON_PEAK | 9120 | ngrid sema odr eeproject_1 | SEMA-RI | .Z.SEMASS | 5.275 |
| 37 | DR | ON_PEAK | 9121 | ngrid wcma odr eeproject_1 | Rest-of-Pool | .Z.WCMASS | 5.442 |
| 38 | DR | ON_PEAK | 12670 | ngrid_nema_fca1_eeodr | NEMA-Boston | .Z.NEMASSBOST | 92.911 |
| 39 | DR | ON_PEAK | 12671 | ngrid_nh_fca1_eeodr | Rest-of-Pool | .Z.NEWHAMPSHIRE | 5.689 |
| 40 | DR | ON_PEAK | 12672 | ngrid_ri_fca1_eeodr | SEMA-RI | .Z.RHODEISLAND | 148.929 |
| 41 | DR | ON_PEAK | 12673 | ngrid_sema_fca1_eeodr | SEMA-RI | .Z.SEMASS | 123.612 |
| 42 | DR | ON_PEAK | 12674 | ngrid_wcma_fca1_eeodr | Rest-of-Pool | .Z.WCMASS | 171.473 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 43 | DR | ON_PEAK | 9128 | NHEC CORE EE Pgm Portfolio 1 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.159 |
| 44 | DR | ON_PEAK | 12757 | NHEC Energy Efficiency Programs | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.364 |
| 45 | DR | ON_PEAK | 12752 | Norfolk Walpole Correctional Complex Cogeneration | SEMA-RI | .Z.SEMASS | 1.320 |
| 46 | DR | ON_PEAK | 12684 | NSTAR EE NEMA | NEMA-Boston | .Z.NEMASSBOST | 336.191 |
| 47 | DR | ON_PEAK | 12685 | NSTAR EE SEMA | SEMA-RI | .Z.SEMASS | 62.003 |
| 48 | DR | ON_PEAK | 9126 | NSTAR NEMA 07 | NEMA-Boston | .Z.NEMASSBOST | 4.203 |
| 49 | DR | ON_PEAK | 9123 | NSTAR SEMA | SEMA-RI | .Z.SEMASS | 3.390 |
| 50 | DR | ON_PEAK | 9105 | PSNH CORE EE Pgm Portfolio I | Rest-of-Pool | .Z.NEWHAMPSHIRE | 2.918 |
| 51 | DR | ON_PEAK | 12693 | PSNH CORE Energy Efficiency Programs | Rest-of-Pool | .Z.NEWHAMPSHIRE | 46.995 |
| 52 | DR | ON_PEAK | 9108 | Residential Energy Efficienc | Rest-of-Pool | .Z.VERMONT | 0.016 |
| 53 | DR | ON_PEAK | 38217 | RI CHP | SEMA-RI | .Z.RHODEISLAND | 10.399 |
| 54 | DR | ON_PEAK | 12754 | Tewksbury State Hospital Cogenerator | Rest-of-Pool | .Z.WCMASS | 0.734 |
| 55 | DR | ON_PEAK | 12801 | UES CORE Energy Efficiency Programs | Rest-of-Pool | .Z.NEWHAMPSHIRE | 6.977 |
| 56 | DR | ON_PEAK | 9125 | UES EE Project 2007 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.622 |
| 57 | DR | ON_PEAK | 14580 | UES Energy Efficiency Portfolio 2011 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.271 |
| 58 | DR | ON_PEAK | 9129 | UMass Amherst - 4 MW Steam Turbine | Rest-of-Pool | .Z.WCMASS | 1.620 |
| 59 | DR | ON_PEAK | 12657 | Unitil CORE Energy Efficiency Programs-2 | Rest-of-Pool | .Z.WCMASS | 6.706 |
| 60 | DR | ON_PEAK | 9118 | Unitil EE Project -2007 | Rest-of-Pool | .Z.WCMASS | 0.066 |
| 61 | DR | ON_PEAK | 12802 | University of Massachusetts Central Heating Plant-3 | Rest-of-Pool | .Z.WCMASS | 10.260 |
| 62 | DR | ON_PEAK | 12805 | University of Rhode Island - Energy Saving Performance Contract | SEMA-RI | .Z.RHODEISLAND | 0.624 |
| 63 | DR | ON_PEAK | 12845 | Vermont Efficiency Portfolio-1 | Rest-of-Pool | .Z.VERMONT | 112.716 |
| 64 | DR | ON_PEAK | 38216 | WCMA CHP | Rest-of-Pool | .Z.WCMASS | 0.613 |
| 65 | DR | ON_PEAK | 16790 | WCMA Project E | Rest-of-Pool | .Z.WCMASS | 0.400 |
| 66 | DR | ON_PEAK | 38219 | WMECO EE WCMA | Rest-of-Pool | .Z.WCMASS | 32.400 |
| 67 | DR | ON_PEAK | 9131 | WMECO MA Portfolio 2006 | Rest-of-Pool | .Z.WCMASS | 0.033 |
| 68 | DR | REAL_TIME | 10361 | BOC Kittery Load | Rest-of-Pool | .Z.MAINE | 9.396 |
| 69 | DR | REAL_TIME | 10106 | Citizens Group A | Rest-of-Pool | .Z.VERMONT | 5.940 |
| 70 | DR | REAL_TIME | 16713 | Comverge CoolSentry 2 | Connecticut | .Z.CONNECTICUT | 2.200 |
| 71 | DR | REAL_TIME | 16718 | Comverge CoolSentry 4 | Connecticut | .Z.CONNECTICUT | 1.500 |
| 72 | DR | REAL_TIME | 10091 | MWRA Deer Island | NEMA-Boston | .Z.NEMASSBOST | 15.660 |
| 73 | DR | REAL_TIME | 37093 | NH DR 1 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1.898 |
| 74 | DR | REAL_TIME | 16700 | RI CoolSentry | SEMA-RI | .Z.RHODEISLAND | 8.527 |
| 75 | DR | REAL_TIME | 38120 | RTDR_50017_Bangor Hydro (7504) - 3 | Rest-of-Pool | .Z.MAINE | 2.436 |
| 76 | DR | REAL_TIME | 38121 | RTDR_50017_Boston (7507) - 3 | NEMA-Boston | .Z.NEMASSBOST | 3.230 |
| 77 | DR | REAL_TIME | 38122 | RTDR_50017_Central MA (7515) - 3 | Rest-of-Pool | .Z.WCMASS | 17.388 |
| 78 | DR | REAL_TIME | 38123 | RTDR_50017_Eastern CT (7500) - 3 | Connecticut | .Z.CONNECTICUT | 6.084 |
| 79 | DR | REAL_TIME | 38124 | RTDR_50017_Lower SEMA (7511) - 3 | SEMA-RI | .Z.SEMASS | 2.411 |
| 80 | DR | REAL_TIME | 38125 | RTDR_50017_Maine (7505) - 3 | Rest-of-Pool | .Z.MAINE | 95.020 |
| 81 | DR | REAL_TIME | 38126 | RTDR_50017_New Hampshire (7509) - 3 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 8.550 |
| 82 | DR | REAL_TIME | 38127 | RTDR_50017_North Shore (7508) - 3 | NEMA-Boston | .Z.NEMASSBOST | 3.812 |
| 83 | DR | REAL_TIME | 38128 | RTDR_50017_Northern CT (7501) - 3 | Connecticut | .Z.CONNECTICUT | 6.150 |
| 84 | DR | REAL_TIME | 38129 | RTDR_50017_Northwest Vermont (7513) - 3 | Rest-of-Pool | .Z.VERMONT | 19.222 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 85 | DR | REAL_TIME | 38130 | RTDR_50017_Norwalk - Stamford (7502) - 3 | Connecticut | .Z.CONNECTICUT | 3.751 |
| 86 | DR | REAL_TIME | 38131 | RTDR_50017_Portland Maine (7506) - 3 | Rest-of-Pool | .Z.MAINE | 6.315 |
| 87 | DR | REAL_TIME | 38132 | RTDR_50017_Rhode Island (7518) - 3 | SEMA-RI | .Z.RHODEISLAND | 30.916 |
| 88 | DR | REAL_TIME | 38134 | RTDR_50017_Seacoast (7510) - 3 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1.392 |
| 89 | DR | REAL_TIME | 38133 | RTDR_50017_SEMA (7512) - 3 | SEMA-RI | .Z.SEMASS | 11.818 |
| 90 | DR | REAL_TIME | 38135 | RTDR_50017_Springfield MA (7516) - 3 | Rest-of-Pool | .Z.WCMASS | 10.663 |
| 91 | DR | REAL_TIME | 38136 | RTDR_50017_Vermont (7514) - 3 | Rest-of-Pool | .Z.VERMONT | 5.711 |
| 92 | DR | REAL_TIME | 38137 | RTDR_50017_Western CT (7503) - 3 | Connecticut | .Z.CONNECTICUT | 40.551 |
| 93 | DR | REAL_TIME | 38138 | RTDR_50017_Western MA (7517) - 3 | Rest-of-Pool | .Z.WCMASS | 16.503 |
| 94 | DR | REAL_TIME | 37889 | RTDR_50092_Eastern CT (7500) - 2 | Connecticut | .Z.CONNECTICUT | 22.293 |
| 95 | DR | REAL_TIME | 37890 | RTDR_50092_Northern CT (7501) - 2 | Connecticut | .Z.CONNECTICUT | 47.961 |
| 96 | DR | REAL_TIME | 37891 | RTDR_50092_Norwalk - Stamford (7502) - 2 | Connecticut | .Z.CONNECTICUT | 2.622 |
| 97 | DR | REAL_TIME | 37892 | RTDR_50092_Western CT (7503) - 2 | Connecticut | .Z.CONNECTICUT | 26.254 |
| 98 | DR | REAL_TIME | 17334 | RTDR_50093_Western MA (7517) | Rest-of-Pool | .Z.WCMASS | 4.706 |
| 99 | DR | REAL_TIME | 38391 | RTDR_50689_Bangor Hydro (7504) - Grp A_1 | Rest-of-Pool | .Z.MAINE | 27.000 |
| 100 | DR | REAL_TIME | 38393 | RTDR_50689_Maine (7505) - Grp A_1 | Rest-of-Pool | .Z.MAINE | 43.200 |
| 101 | DR | REAL_TIME | 38210 | RTDR_50689_North_Shore_38210 | NEMA-Boston | .Z.NEMASSBOST | 11.326 |
| 102 | DR | REAL_TIME | 37917 | RTDR_50744_Boston (7507) - Grp C | NEMA-Boston | .Z.NEMASSBOST | 18.710 |
| 103 | DR | REAL_TIME | 37918 | RTDR_50744_Central MA (7515) - Grp A | Rest-of-Pool | .Z.WCMASS | 2.280 |
| 104 | DR | REAL_TIME | 37919 | RTDR_50744_Lower SEMA (7511) - Grp C | SEMA-RI | .Z.SEMASS | 0.939 |
| 105 | DR | REAL_TIME | 37920 | RTDR_50744_North Shore (7508) - Grp C | NEMA-Boston | .Z.NEMASSBOST | 1.599 |
| 106 | DR | REAL_TIME | 37922 | RTDR_50744_Northern CT (7501) - Grp B | Connecticut | .Z.CONNECTICUT | 17.891 |
| 107 | DR | REAL_TIME | 37924 | RTDR_50744_SEMA (7512) - Grp C | SEMA-RI | .Z.SEMASS | 5.684 |
| 108 | DR | REAL_TIME | 37925 | RTDR_50744_Springfield MA (7516) - Grp A | Rest-of-Pool | .Z.WCMASS | 1.380 |
| 109 | DR | REAL_TIME | 37927 | RTDR_50744_Western CT (7503) - Grp B | Connecticut | .Z.CONNECTICUT | 9.159 |
| 110 | DR | REAL_TIME | 37928 | RTDR_50786_Boston (7507) | NEMA-Boston | .Z.NEMASSBOST | 5.274 |
| 111 | DR | REAL_TIME | 37929 | RTDR_50786_Central MA (7515) | Rest-of-Pool | .Z.WCMASS | 1.825 |
| 112 | DR | REAL_TIME | 37931 | RTDR_50786_Lower SEMA (7511) | SEMA-RI | .Z.SEMASS | 1.609 |
| 113 | DR | REAL_TIME | 37932 | RTDR_50786_Maine (7505) | Rest-of-Pool | .Z.MAINE | 3.188 |
| 114 | DR | REAL_TIME | 37933 | RTDR_50786_New Hampshire (7509) | Rest-of-Pool | .Z.NEWHAMPSHIRE | 5.966 |
| 115 | DR | REAL_TIME | 37934 | RTDR_50786_North Shore (7508) | NEMA-Boston | .Z.NEMASSBOST | 2.760 |
| 116 | DR | REAL_TIME | 37935 | RTDR_50786_Northern CT (7501) | Connecticut | .Z.CONNECTICUT | 2.789 |
| 117 | DR | REAL_TIME | 37937 | RTDR_50786_Portland Maine (7506) | Rest-of-Pool | .Z.MAINE | 0.797 |
| 118 | DR | REAL_TIME | 37938 | RTDR_50786_Rhode Island (7518) | SEMA-RI | .Z.RHODEISLAND | 5.400 |
| 119 | DR | REAL_TIME | 37940 | RTDR_50786_Seacoast (7510) | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.392 |
| 120 | DR | REAL_TIME | 37939 | RTDR_50786_SEMA (7512) | SEMA-RI | .Z.SEMASS | 3.068 |
| 121 | DR | REAL_TIME | 37941 | RTDR_50786_Springfield MA (7516) | Rest-of-Pool | .Z.WCMASS | 0.692 |
| 122 | DR | REAL_TIME | 37942 | RTDR_50786_Vermont (7514) | Rest-of-Pool | .Z.VERMONT | 0.271 |
| 123 | DR | REAL_TIME | 37943 | RTDR_50786_Western CT (7503) | Connecticut | .Z.CONNECTICUT | 0.309 |
| 124 | DR | REAL_TIME | 37944 | RTDR_50786_Western MA (7517) | Rest-of-Pool | .Z.WCMASS | 0.117 |
| 125 | DR | REAL_TIME | 37095 | WCMA DR 7515 | Rest-of-Pool | .Z.WCMASS | 8.538 |
| 126 | DR | REAL_TIME_EG | 37990 | RTEG_50017_Bangor Hydro (7504) | Rest-of-Pool | .Z.MAINE | 0.581 |
| 127 | DR | REAL_TIME_EG | 37991 | RTEG_50017_Boston (7507) | NEMA-Boston | .Z.NEMASSBOST | 8.491 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 128 | DR | REAL_TIME_EG | 38139 | RTEG_50017_Central MA (7515) - 3 | Rest-of-Pool | .Z.WCMASS | 16.716 |
| 129 | DR | REAL_TIME_EG | 37993 | RTEG_50017_Eastern CT (7500) | Connecticut | .Z.CONNECTICUT | 6.628 |
| 130 | DR | REAL_TIME_EG | 37994 | RTEG_50017_Lower SEMA (7511) | SEMA-RI | .Z.SEMASS | 5.373 |
| 131 | DR | REAL_TIME_EG | 37995 | RTEG_50017_Maine (7505) | Rest-of-Pool | .Z.MAINE | 7.409 |
| 132 | DR | REAL_TIME_EG | 37996 | RTEG_50017_New Hampshire (7509) | Rest-of-Pool | .Z.NEWHAMPSHIRE | 13.338 |
| 133 | DR | REAL_TIME_EG | 37997 | RTEG_50017_North Shore (7508) | NEMA-Boston | .Z.NEMASSBOST | 1.720 |
| 134 | DR | REAL_TIME_EG | 37998 | RTEG_50017_Northern CT (7501) | Connecticut | .Z.CONNECTICUT | 3.528 |
| 135 | DR | REAL_TIME_EG | 37999 | RTEG_50017_Northwest Vermont (7513) | Rest-of-Pool | .Z.VERMONT | 1.768 |
| 136 | DR | REAL_TIME_EG | 38140 | RTEG_50017_Norwalk - Stamford (7502) - 3 | Connecticut | .Z.CONNECTICUT | 10.155 |
| 137 | DR | REAL_TIME_EG | 38001 | RTEG_50017_Portland Maine (7506) | Rest-of-Pool | .Z.MAINE | 3.609 |
| 138 | DR | REAL_TIME_EG | 38141 | RTEG_50017_Rhode Island (7518) - 3 | SEMA-RI | .Z.RHODEISLAND | 23.749 |
| 139 | DR | REAL_TIME_EG | 38004 | RTEG_50017_Seacoast (7510) | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.684 |
| 140 | DR | REAL_TIME_EG | 38142 | RTEG_50017_SEMA (7512) - 3 | SEMA-RI | .Z.SEMASS | 10.589 |
| 141 | DR | REAL_TIME_EG | 38005 | RTEG_50017_Springfield MA (7516) | Rest-of-Pool | .Z.WCMASS | 3.190 |
| 142 | DR | REAL_TIME_EG | 38006 | RTEG_50017_Vermont (7514) | Rest-of-Pool | .Z.VERMONT | 1.098 |
| 143 | DR | REAL_TIME_EG | 38143 | RTEG_50017_Western CT (7503) - 3 | Connecticut | .Z.CONNECTICUT | 41.835 |
| 144 | DR | REAL_TIME_EG | 38008 | RTEG_50017_Western MA (7517) | Rest-of-Pool | .Z.WCMASS | 3.162 |
| 145 | DR | REAL_TIME_EG | 38009 | RTEG_50092_Eastern CT (7500) - 2 | Connecticut | .Z.CONNECTICUT | 11.829 |
| 146 | DR | REAL_TIME_EG | 38010 | RTEG_50092_Northern CT (7501) - 2 | Connecticut | .Z.CONNECTICUT | 24.807 |
| 147 | DR | REAL_TIME_EG | 38011 | RTEG_50092_Norwalk - Stamford (7502) - 2 | Connecticut | .Z.CONNECTICUT | 7.234 |
| 148 | DR | REAL_TIME_EG | 38012 | RTEG_50092_Western CT (7503) - 2 | Connecticut | .Z.CONNECTICUT | 31.807 |
| 149 | DR | REAL_TIME_EG | 17321 | RTEG_76_Springfield MA (7516) | Rest-of-Pool | .Z.WCMASS | 3.866 |
| 150 | DR | REAL_TIME_EG | 11273 | Worcester Water Filtration | Rest-of-Pool | .Z.WCMASS | 0.864 |
| 151 | DR | SEASONAL_PEAK | 12581 | CL&P - Conservation & Load Management (CL&M) - Energy Efficiency Project | Connecticut | .Z.CONNECTICUT | 226.043 |
| 152 | DR | SEASONAL_PEAK | 9103 | CLM C&I Energy Efficiency | Connecticut | .Z.CONNECTICUT | 3.639 |
| 153 | DR | SEASONAL_PEAK | 9102 | CLM Residential Energy Effic | Connecticut | .Z.CONNECTICUT | 0.000 |
| 154 | DR | SEASONAL_PEAK | 9104 | EI C&I Energy Efficiency | Connecticut | .Z.CONNECTICUT | 1.406 |
| 155 | DR | SEASONAL_PEAK | 16547 | UI C&LM Programs | Connecticut | .Z.CONNECTICUT | 4.320 |
| 156 | DR | SEASONAL_PEAK | 12600 | UI Conservation and Load Management Programs | Connecticut | .Z.CONNECTICUT | 68.257 |
| 157 | DR | SEASONAL_PEAK | 12806 | WMECO - Conservation & Load Management (CL&M) - Energy Efficiency Project | Rest-of-Pool | .Z.WCMASS | 40.916 |
| **COUNT OF DEMAND RESOURCES: 157** | | | | | **SUBTOTAL DEMAND RESOURCES MW: 2,739.566** | | |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 1 | GEN | Intermittent | 819 | ARNOLD FALLS | Rest-of-Pool | .Z.VERMONT | 0.153 |
| 2 | GEN | Intermittent | 905 | ASHUELOT HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.344 |
| 3 | GEN | Intermittent | 953 | ATTLEBORO LANDFILL - QF | SEMA-RI | .Z.SEMASS | 0.120 |
| 4 | GEN | Intermittent | 931 | AVERY DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.188 |
| 5 | GEN | Intermittent | 951 | BALTIC MILLS - QF | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.038 |
| 6 | GEN | Intermittent | 811 | BANTAM | Connecticut | .Z.CONNECTICUT | 0.026 |
| 7 | GEN | Intermittent | 754 | BAR MILLS | Rest-of-Pool | .Z.MAINE | 1.951 |
| 8 | GEN | Intermittent | 2278 | BARKER LOWER HYDRO | Rest-of-Pool | .Z.MAINE | 0.387 |
| 9 | GEN | Intermittent | 2279 | BARKER UPPER HYDRO | Rest-of-Pool | .Z.MAINE | 0.377 |
| 10 | GEN | Intermittent | 833 | BARNET | Rest-of-Pool | .Z.VERMONT | 0.054 |
| 11 | GEN | Intermittent | 1059 | BARRE LANDFILL | Rest-of-Pool | .Z.WCMASS | 0.611 |
| 12 | GEN | Intermittent | 828 | BARTON HYDRO | Rest-of-Pool | .Z.VERMONT | 0.294 |
| 13 | GEN | Intermittent | 824 | BATH ELECTRIC HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.234 |
| 14 | GEN | Intermittent | 37072 | Beaver_Ridge_Wind | Rest-of-Pool | .Z.MAINE | 0.454 |
| 15 | GEN | Intermittent | 812 | BEEBE HOLBROOK | Rest-of-Pool | .Z.WCMASS | 0.074 |
| 16 | GEN | Intermittent | 2430 | BELDENS-NEW | Rest-of-Pool | .Z.VERMONT | 1.619 |
| 17 | GEN | Intermittent | 2280 | BENTON FALLS HYDRO | Rest-of-Pool | .Z.MAINE | 0.695 |
| 18 | GEN | Intermittent | 12180 | BERKSHIRE COW POWER | Rest-of-Pool | .Z.VERMONT | 0.264 |
| 19 | GEN | Intermittent | 14661 | Berkshire Wind Power Project | Rest-of-Pool | .Z.WCMASS | 1.824 |
| 20 | GEN | Intermittent | 337 | BETHLEHEM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 15.342 |
| 21 | GEN | Intermittent | 1258 | BHE SMALL HYDRO COMPOSITE | Rest-of-Pool | .Z.MAINE | 0.935 |
| 22 | GEN | Intermittent | 1054 | BLACKSTONE HYDRO ASSOC | SEMA-RI | .Z.RHODEISLAND | 0.000 |
| 23 | GEN | Intermittent | 1057 | BLACKSTONE HYDRO LOAD REDUCER | SEMA-RI | .Z.RHODEISLAND | 0.311 |
| 24 | GEN | Intermittent | 37105 | Blue Sky West | Rest-of-Pool | .Z.MAINE | 42.270 |
| 25 | GEN | Intermittent | 10615 | BLUE SPRUCE FARM U5 | Rest-of-Pool | .Z.VERMONT | 0.230 |
| 26 | GEN | Intermittent | 859 | BOATLOCK | Rest-of-Pool | .Z.WCMASS | 1.447 |
| 27 | GEN | Intermittent | 346 | BOLTON FALLS | Rest-of-Pool | .Z.VERMONT | 1.638 |
| 28 | GEN | Intermittent | 348 | BOOT MILLS | Rest-of-Pool | .Z.WCMASS | 8.457 |
| 29 | GEN | Intermittent | 1113 | BRASSUA HYDRO | Rest-of-Pool | .Z.MAINE | 2.002 |
| 30 | GEN | Intermittent | 860 | BRIAR HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1.126 |
| 31 | GEN | Intermittent | 357 | BRIDGEWATER | Rest-of-Pool | .Z.NEWHAMPSHIRE | 14.716 |
| 32 | GEN | Intermittent | 356 | BRISTOL REFUSE | Connecticut | .Z.CONNECTICUT | 12.422 |
| 33 | GEN | Intermittent | 11925 | BROCKTON BRIGHTFIELDS | SEMA-RI | .Z.SEMASS | 0.144 |
| 34 | GEN | Intermittent | 2439 | BROCKWAY MILLS U5 | Rest-of-Pool | .Z.VERMONT | 0.029 |
| 35 | GEN | Intermittent | 2281 | BROWNS MILL HYDRO | Rest-of-Pool | .Z.MAINE | 0.233 |
| 36 | GEN | Intermittent | 358 | BRUNSWICK | Rest-of-Pool | .Z.MAINE | 9.945 |
| 37 | GEN | Intermittent | 362 | BULLS BRIDGE | Connecticut | .Z.CONNECTICUT | 2.903 |
| 38 | GEN | Intermittent | 1165 | CADYS FALLS | Rest-of-Pool | .Z.VERMONT | 0.402 |
| 39 | GEN | Intermittent | 910 | CAMPTON DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.112 |
| 40 | GEN | Intermittent | 861 | CANAAN | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.405 |
| 41 | GEN | Intermittent | 815 | CARVER FALLS | Rest-of-Pool | .Z.VERMONT | 0.239 |
| 42 | GEN | Intermittent | 1122 | CASCADE-DIAMOND-QF | Rest-of-Pool | .Z.WCMASS | 0.142 |
| 43 | GEN | Intermittent | 816 | CAVENDISH | Rest-of-Pool | .Z.VERMONT | 0.331 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 44 | GEN | Intermittent | 789 | CEC 002 PAWTUCKET U5 | SEMA-RI | .Z.RHODEISLAND | 0.248 |
| 45 | GEN | Intermittent | 797 | CEC 003 WYRE WYND U5 | Connecticut | .Z.CONNECTICUT | 0.649 |
| 46 | GEN | Intermittent | 807 | CEC 004 DAYVILLE POND U5 | Connecticut | .Z.CONNECTICUT | 0.005 |
| 47 | GEN | Intermittent | 10401 | CELLEY MILL U5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.014 |
| 48 | GEN | Intermittent | 792 | CENTENNIAL HYDRO | Rest-of-Pool | .Z.WCMASS | 0.252 |
| 49 | GEN | Intermittent | 832 | CENTER RUTLAND | Rest-of-Pool | .Z.VERMONT | 0.000 |
| 50 | GEN | Intermittent | 914 | CHAMBERLAIN FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.000 |
| 51 | GEN | Intermittent | 862 | CHEMICAL | Rest-of-Pool | .Z.WCMASS | 0.500 |
| 52 | GEN | Intermittent | 1050 | CHICOPEE HYDRO | Rest-of-Pool | .Z.WCMASS | 0.808 |
| 53 | GEN | Intermittent | 887 | CHINA MILLS DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.040 |
| 54 | GEN | Intermittent | 863 | CLEMENT DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.604 |
| 55 | GEN | Intermittent | 886 | COCHECO FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.107 |
| 56 | GEN | Intermittent | 798 | COLEBROOK | Connecticut | .Z.CONNECTICUT | 0.559 |
| 57 | GEN | Intermittent | 1049 | COLLINS HYDRO | Rest-of-Pool | .Z.WCMASS | 0.416 |
| 58 | GEN | Intermittent | 834 | COMPTU FALLS | Rest-of-Pool | .Z.VERMONT | 0.178 |
| 59 | GEN | Intermittent | 13975 | Corriveau Hydroelectric LLC | Rest-of-Pool | .Z.MAINE | 0.053 |
| 60 | GEN | Intermittent | 10801 | COVENTRY CLEAN ENERGY | Rest-of-Pool | .Z.VERMONT | 3.390 |
| 61 | GEN | Intermittent | 12323 | COVENTRY CLEAN ENERGY #4 | Rest-of-Pool | .Z.VERMONT | 2.244 |
| 62 | GEN | Intermittent | 849 | CRESCENT DAM | Rest-of-Pool | .Z.WCMASS | 0.337 |
| 63 | GEN | Intermittent | 1209 | CRRA HARTFORD LANDFILL | Connecticut | .Z.CONNECTICUT | 1.612 |
| 64 | GEN | Intermittent | 2282 | DAMARISCOTTA HYDRO | Rest-of-Pool | .Z.MAINE | 0.000 |
| 65 | GEN | Intermittent | 835 | DEWEY MILLS | Rest-of-Pool | .Z.VERMONT | 0.436 |
| 66 | GEN | Intermittent | 618 | DG WHITEFIELD, LLC | Rest-of-Pool | .Z.NEWHAMPSHIRE | 16.563 |
| 67 | GEN | Intermittent | 2431 | DODGE FALLS-NEW | Rest-of-Pool | .Z.VERMONT | 3.174 |
| 68 | GEN | Intermittent | 970 | DUDLEY HYDRO | Rest-of-Pool | .Z.WCMASS | 0.030 |
| 69 | GEN | Intermittent | 942 | DUNBARTON ROAD LANDFILL | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.182 |
| 70 | GEN | Intermittent | 864 | DWIGHT | Rest-of-Pool | .Z.WCMASS | 0.266 |
| 71 | GEN | Intermittent | 823 | EAST BARNET | Rest-of-Pool | .Z.VERMONT | 0.458 |
| 72 | GEN | Intermittent | 38114 | East Bridgewater Solar Energy Project | SEMA-RI | .Z.SEMASS | 0.850 |
| 73 | GEN | Intermittent | 10403 | EASTMAN BROOK U5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.011 |
| 74 | GEN | Intermittent | 542 | ECO MAINE | Rest-of-Pool | .Z.MAINE | 10.887 |
| 75 | GEN | Intermittent | 836 | EMERSON FALLS | Rest-of-Pool | .Z.VERMONT | 0.014 |
| 76 | GEN | Intermittent | 830 | ENOSBURG HYDRO | Rest-of-Pool | .Z.VERMONT | 0.449 |
| 77 | GEN | Intermittent | 865 | ERROL | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1.846 |
| 78 | GEN | Intermittent | 410 | ESSEX 19 HYDRO | Rest-of-Pool | .Z.VERMONT | 3.082 |
| 79 | GEN | Intermittent | 2283 | EUSTIS HYDRO | Rest-of-Pool | .Z.MAINE | 0.069 |
| 80 | GEN | Intermittent | 411 | EXETER | Connecticut | .Z.CONNECTICUT | 19.011 |
| 81 | GEN | Intermittent | 1047 | FAIRFAX | Rest-of-Pool | .Z.VERMONT | 1.705 |
| 82 | GEN | Intermittent | 412 | FALLS VILLAGE | Connecticut | .Z.CONNECTICUT | 3.029 |
| 83 | GEN | Intermittent | 35593 | Fiske Hydro | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.077 |
| 84 | GEN | Intermittent | 943 | FOUR HILLS LANDFILL | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.355 |
| 85 | GEN | Intermittent | 194 | FOUR HILLS LOAD REDUCER | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.560 |
| 86 | GEN | Intermittent | 882 | FRANKLIN FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.428 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 87 | GEN | Intermittent | 821 | GAGE | Rest-of-Pool | .Z.VERMONT | 0.214 |
| 88 | GEN | Intermittent | 2284 | GARDINER HYDRO | Rest-of-Pool | .Z.MAINE | 0.388 |
| 89 | GEN | Intermittent | 851 | GARDNER FALLS | Rest-of-Pool | .Z.WCMASS | 0.248 |
| 90 | GEN | Intermittent | 768 | GARVINS HOOKSETT | Rest-of-Pool | .Z.NEWHAMPSHIRE | 5.173 |
| 91 | GEN | Intermittent | 850 | GLENDALE HYDRO | Rest-of-Pool | .Z.WCMASS | 0.288 |
| 92 | GEN | Intermittent | 35555 | GMCW | Rest-of-Pool | .Z.VERMONT | 0.850 |
| 93 | GEN | Intermittent | 913 | GOODRICH FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.186 |
| 94 | GEN | Intermittent | 2434 | GORGE 18 HYDRO-NEW | Rest-of-Pool | .Z.VERMONT | 0.216 |
| 95 | GEN | Intermittent | 427 | GORHAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1.192 |
| 96 | GEN | Intermittent | 1572 | GRANBY SANITARY LANDFILL QF U5 | Rest-of-Pool | .Z.WCMASS | 2.727 |
| 97 | GEN | Intermittent | 14595 | Granite Reliable Power | Rest-of-Pool | .Z.NEWHAMPSHIRE | 13.932 |
| 98 | GEN | Intermittent | 900 | GREAT FALLS LOWER | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.142 |
| 99 | GEN | Intermittent | 899 | GREAT FALLS UPPER | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.000 |
| 100 | GEN | Intermittent | 10424 | Great Lakes - Berlin Incremental | Rest-of-Pool | .Z.NEWHAMPSHIRE | 8.977 |
| 101 | GEN | Intermittent | 424 | GREAT LAKES - MILLINOCKET | Rest-of-Pool | .Z.MAINE | 44.222 |
| 102 | GEN | Intermittent | 1117 | GREAT WORKS COMPOSITE | Rest-of-Pool | .Z.MAINE | 0.019 |
| 103 | GEN | Intermittent | 12274 | GREEN MOUNTAIN DAIRY | Rest-of-Pool | .Z.VERMONT | 0.193 |
| 104 | GEN | Intermittent | 429 | GREENVILLE | Rest-of-Pool | .Z.MAINE | 2.816 |
| 105 | GEN | Intermittent | 2285 | GREENVILLE HYDRO | Rest-of-Pool | .Z.MAINE | 0.107 |
| 106 | GEN | Intermittent | 866 | GREGGS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.470 |
| 107 | GEN | Intermittent | 37050 | Groton Wind Project | Rest-of-Pool | .Z.NEWHAMPSHIRE | 6.414 |
| 108 | GEN | Intermittent | 11052 | GRTR NEW BEDFORD LFG UTIL PROJ | SEMA-RI | .Z.SEMASS | 2.537 |
| 109 | GEN | Intermittent | 2286 | HACKETT MILLS HYDRO | Rest-of-Pool | .Z.MAINE | 0.104 |
| 110 | GEN | Intermittent | 769 | HADLEY FALLS 1&2 | Rest-of-Pool | .Z.WCMASS | 13.349 |
| 111 | GEN | Intermittent | 38115 | Harrington Street PV Project | Rest-of-Pool | .Z.WCMASS | 1.430 |
| 112 | GEN | Intermittent | 436 | HEMPHILL 1 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 14.137 |
| 113 | GEN | Intermittent | 957 | HG&E HYDRO CABOT 1-4 | Rest-of-Pool | .Z.WCMASS | 1.244 |
| 114 | GEN | Intermittent | 783 | HIGHGATE FALLS | Rest-of-Pool | .Z.VERMONT | 3.216 |
| 115 | GEN | Intermittent | 16640 | Hilldale Ave Haverhill PV | NEMA-Boston | .Z.NEMASSBOST | 0.270 |
| 116 | GEN | Intermittent | 891 | HILLSBORO MILLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.024 |
| 117 | GEN | Intermittent | 919 | HOPKINTON HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.080 |
| 118 | GEN | Intermittent | 902 | HOSIERY MILL DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.061 |
| 119 | GEN | Intermittent | 11408 | HULL WIND TURBINE II | SEMA-RI | .Z.SEMASS | 0.068 |
| 120 | GEN | Intermittent | 1656 | HULL WIND TURBINE U5 | SEMA-RI | .Z.SEMASS | 0.046 |
| 121 | GEN | Intermittent | 2432 | HUNTINGTON FALLS-NEW | Rest-of-Pool | .Z.VERMONT | 1.884 |
| 122 | GEN | Intermittent | 856 | HUNT'S POND | Rest-of-Pool | .Z.WCMASS | 0.004 |
| 123 | GEN | Intermittent | 2426 | Hydro Kennebec | Rest-of-Pool | .Z.MAINE | 6.804 |
| 124 | GEN | Intermittent | 867 | INDIAN ORCHARD | Rest-of-Pool | .Z.WCMASS | 0.509 |
| 125 | GEN | Intermittent | 16659 | Ipswich Wind Farm 1 | NEMA-Boston | .Z.NEMASSBOST | 0.150 |
| 126 | GEN | Intermittent | 911 | KELLEYS FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.022 |
| 127 | GEN | Intermittent | 1119 | KENNEBAGO HYDRO | Rest-of-Pool | .Z.MAINE | 0.197 |
| 128 | GEN | Intermittent | 1273 | KENNEBEC WATER U5 | Rest-of-Pool | .Z.MAINE | 0.000 |
| 129 | GEN | Intermittent | 786 | KEZAR LEDGEMERE COMPOSITE | Rest-of-Pool | .Z.MAINE | 0.523 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 130 | GEN | Intermittent | 12551 | Kibby Wind Power | Rest-of-Pool | .Z.MAINE | 13.928 |
| 131 | GEN | Intermittent | 837 | KILLINGTON | Rest-of-Pool | .Z.VERMONT | 0.003 |
| 132 | GEN | Intermittent | 35979 | Kingdom Community Wind | Rest-of-Pool | .Z.VERMONT | 9.760 |
| 133 | GEN | Intermittent | 838 | KINGSBURY | Rest-of-Pool | .Z.VERMONT | 0.057 |
| 134 | GEN | Intermittent | 799 | KINNEYTOWN A | Connecticut | .Z.CONNECTICUT | 0.000 |
| 135 | GEN | Intermittent | 800 | KINNEYTOWN B | Connecticut | .Z.CONNECTICUT | 0.242 |
| 136 | GEN | Intermittent | 839 | LADD'S MILL | Rest-of-Pool | .Z.VERMONT | 0.026 |
| 137 | GEN | Intermittent | 892 | LAKEPORT DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.273 |
| 138 | GEN | Intermittent | 457 | LAWRENCE HYDRO | Rest-of-Pool | .Z.WCMASS | 5.760 |
| 139 | GEN | Intermittent | 14660 | Lempster Wind | Rest-of-Pool | .Z.NEWHAMPSHIRE | 3.059 |
| 140 | GEN | Intermittent | 1283 | LEWISTON U5 | Rest-of-Pool | .Z.MAINE | 0.227 |
| 141 | GEN | Intermittent | 894 | LISBON HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.244 |
| 142 | GEN | Intermittent | 462 | LISBON RESOURCE RECOVERY | Connecticut | .Z.CONNECTICUT | 13.500 |
| 143 | GEN | Intermittent | 904 | LOCHMERE DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.340 |
| 144 | GEN | Intermittent | 460 | LOCKWOOD | Rest-of-Pool | .Z.MAINE | 3.623 |
| 145 | GEN | Intermittent | 895 | LOWER ROBERTSON DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.323 |
| 146 | GEN | Intermittent | 10406 | LOWER VALLEY HYDRO U5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.164 |
| 147 | GEN | Intermittent | 10408 | LOWER VILLAGE HYDRO U5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.000 |
| 148 | GEN | Intermittent | 950 | LP ATHOL - QF | Rest-of-Pool | .Z.WCMASS | 0.084 |
| 149 | GEN | Intermittent | 1114 | MADISON COMPOSITE | Rest-of-Pool | .Z.MAINE | 0.000 |
| 150 | GEN | Intermittent | 16644 | Main Street Whitinsville PV | SEMA-RI | .Z.SEMASS | 0.280 |
| 151 | GEN | Intermittent | 13669 | Manchester Methane LLC East Windsor Facility | Connecticut | .Z.CONNECTICUT | 0.932 |
| 152 | GEN | Intermittent | 1266 | MARSH POWER | Rest-of-Pool | .Z.MAINE | 0.000 |
| 153 | GEN | Intermittent | 840 | MARTINSVILLE | Rest-of-Pool | .Z.VERMONT | 0.034 |
| 154 | GEN | Intermittent | 1061 | MASCOMA HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.253 |
| 155 | GEN | Intermittent | 10998 | MASSINNOVATION FITCHBURG | Rest-of-Pool | .Z.WCMASS | 0.000 |
| 156 | GEN | Intermittent | 2287 | MECHANIC FALLS HYDRO | Rest-of-Pool | .Z.MAINE | 0.231 |
| 157 | GEN | Intermittent | 806 | MECHANICSVILLE | Connecticut | .Z.CONNECTICUT | 0.036 |
| 158 | GEN | Intermittent | 16525 | Medway | Rest-of-Pool | .Z.MAINE | 3.443 |
| 159 | GEN | Intermittent | 759 | MESSALONSKEE COMPOSITE | Rest-of-Pool | .Z.MAINE | 1.917 |
| 160 | GEN | Intermittent | 793 | METHUEN HYDRO | NEMA-Boston | .Z.NEMASSBOST | 0.016 |
| 161 | GEN | Intermittent | 1720 | MIDDLEBURY LOWER | Rest-of-Pool | .Z.VERMONT | 0.871 |
| 162 | GEN | Intermittent | 779 | MIDDLESEX 2 | Rest-of-Pool | .Z.VERMONT | 1.033 |
| 163 | GEN | Intermittent | 16296 | Milford Hydro | Rest-of-Pool | .Z.MAINE | 6.422 |
| 164 | GEN | Intermittent | 487 | MILLER HYDRO | Rest-of-Pool | .Z.MAINE | 8.668 |
| 165 | GEN | Intermittent | 868 | MILTON MILLS HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.374 |
| 166 | GEN | Intermittent | 869 | MINE FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.788 |
| 167 | GEN | Intermittent | 794 | MINIWAWA | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.175 |
| 168 | GEN | Intermittent | 954 | MM LOWELL LANDFILL - QF | Rest-of-Pool | .Z.WCMASS | 0.094 |
| 169 | GEN | Intermittent | 1109 | MMWAC | Rest-of-Pool | .Z.MAINE | 1.792 |
| 170 | GEN | Intermittent | 915 | MONADNOCK PAPER MILLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.000 |
| 171 | GEN | Intermittent | 841 | MORETOWN 8 | Rest-of-Pool | .Z.VERMONT | 0.113 |
| 172 | GEN | Intermittent | 1166 | MORRISVILLE PLANT #2 | Rest-of-Pool | .Z.VERMONT | 0.314 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 173 | GEN | Intermittent | 1062 | MWRA COSGROVE | Rest-of-Pool | .Z.WCMASS | 0.905 |
| 174 | GEN | Intermittent | 842 | NANTANA MILL | Rest-of-Pool | .Z.VERMONT | 0.045 |
| 175 | GEN | Intermittent | 890 | NASHUA HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.326 |
| 176 | GEN | Intermittent | 978 | NEW MILFORD | Connecticut | .Z.CONNECTICUT | 1.500 |
| 177 | GEN | Intermittent | 843 | NEWBURY | Rest-of-Pool | .Z.VERMONT | 0.069 |
| 178 | GEN | Intermittent | 888 | NEWFOUND HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.410 |
| 179 | GEN | Intermittent | 772 | NEWPORT HYDRO | Rest-of-Pool | .Z.VERMONT | 1.294 |
| 180 | GEN | Intermittent | 38078 | NFM Solar Power, LLC | Rest-of-Pool | .Z.WCMASS | 0.507 |
| 181 | GEN | Intermittent | 922 | NOONE FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.016 |
| 182 | GEN | Intermittent | 760 | NORTH GORHAM | Rest-of-Pool | .Z.MAINE | 1.211 |
| 183 | GEN | Intermittent | 11126 | NORTH HARTLAND HYDRO | Rest-of-Pool | .Z.VERMONT | 2.532 |
| 184 | GEN | Intermittent | 2288 | NORWAY HYDRO | Rest-of-Pool | .Z.MAINE | 0.000 |
| 185 | GEN | Intermittent | 857 | OAKDALE HYDRO | Rest-of-Pool | .Z.WCMASS | 2.645 |
| 186 | GEN | Intermittent | 527 | OGDEN-MARTIN 1 | NEMA-Boston | .Z.NEMASSBOST | 39.352 |
| 187 | GEN | Intermittent | 897 | OLD NASH DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.024 |
| 188 | GEN | Intermittent | 854 | ORANGE HYDRO 1 | Rest-of-Pool | .Z.WCMASS | 0.034 |
| 189 | GEN | Intermittent | 855 | ORANGE HYDRO 2 | Rest-of-Pool | .Z.WCMASS | 0.071 |
| 190 | GEN | Intermittent | 908 | OTIS MILL HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.000 |
| 191 | GEN | Intermittent | 844 | OTTAUQUECHEE | Rest-of-Pool | .Z.VERMONT | 0.713 |
| 192 | GEN | Intermittent | 925 | OTTER LANE HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.013 |
| 193 | GEN | Intermittent | 820 | PASSUMPSIC | Rest-of-Pool | .Z.VERMONT | 0.215 |
| 194 | GEN | Intermittent | 814 | PATCH | Rest-of-Pool | .Z.VERMONT | 0.019 |
| 195 | GEN | Intermittent | 532 | PEJEPSCOT | Rest-of-Pool | .Z.MAINE | 7.288 |
| 196 | GEN | Intermittent | 870 | PEMBROKE | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.468 |
| 197 | GEN | Intermittent | 871 | PENNACOOK FALLS LOWER | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1.516 |
| 198 | GEN | Intermittent | 872 | PENNACOOK FALLS UPPER | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1.050 |
| 199 | GEN | Intermittent | 948 | PEPPERELL HYDRO COMPANY LLC | Rest-of-Pool | .Z.WCMASS | 0.524 |
| 200 | GEN | Intermittent | 536 | PERC-ORRINGTON 1 | Rest-of-Pool | .Z.MAINE | 21.101 |
| 201 | GEN | Intermittent | 926 | PETERBOROUGH LOWER HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.007 |
| 202 | GEN | Intermittent | 941 | PETERBOROUGH UPPER HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.010 |
| 203 | GEN | Intermittent | 10402 | PETTYBORO HYDRO U5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.001 |
| 204 | GEN | Intermittent | 818 | PIERCE MILLS | Rest-of-Pool | .Z.VERMONT | 0.105 |
| 205 | GEN | Intermittent | 809 | PINCHBECK | Connecticut | .Z.CONNECTICUT | 0.000 |
| 206 | GEN | Intermittent | 2289 | PIONEER DAM HYDRO | Rest-of-Pool | .Z.MAINE | 0.059 |
| 207 | GEN | Intermittent | 2290 | PITTSFIELD HYDRO | Rest-of-Pool | .Z.MAINE | 0.163 |
| 208 | GEN | Intermittent | 2462 | PLAINVILLE GEN QF U5 | SEMA-RI | .Z.SEMASS | 2.692 |
| 209 | GEN | Intermittent | 539 | PONTOOK HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 4.924 |
| 210 | GEN | Intermittent | 969 | POWDER MILL HYDRO | Rest-of-Pool | .Z.WCMASS | 0.010 |
| 211 | GEN | Intermittent | 14610 | Princeton Wind Farm  Project | Rest-of-Pool | .Z.WCMASS | 0.161 |
| 212 | GEN | Intermittent | 541 | PROCTOR | Rest-of-Pool | .Z.VERMONT | 1.660 |
| 213 | GEN | Intermittent | 804 | PUTNAM | Connecticut | .Z.CONNECTICUT | 0.186 |
| 214 | GEN | Intermittent | 873 | PUTTS BRIDGE | Rest-of-Pool | .Z.WCMASS | 1.183 |
| 215 | GEN | Intermittent | 810 | QUINEBAUG | Connecticut | .Z.CONNECTICUT | 0.392 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 216 | GEN | Intermittent | 16642 | Railroad Street Revere PV | NEMA-Boston | .Z.NEMASSBOST | 0.245 |
| 217 | GEN | Intermittent | 14665 | Record Hill Wind | Rest-of-Pool | .Z.MAINE | 6.948 |
| 218 | GEN | Intermittent | 874 | RED BRIDGE | Rest-of-Pool | .Z.WCMASS | 0.971 |
| 219 | GEN | Intermittent | 875 | RIVER BEND | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.548 |
| 220 | GEN | Intermittent | 795 | RIVER MILL HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.000 |
| 221 | GEN | Intermittent | 947 | RIVERDALE MILLS - QF | SEMA-RI | .Z.SEMASS | 0.000 |
| 222 | GEN | Intermittent | 1034 | RIVERSIDE 4-7 | Rest-of-Pool | .Z.WCMASS | 1.389 |
| 223 | GEN | Intermittent | 1035 | RIVERSIDE 8 | Rest-of-Pool | .Z.WCMASS | 2.568 |
| 224 | GEN | Intermittent | 876 | ROBERTSVILLE | Connecticut | .Z.CONNECTICUT | 0.005 |
| 225 | GEN | Intermittent | 1368 | ROCKY GORGE CORPORATION | Rest-of-Pool | .Z.MAINE | 0.127 |
| 226 | GEN | Intermittent | 906 | ROLLINSFORD HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.238 |
| 227 | GEN | Intermittent | 16643 | Rover Street Everett PV | NEMA-Boston | .Z.NEMASSBOST | 0.168 |
| 228 | GEN | Intermittent | 10959 | RRIG EXPANSION PHASE 2 | SEMA-RI | .Z.RHODEISLAND | 4.085 |
| 229 | GEN | Intermittent | 11424 | RUMFORD FALLS | Rest-of-Pool | .Z.MAINE | 28.971 |
| 230 | GEN | Intermittent | 2433 | RYEGATE 1-NEW | Rest-of-Pool | .Z.VERMONT | 19.000 |
| 231 | GEN | Intermittent | 38173 | Saddleback Ridge Wind | Rest-of-Pool | .Z.MAINE | 5.500 |
| 232 | GEN | Intermittent | 928 | SALMON BROOK STATION 3 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.047 |
| 233 | GEN | Intermittent | 883 | SALMON FALLS HYDRO | Rest-of-Pool | .Z.MAINE | 0.145 |
| 234 | GEN | Intermittent | 808 | SANDY HOOK HYDRO | Connecticut | .Z.CONNECTICUT | 0.007 |
| 235 | GEN | Intermittent | 877 | SCOTLAND | Connecticut | .Z.CONNECTICUT | 0.000 |
| 236 | GEN | Intermittent | 35442 | Seaman Energy | Rest-of-Pool | .Z.WCMASS | 0.377 |
| 237 | GEN | Intermittent | 827 | SEARSBURG WIND | Rest-of-Pool | .Z.WCMASS | 0.256 |
| 238 | GEN | Intermittent | 562 | SECREC-PRESTON | Connecticut | .Z.CONNECTICUT | 16.294 |
| 239 | GEN | Intermittent | 563 | SEMASS 1 | SEMA-RI | .Z.SEMASS | 46.955 |
| 240 | GEN | Intermittent | 564 | SEMASS 2 | SEMA-RI | .Z.SEMASS | 22.174 |
| 241 | GEN | Intermittent | 767 | SES CONCORD | Rest-of-Pool | .Z.NEWHAMPSHIRE | 12.151 |
| 242 | GEN | Intermittent | 761 | SHAWMUT | Rest-of-Pool | .Z.MAINE | 5.392 |
| 243 | GEN | Intermittent | 12530 | Sheffield Wind Farm | Rest-of-Pool | .Z.VERMONT | 2.795 |
| 244 | GEN | Intermittent | 565 | SHELDON SPRINGS | Rest-of-Pool | .Z.VERMONT | 4.416 |
| 245 | GEN | Intermittent | 737 | SIMPSON G LOAD REDUCER | Rest-of-Pool | .Z.VERMONT | 2.329 |
| 246 | GEN | Intermittent | 878 | SKINNER | Rest-of-Pool | .Z.WCMASS | 0.050 |
| 247 | GEN | Intermittent | 845 | SLACK DAM | Rest-of-Pool | .Z.VERMONT | 0.141 |
| 248 | GEN | Intermittent | 570 | SMITH | Rest-of-Pool | .Z.NEWHAMPSHIRE | 10.037 |
| 249 | GEN | Intermittent | 822 | SMITH (CVPS) | Rest-of-Pool | .Z.VERMONT | 0.517 |
| 250 | GEN | Intermittent | 580 | SO. MEADOW 5 | Connecticut | .Z.CONNECTICUT | 23.873 |
| 251 | GEN | Intermittent | 581 | SO. MEADOW 6 | Connecticut | .Z.CONNECTICUT | 22.797 |
| 252 | GEN | Intermittent | 1107 | SOMERSET | Rest-of-Pool | .Z.MAINE | 0.000 |
| 253 | GEN | Intermittent | 852 | SOUTH BARRE HYDRO | Rest-of-Pool | .Z.WCMASS | 0.066 |
| 254 | GEN | Intermittent | 1267 | SPARHAWK | Rest-of-Pool | .Z.MAINE | 0.001 |
| 255 | GEN | Intermittent | 35594 | Spaulding Pond Hydro | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.021 |
| 256 | GEN | Intermittent | 2425 | SPRINGFIELD REFUSE-NEW | Rest-of-Pool | .Z.WCMASS | 5.087 |
| 257 | GEN | Intermittent | 35693 | Spruce Mountain Wind | Rest-of-Pool | .Z.MAINE | 2.353 |
| 258 | GEN | Intermittent | 909 | STEELS POND HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.038 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 259 | GEN | Intermittent | 885 | STEVENS MILL | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.080 |
| 260 | GEN | Intermittent | 16523 | Stillwater | Rest-of-Pool | .Z.MAINE | 1.529 |
| 261 | GEN | Intermittent | 898 | SUGAR RIVER HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.000 |
| 262 | GEN | Intermittent | 889 | SUNAPEE HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.101 |
| 263 | GEN | Intermittent | 935 | SUNNYBROOK HYDRO 2 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.013 |
| 264 | GEN | Intermittent | 884 | SWANS FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.372 |
| 265 | GEN | Intermittent | 10409 | SWEETWATER HYDRO U5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.154 |
| 266 | GEN | Intermittent | 1270 | SYSKO STONY BROOK | Rest-of-Pool | .Z.MAINE | 0.017 |
| 267 | GEN | Intermittent | 1271 | SYSKO WIGHT BROOK | Rest-of-Pool | .Z.MAINE | 0.003 |
| 268 | GEN | Intermittent | 817 | TAFTSVILLE VT | Rest-of-Pool | .Z.VERMONT | 0.059 |
| 269 | GEN | Intermittent | 879 | TAFTVILLE CT | Connecticut | .Z.CONNECTICUT | 0.265 |
| 270 | GEN | Intermittent | 592 | TAMWORTH | Rest-of-Pool | .Z.NEWHAMPSHIRE | 19.536 |
| 271 | GEN | Intermittent | 1225 | TANNERY DAM | Rest-of-Pool | .Z.WCMASS | 0.000 |
| 272 | GEN | Intermittent | 1302 | TCPMCMPAGF GEN1 U5 | Rest-of-Pool | .Z.MAINE | 0.000 |
| 273 | GEN | Intermittent | 14652 | Templeton Wind Turbine | Rest-of-Pool | .Z.WCMASS | 0.058 |
| 274 | GEN | Intermittent | 37120 | Thundermist Hydropower | SEMA-RI | .Z.RHODEISLAND | 0.000 |
| 275 | GEN | Intermittent | 813 | TUNNEL | Connecticut | .Z.CONNECTICUT | 0.520 |
| 276 | GEN | Intermittent | 253 | TURNKEY LANDFILL | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1.185 |
| 277 | GEN | Intermittent | 831 | VAIL & GREAT FALLS | Rest-of-Pool | .Z.VERMONT | 0.312 |
| 278 | GEN | Intermittent | 949 | VALLEY HYDRO - QF | SEMA-RI | .Z.RHODEISLAND | 0.040 |
| 279 | GEN | Intermittent | 14623 | Valley Hydro (Station No. 5) | Rest-of-Pool | .Z.WCMASS | 0.241 |
| 280 | GEN | Intermittent | 2435 | VERGENNES HYDRO-NEW | Rest-of-Pool | .Z.VERMONT | 0.961 |
| 281 | GEN | Intermittent | 16631 | Victory Road Dorchester PV | NEMA-Boston | .Z.NEMASSBOST | 0.316 |
| 282 | GEN | Intermittent | 1048 | WARE HYDRO | Rest-of-Pool | .Z.WCMASS | 0.237 |
| 283 | GEN | Intermittent | 901 | WATERLOOM FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.008 |
| 284 | GEN | Intermittent | 932 | WATSON DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.024 |
| 285 | GEN | Intermittent | 2291 | WAVERLY AVENUE HYDRO | Rest-of-Pool | .Z.MAINE | 0.147 |
| 286 | GEN | Intermittent | 853 | WEBSTER HYDRO | Rest-of-Pool | .Z.WCMASS | 0.000 |
| 287 | GEN | Intermittent | 38110 | West Brookfield Solar | Rest-of-Pool | .Z.WCMASS | 0.410 |
| 288 | GEN | Intermittent | 781 | WEST DANVILLE 1 | Rest-of-Pool | .Z.VERMONT | 0.000 |
| 289 | GEN | Intermittent | 616 | WEST ENFIELD | Rest-of-Pool | .Z.MAINE | 11.216 |
| 290 | GEN | Intermittent | 893 | WEST HOPKINTON HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.237 |
| 291 | GEN | Intermittent | 10770 | WEST SPRINGFIELD HYDRO U5 | Rest-of-Pool | .Z.WCMASS | 0.333 |
| 292 | GEN | Intermittent | 10451 | WESTFIELD #1 U5 | Rest-of-Pool | .Z.WCMASS | 0.000 |
| 293 | GEN | Intermittent | 617 | WESTON | Rest-of-Pool | .Z.MAINE | 7.871 |
| 294 | GEN | Intermittent | 933 | WESTON DAM | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.226 |
| 295 | GEN | Intermittent | 349 | WHEELABRATOR BRIDGEPORT, L.P. | Connecticut | .Z.CONNECTICUT | 59.237 |
| 296 | GEN | Intermittent | 10404 | WHEELABRATOR CLAREMONT U5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 3.619 |
| 297 | GEN | Intermittent | 547 | WHEELABRATOR NORTH ANDOVER | NEMA-Boston | .Z.NEMASSBOST | 29.714 |
| 298 | GEN | Intermittent | 801 | WILLIMANTIC 1 | Connecticut | .Z.CONNECTICUT | 0.060 |
| 299 | GEN | Intermittent | 802 | WILLIMANTIC 2 | Connecticut | .Z.CONNECTICUT | 0.037 |
| 300 | GEN | Intermittent | 622 | WINOOSKI 1 | Rest-of-Pool | .Z.VERMONT | 1.977 |
| 301 | GEN | Intermittent | 846 | WINOOSKI 8 | Rest-of-Pool | .Z.VERMONT | 0.303 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 302 | GEN | Intermittent | 1167 | WOLCOTT HYDRO #1 | Rest-of-Pool | .Z.VERMONT | 0.214 |
| 303 | GEN | Intermittent | 847 | WOODSIDE | Rest-of-Pool | .Z.VERMONT | 0.065 |
| 304 | GEN | Intermittent | 10407 | WOODSVILLE HYDRO U5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.131 |
| 305 | GEN | Intermittent | 37077 | Woronoco Hydro LLC | Rest-of-Pool | .Z.WCMASS | 0.658 |
| 306 | GEN | Intermittent | 848 | WRIGHTSVILLE | Rest-of-Pool | .Z.VERMONT | 0.130 |
| 307 | GEN | Intermittent | 903 | WYANDOTTE HYDRO | Rest-of-Pool | .Z.NEWHAMPSHIRE | 0.002 |
| 308 | GEN | Intermittent | 2292 | YORK HYDRO | Rest-of-Pool | .Z.MAINE | 0.289 |
| 309 | GEN | Non Intermittent | 463 | AEI LIVERMORE | Rest-of-Pool | .Z.MAINE | 34.430 |
| 310 | GEN | Non Intermittent | 326 | ALTRESCO | Rest-of-Pool | .Z.WCMASS | 150.972 |
| 311 | GEN | Non Intermittent | 14271 | Ameresco Northampton | Rest-of-Pool | .Z.WCMASS | 0.733 |
| 312 | GEN | Non Intermittent | 327 | AMOSKEAG | Rest-of-Pool | .Z.NEWHAMPSHIRE | 16.781 |
| 313 | GEN | Non Intermittent | 1412 | ANP-BELLINGHAM 1 | SEMA-RI | .Z.SEMASS | 237.102 |
| 314 | GEN | Non Intermittent | 1415 | ANP-BELLINGHAM 2 | SEMA-RI | .Z.SEMASS | 243.587 |
| 315 | GEN | Non Intermittent | 1287 | ANP-BLACKSTONE ENERGY 2 | SEMA-RI | .Z.SEMASS | 245.314 |
| 316 | GEN | Non Intermittent | 1286 | ANP-BLACKSTONE ENERGY CO. #1 | SEMA-RI | .Z.SEMASS | 239.634 |
| 317 | GEN | Non Intermittent | 329 | ASCUTNEY GT | Rest-of-Pool | .Z.VERMONT | 8.940 |
| 318 | GEN | Non Intermittent | 330 | AYERS ISLAND | Rest-of-Pool | .Z.NEWHAMPSHIRE | 8.474 |
| 319 | GEN | Non Intermittent | 331 | AZISCOHOS HYDRO | Rest-of-Pool | .Z.MAINE | 6.800 |
| 320 | GEN | Non Intermittent | 959 | BARTON 1-4 DIESELS | Rest-of-Pool | .Z.VERMONT | 0.605 |
| 321 | GEN | Non Intermittent | 335 | BELLOWS FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 48.540 |
| 322 | GEN | Non Intermittent | 1086 | BERKSHIRE POWER | Rest-of-Pool | .Z.WCMASS | 229.279 |
| 323 | GEN | Non Intermittent | 336 | BERLIN 1 GT | Rest-of-Pool | .Z.VERMONT | 34.830 |
| 324 | GEN | Non Intermittent | 16653 | Berlin Biopower | Rest-of-Pool | .Z.NEWHAMPSHIRE | 65.380 |
| 325 | GEN | Non Intermittent | 16738 | BFCP Fuel Cell | Connecticut | .Z.CONNECTICUT | 13.054 |
| 326 | GEN | Non Intermittent | 1005 | BG DIGHTON POWER LLC | SEMA-RI | .Z.SEMASS | 160.539 |
| 327 | GEN | Non Intermittent | 755 | BONNY EAGLE W. BUXTON | Rest-of-Pool | .Z.MAINE | 16.151 |
| 328 | GEN | Non Intermittent | 590 | BORALEX STRATTON ENERGY | Rest-of-Pool | .Z.MAINE | 44.363 |
| 329 | GEN | Non Intermittent | 355 | BRANFORD 10 | Connecticut | .Z.CONNECTICUT | 15.840 |
| 330 | GEN | Non Intermittent | 1032 | BRIDGEPORT ENERGY 1 | Connecticut | .Z.CONNECTICUT | 454.434 |
| 331 | GEN | Non Intermittent | 340 | BRIDGEPORT HARBOR 3 | Connecticut | .Z.CONNECTICUT | 383.426 |
| 332 | GEN | Non Intermittent | 341 | BRIDGEPORT HARBOR 4 | Connecticut | .Z.CONNECTICUT | 17.100 |
| 333 | GEN | Non Intermittent | 1288 | BUCKSPORT ENERGY 4 | Rest-of-Pool | .Z.MAINE | 144.000 |
| 334 | GEN | Non Intermittent | 1028 | BUNKER RD #12 GAS TURB | SEMA-RI | .Z.SEMASS | 2.351 |
| 335 | GEN | Non Intermittent | 1029 | BUNKER RD #13 GAS TURB | SEMA-RI | .Z.SEMASS | 2.840 |
| 336 | GEN | Non Intermittent | 363 | BURLINGTON GT | Rest-of-Pool | .Z.VERMONT | 18.776 |
| 337 | GEN | Non Intermittent | 766 | CABOT TURNERS FALLS | Rest-of-Pool | .Z.WCMASS | 67.881 |
| 338 | GEN | Non Intermittent | 365 | CANAL 1 | SEMA-RI | .Z.SEMASS | 547.059 |
| 339 | GEN | Non Intermittent | 366 | CANAL 2 | SEMA-RI | .Z.SEMASS | 545.125 |
| 340 | GEN | Non Intermittent | 367 | CAPE GT 4 | Rest-of-Pool | .Z.MAINE | 13.750 |
| 341 | GEN | Non Intermittent | 368 | CAPE GT 5 | Rest-of-Pool | .Z.MAINE | 15.822 |
| 342 | GEN | Non Intermittent | 369 | CATARACT EAST | Rest-of-Pool | .Z.MAINE | 7.775 |
| 343 | GEN | Non Intermittent | 324 | CDECCA | Connecticut | .Z.CONNECTICUT | 55.254 |
| 344 | GEN | Non Intermittent | 2468 | CHERRY 10 | Rest-of-Pool | .Z.WCMASS | 2.100 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 345 | GEN | Non Intermittent | 2469 | CHERRY 11 | Rest-of-Pool | .Z.WCMASS | 2.100 |
| 346 | GEN | Non Intermittent | 2470 | CHERRY 12 | Rest-of-Pool | .Z.WCMASS | 4.999 |
| 347 | GEN | Non Intermittent | 2466 | CHERRY 7 | Rest-of-Pool | .Z.WCMASS | 2.800 |
| 348 | GEN | Non Intermittent | 2467 | CHERRY 8 | Rest-of-Pool | .Z.WCMASS | 3.400 |
| 349 | GEN | Non Intermittent | 2424 | CITIZENS BLOCK LOAD | Rest-of-Pool | .Z.VERMONT | 30.000 |
| 350 | GEN | Non Intermittent | 376 | CLEARY 8 | SEMA-RI | .Z.SEMASS | 24.825 |
| 351 | GEN | Non Intermittent | 375 | CLEARY 9 9A CC | SEMA-RI | .Z.SEMASS | 104.931 |
| 352 | GEN | Non Intermittent | 379 | COBBLE MOUNTAIN | Rest-of-Pool | .Z.WCMASS | 31.126 |
| 353 | GEN | Non Intermittent | 380 | COMERFORD | Rest-of-Pool | .Z.NEWHAMPSHIRE | 166.135 |
| 354 | GEN | Non Intermittent | 370 | COS COB 10 | Connecticut | .Z.CONNECTICUT | 19.028 |
| 355 | GEN | Non Intermittent | 371 | COS COB 11 | Connecticut | .Z.CONNECTICUT | 18.724 |
| 356 | GEN | Non Intermittent | 372 | COS COB 12 | Connecticut | .Z.CONNECTICUT | 18.660 |
| 357 | GEN | Non Intermittent | 12524 | Cos Cob 13&14 | Connecticut | .Z.CONNECTICUT | 36.000 |
| 358 | GEN | Non Intermittent | 12553 | Covanta Haverhill Landfill Gas Engine | NEMA-Boston | .Z.NEMASSBOST | 1.241 |
| 359 | GEN | Non Intermittent | 446 | COVANTA JONESBORO | Rest-of-Pool | .Z.MAINE | 20.226 |
| 360 | GEN | Non Intermittent | 445 | COVANTA WEST ENFIELD | Rest-of-Pool | .Z.MAINE | 20.461 |
| 361 | GEN | Non Intermittent | 388 | DARTMOUTH POWER | SEMA-RI | .Z.SEMASS | 62.156 |
| 362 | GEN | Non Intermittent | 15415 | Dartmouth Power Expansion | SEMA-RI | .Z.SEMASS | 20.305 |
| 363 | GEN | Non Intermittent | 465 | DEERFIELD 2 LWR DRFIELD | Rest-of-Pool | .Z.WCMASS | 19.275 |
| 364 | GEN | Non Intermittent | 393 | DEERFIELD 5 | Rest-of-Pool | .Z.WCMASS | 13.703 |
| 365 | GEN | Non Intermittent | 389 | DERBY DAM | Connecticut | .Z.CONNECTICUT | 7.050 |
| 366 | GEN | Non Intermittent | 396 | DEVON 10 | Connecticut | .Z.CONNECTICUT | 14.407 |
| 367 | GEN | Non Intermittent | 397 | DEVON 11 | Connecticut | .Z.CONNECTICUT | 29.299 |
| 368 | GEN | Non Intermittent | 398 | DEVON 12 | Connecticut | .Z.CONNECTICUT | 29.227 |
| 369 | GEN | Non Intermittent | 399 | DEVON 13 | Connecticut | .Z.CONNECTICUT | 29.967 |
| 370 | GEN | Non Intermittent | 400 | DEVON 14 | Connecticut | .Z.CONNECTICUT | 29.704 |
| 371 | GEN | Non Intermittent | 12504 | Devon 15-18 | Connecticut | .Z.CONNECTICUT | 187.571 |
| 372 | GEN | Non Intermittent | 392 | DEXTER | Connecticut | .Z.CONNECTICUT | 38.000 |
| 373 | GEN | Non Intermittent | 16729 | DFC-ERG Hybrid Fuel Cell | Connecticut | .Z.CONNECTICUT | 2.500 |
| 374 | GEN | Non Intermittent | 16737 | DFC-ERG Hybrid Fuel Cell (3) | Connecticut | .Z.CONNECTICUT | 2.500 |
| 375 | GEN | Non Intermittent | 395 | DOREEN | Rest-of-Pool | .Z.WCMASS | 15.959 |
| 376 | GEN | Non Intermittent | 401 | EASTMAN FALLS | Rest-of-Pool | .Z.NEWHAMPSHIRE | 5.582 |
| 377 | GEN | Non Intermittent | 407 | EASTPORT DIESELS 1-3 | Rest-of-Pool | .Z.MAINE | 2.200 |
| 378 | GEN | Non Intermittent | 405 | ELLSWORTH HYDRO | Rest-of-Pool | .Z.MAINE | 8.821 |
| 379 | GEN | Non Intermittent | 829 | ENOSBURG 2 DIESEL | Rest-of-Pool | .Z.VERMONT | 0.598 |
| 380 | GEN | Non Intermittent | 1221 | ESSEX DIESELS | Rest-of-Pool | .Z.VERMONT | 7.215 |
| 381 | GEN | Non Intermittent | 12108 | FIEC DIESEL | Rest-of-Pool | .Z.MAINE | 1.640 |
| 382 | GEN | Non Intermittent | 413 | FIFE BROOK | Rest-of-Pool | .Z.WCMASS | 6.089 |
| 383 | GEN | Non Intermittent | 35485 | Fitchburg-FCA-5 | Rest-of-Pool | .Z.WCMASS | 3.694 |
| 384 | GEN | Non Intermittent | 38089 | Footprint Combined Cycle | NEMA-Boston | .Z.NEMASSBOST | 674.000 |
| 385 | GEN | Non Intermittent | 1691 | FORE RIVER-1 | SEMA-RI | .Z.SEMASS | 700.000 |
| 386 | GEN | Non Intermittent | 417 | FRAMINGHAM JET 1 | NEMA-Boston | .Z.NEMASSBOST | 10.145 |
| 387 | GEN | Non Intermittent | 418 | FRAMINGHAM JET 2 | NEMA-Boston | .Z.NEMASSBOST | 11.686 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 388 | GEN | Non Intermittent | 419 | FRAMINGHAM JET 3 | NEMA-Boston | .Z.NEMASSBOST | 11.250 |
| 389 | GEN | Non Intermittent | 420 | FRANKLIN DRIVE 10 | Connecticut | .Z.CONNECTICUT | 15.417 |
| 390 | GEN | Non Intermittent | 421 | FRONT STREET DIESELS 1-3 | Rest-of-Pool | .Z.WCMASS | 8.250 |
| 391 | GEN | Non Intermittent | 10880 | GE LYNN EXCESS REPLACEMENT | NEMA-Boston | .Z.NEMASSBOST | 0.000 |
| 392 | GEN | Non Intermittent | 796 | GOODWIN DAM | Connecticut | .Z.CONNECTICUT | 3.000 |
| 393 | GEN | Non Intermittent | 426 | GORGE 1 DIESEL | Rest-of-Pool | .Z.VERMONT | 7.090 |
| 394 | GEN | Non Intermittent | 1625 | GRANITE RIDGE ENERGY | Rest-of-Pool | .Z.NEWHAMPSHIRE | 661.322 |
| 395 | GEN | Non Intermittent | 1432 | GRS-FALL RIVER | SEMA-RI | .Z.SEMASS | 3.113 |
| 396 | GEN | Non Intermittent | 328 | GULF ISLAND COMPOSITE Incremental | Rest-of-Pool | .Z.MAINE | 38.915 |
| 397 | GEN | Non Intermittent | 1168 | H.K. SANDERS | Rest-of-Pool | .Z.VERMONT | 1.740 |
| 398 | GEN | Non Intermittent | 435 | HARRIMAN | Rest-of-Pool | .Z.WCMASS | 38.663 |
| 399 | GEN | Non Intermittent | 432 | HARRIS 1 | Rest-of-Pool | .Z.MAINE | 16.776 |
| 400 | GEN | Non Intermittent | 433 | HARRIS 2 | Rest-of-Pool | .Z.MAINE | 34.500 |
| 401 | GEN | Non Intermittent | 434 | HARRIS 3 | Rest-of-Pool | .Z.MAINE | 33.905 |
| 402 | GEN | Non Intermittent | 757 | HARRIS 4 | Rest-of-Pool | .Z.MAINE | 1.249 |
| 403 | GEN | Non Intermittent | 440 | HIRAM | Rest-of-Pool | .Z.MAINE | 11.189 |
| 404 | GEN | Non Intermittent | 1631 | Indeck-Energy Alexandria, LLC | Rest-of-Pool | .Z.NEWHAMPSHIRE | 13.882 |
| 405 | GEN | Non Intermittent | 448 | IPSWICH DIESELS | NEMA-Boston | .Z.NEMASSBOST | 9.495 |
| 406 | GEN | Non Intermittent | 474 | J C MCNEIL | Rest-of-Pool | .Z.VERMONT | 52.000 |
| 407 | GEN | Non Intermittent | 359 | J. COCKWELL 1 | Rest-of-Pool | .Z.WCMASS | 284.100 |
| 408 | GEN | Non Intermittent | 360 | J. COCKWELL 2 | Rest-of-Pool | .Z.WCMASS | 283.741 |
| 409 | GEN | Non Intermittent | 449 | JACKMAN | Rest-of-Pool | .Z.NEWHAMPSHIRE | 3.400 |
| 410 | GEN | Non Intermittent | 1672 | KENDALL CT | NEMA-Boston | .Z.NEMASSBOST | 153.533 |
| 411 | GEN | Non Intermittent | 452 | KENDALL JET 1 | NEMA-Boston | .Z.NEMASSBOST | 18.000 |
| 412 | GEN | Non Intermittent | 37040 | KENDALL STEAM | NEMA-Boston | .Z.NEMASSBOST | 27.750 |
| 413 | GEN | Non Intermittent | 14706 | Kimberly-Clark Corp Energy Independence Project | Connecticut | .Z.CONNECTICUT | 13.375 |
| 414 | GEN | Non Intermittent | 14614 | Kleen Energy | Connecticut | .Z.CONNECTICUT | 620.000 |
| 415 | GEN | Non Intermittent | 466 | L STREET JET | NEMA-Boston | .Z.NEMASSBOST | 16.030 |
| 416 | GEN | Non Intermittent | 1342 | LAKE ROAD 1 | Connecticut | .Z.CONNECTICUT | 245.792 |
| 417 | GEN | Non Intermittent | 1343 | LAKE ROAD 2 | Connecticut | .Z.CONNECTICUT | 251.213 |
| 418 | GEN | Non Intermittent | 1344 | LAKE ROAD 3 | Connecticut | .Z.CONNECTICUT | 255.000 |
| 419 | GEN | Non Intermittent | 464 | LOST NATION | Rest-of-Pool | .Z.NEWHAMPSHIRE | 13.979 |
| 420 | GEN | Non Intermittent | 12521 | Lowell Power Reactivation | Rest-of-Pool | .Z.WCMASS | 74.000 |
| 421 | GEN | Non Intermittent | 774 | LOWER LAMOILLE COMPOSITE | Rest-of-Pool | .Z.VERMONT | 15.800 |
| 422 | GEN | Non Intermittent | 472 | M STREET JET | NEMA-Boston | .Z.NEMASSBOST | 44.434 |
| 423 | GEN | Non Intermittent | 1216 | MAINE INDEPENDENCE STATION | Rest-of-Pool | .Z.MAINE | 488.276 |
| 424 | GEN | Non Intermittent | 321 | MANCHESTER 10 10A CC | SEMA-RI | .Z.RHODEISLAND | 149.000 |
| 425 | GEN | Non Intermittent | 322 | MANCHESTER 11 11A CC | SEMA-RI | .Z.RHODEISLAND | 149.000 |
| 426 | GEN | Non Intermittent | 323 | MANCHESTER 9 9A CC | SEMA-RI | .Z.RHODEISLAND | 149.000 |
| 427 | GEN | Non Intermittent | 467 | MARBLEHEAD DIESELS | NEMA-Boston | .Z.NEMASSBOST | 5.000 |
| 428 | GEN | Non Intermittent | 468 | MARSHFIELD 6 HYDRO | Rest-of-Pool | .Z.VERMONT | 4.535 |
| 429 | GEN | Non Intermittent | 497 | MASS POWER | Rest-of-Pool | .Z.WCMASS | 240.000 |
| 430 | GEN | Non Intermittent | 38182 | MAT-2 (MATEP Combined Cycle) | NEMA-Boston | .Z.NEMASSBOST | 13.850 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 431 | GEN | Non Intermittent | 14087 | MAT3 | NEMA-Boston | .Z.NEMASSBOST | 11.573 |
| 432 | GEN | Non Intermittent | 13675 | MATEP (COMBINED CYCLE) | NEMA-Boston | .Z.NEMASSBOST | 43.250 |
| 433 | GEN | Non Intermittent | 13673 | MATEP (DIESEL) | NEMA-Boston | .Z.NEMASSBOST | 17.783 |
| 434 | GEN | Non Intermittent | 473 | MCINDOES | Rest-of-Pool | .Z.NEWHAMPSHIRE | 10.066 |
| 435 | GEN | Non Intermittent | 489 | MERRIMACK 1 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 112.500 |
| 436 | GEN | Non Intermittent | 490 | MERRIMACK 2 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 330.513 |
| 437 | GEN | Non Intermittent | 382 | MERRIMACK CT1 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 16.826 |
| 438 | GEN | Non Intermittent | 383 | MERRIMACK CT2 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 16.804 |
| 439 | GEN | Non Intermittent | 775 | MIDDLEBURY COMPOSITE | Rest-of-Pool | .Z.VERMONT | 3.600 |
| 440 | GEN | Non Intermittent | 478 | MIDDLETOWN 10 | Connecticut | .Z.CONNECTICUT | 16.319 |
| 441 | GEN | Non Intermittent | 12505 | Middletown 12-15 | Connecticut | .Z.CONNECTICUT | 187.600 |
| 442 | GEN | Non Intermittent | 480 | MIDDLETOWN 2 | Connecticut | .Z.CONNECTICUT | 117.000 |
| 443 | GEN | Non Intermittent | 481 | MIDDLETOWN 3 | Connecticut | .Z.CONNECTICUT | 236.000 |
| 444 | GEN | Non Intermittent | 482 | MIDDLETOWN 4 | Connecticut | .Z.CONNECTICUT | 400.000 |
| 445 | GEN | Non Intermittent | 486 | MILFORD POWER | SEMA-RI | .Z.SEMASS | 149.000 |
| 446 | GEN | Non Intermittent | 1385 | Milford Power 1 Incremental | Connecticut | .Z.CONNECTICUT | 253.610 |
| 447 | GEN | Non Intermittent | 1386 | MILFORD POWER 2 | Connecticut | .Z.CONNECTICUT | 253.093 |
| 448 | GEN | Non Intermittent | 1210 | MILLENNIUM | Rest-of-Pool | .Z.WCMASS | 331.000 |
| 449 | GEN | Non Intermittent | 484 | MILLSTONE POINT 2 | Connecticut | .Z.CONNECTICUT | 875.260 |
| 450 | GEN | Non Intermittent | 485 | MILLSTONE POINT 3 | Connecticut | .Z.CONNECTICUT | 1,225.000 |
| 451 | GEN | Non Intermittent | 492 | MONTVILLE 10 and 11 | Connecticut | .Z.CONNECTICUT | 5.296 |
| 452 | GEN | Non Intermittent | 493 | MONTVILLE 5 | Connecticut | .Z.CONNECTICUT | 81.000 |
| 453 | GEN | Non Intermittent | 494 | MONTVILLE 6 | Connecticut | .Z.CONNECTICUT | 406.183 |
| 454 | GEN | Non Intermittent | 495 | MONTY | Rest-of-Pool | .Z.MAINE | 28.000 |
| 455 | GEN | Non Intermittent | 496 | MOORE | Rest-of-Pool | .Z.NEWHAMPSHIRE | 189.032 |
| 456 | GEN | Non Intermittent | 35728 | Moretown LG | Rest-of-Pool | .Z.VERMONT | 4.608 |
| 457 | GEN | Non Intermittent | 498 | MT TOM | Rest-of-Pool | .Z.WCMASS | 142.881 |
| 458 | GEN | Non Intermittent | 502 | MYSTIC 7 | NEMA-Boston | .Z.NEMASSBOST | 575.472 |
| 459 | GEN | Non Intermittent | 1478 | MYSTIC 8 | NEMA-Boston | .Z.NEMASSBOST | 703.324 |
| 460 | GEN | Non Intermittent | 1616 | MYSTIC 9 | NEMA-Boston | .Z.NEMASSBOST | 708.612 |
| 461 | GEN | Non Intermittent | 503 | MYSTIC JET | NEMA-Boston | .Z.NEMASSBOST | 8.589 |
| 462 | GEN | Non Intermittent | 776 | N. RUTLAND COMPOSITE | Rest-of-Pool | .Z.VERMONT | 5.200 |
| 463 | GEN | Non Intermittent | 1649 | NAEA Newington Energy, LLC | Rest-of-Pool | .Z.NEWHAMPSHIRE | 522.014 |
| 464 | GEN | Non Intermittent | 507 | NEA BELLINGHAM | SEMA-RI | .Z.SEMASS | 277.621 |
| 465 | GEN | Non Intermittent | 10308 | NECCO COGENERATION FACILITY | NEMA-Boston | .Z.NEMASSBOST | 4.871 |
| 466 | GEN | Non Intermittent | 513 | NEW HAVEN HARBOR | Connecticut | .Z.CONNECTICUT | 447.894 |
| 467 | GEN | Non Intermittent | 15477 | New Haven Harbor Units 2, 3, & 4 | Connecticut | .Z.CONNECTICUT | 129.600 |
| 468 | GEN | Non Intermittent | 508 | NEWINGTON 1 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 400.200 |
| 469 | GEN | Non Intermittent | 16688 | Nor1 | Connecticut | .Z.CONNECTICUT | 1.950 |
| 470 | GEN | Non Intermittent | 16750 | Norden #2 | Connecticut | .Z.CONNECTICUT | 1.947 |
| 471 | GEN | Non Intermittent | 16752 | Norden #3 | Connecticut | .Z.CONNECTICUT | 1.942 |
| 472 | GEN | Non Intermittent | 14217 | NORTHFIELD MOUNTAIN 1 | Rest-of-Pool | .Z.WCMASS | 292.000 |
| 473 | GEN | Non Intermittent | 14218 | NORTHFIELD MOUNTAIN 2 | Rest-of-Pool | .Z.WCMASS | 270.000 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 474 | GEN | Non Intermittent | 14219 | NORTHFIELD MOUNTAIN 3 | Rest-of-Pool | .Z.WCMASS | 292.000 |
| 475 | GEN | Non Intermittent | 14220 | NORTHFIELD MOUNTAIN 4 | Rest-of-Pool | .Z.WCMASS | 292.000 |
| 476 | GEN | Non Intermittent | 515 | NORWICH JET | Connecticut | .Z.CONNECTICUT | 15.255 |
| 477 | GEN | Non Intermittent | 1030 | OAK BLUFFS | SEMA-RI | .Z.SEMASS | 8.120 |
| 478 | GEN | Non Intermittent | 528 | OCEAN ST PWR GT1 GT2 ST1 | SEMA-RI | .Z.RHODEISLAND | 270.901 |
| 479 | GEN | Non Intermittent | 529 | OCEAN ST PWR GT3 GT4 ST2 | SEMA-RI | .Z.RHODEISLAND | 270.180 |
| 480 | GEN | Non Intermittent | 531 | PAWTUCKET POWER | SEMA-RI | .Z.RHODEISLAND | 59.810 |
| 481 | GEN | Non Intermittent | 12526 | Pierce | Connecticut | .Z.CONNECTICUT | 76.515 |
| 482 | GEN | Non Intermittent | 537 | PILGRIM NUCLEAR POWER STATION | SEMA-RI | .Z.SEMASS | 677.284 |
| 483 | GEN | Non Intermittent | 538 | PINETREE POWER | Rest-of-Pool | .Z.WCMASS | 15.783 |
| 484 | GEN | Non Intermittent | 15509 | Plainfield Renewable Energy | Connecticut | .Z.CONNECTICUT | 35.201 |
| 485 | GEN | Non Intermittent | 540 | POTTER 2 CC | SEMA-RI | .Z.SEMASS | 73.927 |
| 486 | GEN | Non Intermittent | 12163 | PPL GREAT WORKS - RED SHIELD | Rest-of-Pool | .Z.MAINE | 0.000 |
| 487 | GEN | Non Intermittent | 1376 | PPL WALLINGFORD UNIT 1 | Connecticut | .Z.CONNECTICUT | 45.000 |
| 488 | GEN | Non Intermittent | 1377 | PPL WALLINGFORD UNIT 2 | Connecticut | .Z.CONNECTICUT | 45.000 |
| 489 | GEN | Non Intermittent | 1378 | PPL WALLINGFORD UNIT 3 | Connecticut | .Z.CONNECTICUT | 45.000 |
| 490 | GEN | Non Intermittent | 1379 | PPL WALLINGFORD UNIT 4 | Connecticut | .Z.CONNECTICUT | 44.710 |
| 491 | GEN | Non Intermittent | 1380 | PPL WALLINGFORD UNIT 5 | Connecticut | .Z.CONNECTICUT | 45.000 |
| 492 | GEN | Non Intermittent | 35658 | Rainbow_1 | Connecticut | .Z.CONNECTICUT | 4.100 |
| 493 | GEN | Non Intermittent | 35656 | Rainbow_2 | Connecticut | .Z.CONNECTICUT | 4.100 |
| 494 | GEN | Non Intermittent | 546 | RESCO SAUGUS | NEMA-Boston | .Z.NEMASSBOST | 30.114 |
| 495 | GEN | Non Intermittent | 14599 | Rhode Island LFG Genco, LLC - ST | SEMA-RI | .Z.RHODEISLAND | 26.000 |
| 496 | GEN | Non Intermittent | 1630 | RISEP | SEMA-RI | .Z.RHODEISLAND | 543.455 |
| 497 | GEN | Non Intermittent | 715 | ROCHESTER LANDFILL | Rest-of-Pool | .Z.NEWHAMPSHIRE | 2.353 |
| 498 | GEN | Non Intermittent | 739 | ROCKY RIVER | Connecticut | .Z.CONNECTICUT | 29.001 |
| 499 | GEN | Non Intermittent | 1255 | RUMFORD POWER | Rest-of-Pool | .Z.MAINE | 244.281 |
| 500 | GEN | Non Intermittent | 549 | RUTLAND 5 GT | Rest-of-Pool | .Z.VERMONT | 8.406 |
| 501 | GEN | Non Intermittent | 591 | S.D. WARREN-WESTBROOK | Rest-of-Pool | .Z.MAINE | 42.590 |
| 502 | GEN | Non Intermittent | 556 | SCHILLER 4 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 47.500 |
| 503 | GEN | Non Intermittent | 557 | SCHILLER 5 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 42.594 |
| 504 | GEN | Non Intermittent | 558 | SCHILLER 6 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 47.938 |
| 505 | GEN | Non Intermittent | 559 | SCHILLER CT 1 | Rest-of-Pool | .Z.NEWHAMPSHIRE | 17.621 |
| 506 | GEN | Non Intermittent | 555 | SEABROOK | Rest-of-Pool | .Z.NEWHAMPSHIRE | 1,246.225 |
| 507 | GEN | Non Intermittent | 561 | SEARSBURG | Rest-of-Pool | .Z.WCMASS | 4.755 |
| 508 | GEN | Non Intermittent | 566 | SHEPAUG | Connecticut | .Z.CONNECTICUT | 41.511 |
| 509 | GEN | Non Intermittent | 567 | SHERMAN | Rest-of-Pool | .Z.WCMASS | 6.154 |
| 510 | GEN | Non Intermittent | 35657 | Shrewsbury Diesels | Rest-of-Pool | .Z.WCMASS | 13.700 |
| 511 | GEN | Non Intermittent | 569 | SKELTON | Rest-of-Pool | .Z.MAINE | 22.080 |
| 512 | GEN | Non Intermittent | 572 | SO. MEADOW 11 | Connecticut | .Z.CONNECTICUT | 35.781 |
| 513 | GEN | Non Intermittent | 573 | SO. MEADOW 12 | Connecticut | .Z.CONNECTICUT | 37.701 |
| 514 | GEN | Non Intermittent | 574 | SO. MEADOW 13 | Connecticut | .Z.CONNECTICUT | 38.317 |
| 515 | GEN | Non Intermittent | 575 | SO. MEADOW 14 | Connecticut | .Z.CONNECTICUT | 36.746 |
| 516 | GEN | Non Intermittent | 38178 | Southbridge Landfill Gas to Energy 17-18 | Rest-of-Pool | .Z.WCMASS | 1.400 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 517 | GEN | Non Intermittent | 1495 | SOUTHBRIDGE P&T QF U5 | Rest-of-Pool | .Z.WCMASS | 0.149 |
| 518 | GEN | Non Intermittent | 587 | STEVENSON | Connecticut | .Z.CONNECTICUT | 28.311 |
| 519 | GEN | Non Intermittent | 583 | STONY BROOK 2A | Rest-of-Pool | .Z.WCMASS | 67.000 |
| 520 | GEN | Non Intermittent | 584 | STONY BROOK 2B | Rest-of-Pool | .Z.WCMASS | 65.000 |
| 521 | GEN | Non Intermittent | 1185 | STONY BROOK GT1A | Rest-of-Pool | .Z.WCMASS | 103.167 |
| 522 | GEN | Non Intermittent | 1186 | STONY BROOK GT1B | Rest-of-Pool | .Z.WCMASS | 100.000 |
| 523 | GEN | Non Intermittent | 1187 | STONY BROOK GT1C | Rest-of-Pool | .Z.WCMASS | 103.167 |
| 524 | GEN | Non Intermittent | 12510 | Swanton Gas Turbine 1 | Rest-of-Pool | .Z.VERMONT | 19.372 |
| 525 | GEN | Non Intermittent | 12511 | Swanton Gas Turbine 2 | Rest-of-Pool | .Z.VERMONT | 19.536 |
| 526 | GEN | Non Intermittent | 12500 | Thomas A. Watson | SEMA-RI | .Z.SEMASS | 105.200 |
| 527 | GEN | Non Intermittent | 1226 | TIVERTON POWER | SEMA-RI | .Z.RHODEISLAND | 244.086 |
| 528 | GEN | Non Intermittent | 595 | TORRINGTON TERMINAL 10 | Connecticut | .Z.CONNECTICUT | 15.638 |
| 529 | GEN | Non Intermittent | 803 | TOUTANT | Connecticut | .Z.CONNECTICUT | 0.251 |
| 530 | GEN | Non Intermittent | 596 | TUNNEL 10 | Connecticut | .Z.CONNECTICUT | 16.706 |
| 531 | GEN | Non Intermittent | 12509 | UNH Power Plant | Rest-of-Pool | .Z.NEWHAMPSHIRE | 2.000 |
| 532 | GEN | Non Intermittent | 598 | VERGENNES 5 and 6 DIESELS | Rest-of-Pool | .Z.VERMONT | 3.940 |
| 533 | GEN | Non Intermittent | 599 | VERNON | Rest-of-Pool | .Z.WCMASS | 32.000 |
| 534 | GEN | Non Intermittent | 13703 | Verso VCG1 | Rest-of-Pool | .Z.MAINE | 42.606 |
| 535 | GEN | Non Intermittent | 13704 | Verso VCG2 | Rest-of-Pool | .Z.MAINE | 45.167 |
| 536 | GEN | Non Intermittent | 13705 | Verso VCG3 | Rest-of-Pool | .Z.MAINE | 43.768 |
| 537 | GEN | Non Intermittent | 614 | WATERBURY 22 | Rest-of-Pool | .Z.VERMONT | 5.000 |
| 538 | GEN | Non Intermittent | 12564 | Waterbury Generation Facility | Connecticut | .Z.CONNECTICUT | 96.349 |
| 539 | GEN | Non Intermittent | 612 | WATERS RIVER JET 1 | NEMA-Boston | .Z.NEMASSBOST | 16.050 |
| 540 | GEN | Non Intermittent | 613 | WATERS RIVER JET 2 | NEMA-Boston | .Z.NEMASSBOST | 33.756 |
| 541 | GEN | Non Intermittent | 11842 | WATERSIDE POWER | Connecticut | .Z.CONNECTICUT | 70.937 |
| 542 | GEN | Non Intermittent | 625 | WEST MEDWAY JET 1 | NEMA-Boston | .Z.NEMASSBOST | 42.000 |
| 543 | GEN | Non Intermittent | 626 | WEST MEDWAY JET 2 | NEMA-Boston | .Z.NEMASSBOST | 40.835 |
| 544 | GEN | Non Intermittent | 627 | WEST MEDWAY JET 3 | SEMA-RI | .Z.SEMASS | 35.441 |
| 545 | GEN | Non Intermittent | 630 | WEST SPRINGFIELD 10 | Rest-of-Pool | .Z.WCMASS | 17.143 |
| 546 | GEN | Non Intermittent | 633 | WEST SPRINGFIELD 3 | Rest-of-Pool | .Z.WCMASS | 94.276 |
| 547 | GEN | Non Intermittent | 1693 | WEST SPRINGFIELD GT-1 | Rest-of-Pool | .Z.WCMASS | 36.908 |
| 548 | GEN | Non Intermittent | 1694 | WEST SPRINGFIELD GT-2 | Rest-of-Pool | .Z.WCMASS | 37.441 |
| 549 | GEN | Non Intermittent | 1031 | WEST TISBURY | SEMA-RI | .Z.SEMASS | 5.524 |
| 550 | GEN | Non Intermittent | 1345 | WESTBROOK | Rest-of-Pool | .Z.MAINE | 530.000 |
| 551 | GEN | Non Intermittent | 619 | WHITE LAKE JET | Rest-of-Pool | .Z.NEWHAMPSHIRE | 17.447 |
| 552 | GEN | Non Intermittent | 620 | WILDER | Rest-of-Pool | .Z.NEWHAMPSHIRE | 41.073 |
| 553 | GEN | Non Intermittent | 621 | WILLIAMS | Rest-of-Pool | .Z.MAINE | 14.900 |
| 554 | GEN | Non Intermittent | 624 | WMI MILLBURY 1 | Rest-of-Pool | .Z.WCMASS | 39.811 |
| 555 | GEN | Non Intermittent | 14663 | WMRE Crossroads | Rest-of-Pool | .Z.MAINE | 2.806 |
| 556 | GEN | Non Intermittent | 628 | WOODLAND ROAD | Rest-of-Pool | .Z.WCMASS | 15.808 |
| 557 | GEN | Non Intermittent | 636 | WYMAN HYDRO 1 | Rest-of-Pool | .Z.MAINE | 28.500 |
| 558 | GEN | Non Intermittent | 637 | WYMAN HYDRO 2 | Rest-of-Pool | .Z.MAINE | 29.866 |
| 559 | GEN | Non Intermittent | 638 | WYMAN HYDRO 3 | Rest-of-Pool | .Z.MAINE | 26.430 |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 560 | GEN | Non Intermittent | 639 | YARMOUTH 1 | Rest-of-Pool | .Z.MAINE | 0.000 |
| 561 | GEN | Non Intermittent | 640 | YARMOUTH 2 | Rest-of-Pool | .Z.MAINE | 51.131 |
| 562 | GEN | Non Intermittent | 641 | YARMOUTH 3 | Rest-of-Pool | .Z.MAINE | 115.173 |
| 563 | GEN | Non Intermittent | 642 | YARMOUTH 4 | Rest-of-Pool | .Z.MAINE | 603.225 |
| **COUNT OF GENERATION: 563** | | | | | **SUBTOTAL GENERATION MW: 29,726.798** | | |

| Item # | Resource Type | Resource Sub-type | Resource ID | Resource Name | Capacity Zone | Load Zone/ Interface Name | FCA Qualified Capacity (MW) |
|---|---|---|---|---|---|---|---|
| 1 | IMPORT | Resource Backed | 12450 | NYPA - CMR | Rest-of-Pool | New York AC Ties | 68.800 |
| 2 | IMPORT | Resource Backed | 12451 | NYPA - VT | Rest-of-Pool | New York AC Ties | 14.000 |
| 3 | IMPORT | Resource Backed | 12452 | VJO - Highgate | Rest-of-Pool | Hydro-Quebec Highgate | 6.000 |
| **COUNT OF IMPORT: 3** | | | | | **SUBTOTAL IMPORT MW: 88.800** | | |

# Attachment D

# New Generating, Import and Demand Resource Capacity

# REDACTED

# Contains Privileged Information

# Attachment E

# Summary of All De-List Bids Submitted

# REDACTED

# Contains Privileged Information

# Attachment F

# Significant Increases

# REDACTED

# Contains Privileged Information

# Attachment G

# Major Elements in the Determination of Expected Net Revenues - Generation

# REDACTED

# Contains Privileged Information

# Attachment H

# Major Elements in the Determination of Expected Net Revenues – Demand Resources

## REDACTED

## Contains Privileged Information

# Attachment I

# Notifications Sent to Resources That Were Not Qualified to Participate in the FCA

## REDACTED

## Contains Privileged Information

# Attachment J

# Methodology Used by IMM in Establishing an Alternative De-List Bid Value When the IMM Rejected Some or All of the Components of the Participant-submitted De-List Bids

**Attachment B to QDNs**

# Internal Market Monitor Review of De-list Bids for the Ninth Forward Capacity Auction: A Methodology Document

ISO New England Inc.
Internal Market Monitor
September 26, 2014

## 1. Introduction

Pursuant to Section III.13.1.2.3.2 of the Tariff,[1] the Internal Market Monitor ("IMM") must review Export Bids and Static and Permanent De-list Bids submitted by Market Participants ("participants") above the Dynamic De-list Bid Threshold of $3.94/kW-month. Specifically, the IMM must determine if the de-list bid is consistent with the four cost components comprising a de-list bid; (1) the participant's net going forward costs for the resource, (2) the participant's reasonable expectations of the resource's Capacity Performance Payments, (3) the participant's reasonable risk premium, and (4) opportunity costs.

After due consideration and consultation with a Market Participant, if the IMM determines that the participant's de-list bid is inconsistent with reasonable estimates of any of those four elements of the de-list bid, and if the participant is a pivotal supplier as defined in Section III.13.1.2.3.2 of the Tariff, then the de-list bid must be rejected and mitigated to the IMM's estimated de-list bid. For the Capacity Commitment Period 2018/19 corresponding to the ninth Forward Capacity Auction ("FCA") all participants with existing resources are pivotal suppliers and are therefore subject to potential mitigation.

This document sets out the approach and methodology followed by the IMM in establishing an alternative de-list bid value when the IMM rejected some or all of the components of the participant-submitted de-list bid. The resource-specific Qualification Determination Notification ("QDN") provides additional detail on why the IMM rejected a component of a participant-submitted de-list bid and replaced it with the value calculated using the methodology described here. This document covers the first three components of the de-list bid. For FCA9 no participants included opportunity costs in their submitted de-list bids.

## 2. Overview of IMM Approach to Evaluating De-list Bids

### *a. IMM De-List Bid Calculation*

[1] All references to the Forward Capacity Market de-list bid rules are to the version filed in *ISO New England Inc. and New England Power Pool*, Compliance Filing of Two-Settlement Forward Capacity Market Design (filed July 14, 2014), Docket Nos. EL14-52-000 and ER14-2419, *available at* http://www.iso-ne.com/participate/filings-orders/ferc-filings. *See also* ISO New England Inc. and New England Power Pool, Filings of Market Rule Changes To Implement Pay For Performance in the Forward Capacity Market, Docket No. ER14-1050-000 (filed January 17, 2014), *available at* http://www.iso-ne.com/participate/filings-orders/ferc-filings.

In calculating an alternative de-list bid, the IMM considered the minimum de-list bid price to be the participant's expected cost of the financial obligation taken on by acquiring a Capacity Supply Obligation ("CSO") under PFP, relative to its next best alternative: either remaining active in the energy market without a CSO, or becoming inactive entirely.[2]

The cost of the financial obligation associated with a CSO under the Pay-for-Performance capacity market construct ("PFP") corresponds to the obligation to deliver energy (or reserves) equal to the resource's share of total Installed Capacity Requirement ("ICR") during Capacity Scarcity Conditions, which can be avoided by foregoing a CSO. This equals CSO * PPR * H * Br, where:

CSO: Capacity Supply Obligation, in MW

PPR: Performance Payment Rate, which is $2,000/MWh for FCA9

Br: Balancing Ratio

H: Number of expected Capacity Scarcity Conditions for the Capacity Commitment Period, in hours per year.

Because a participant can avoid this cost by foregoing a CSO, they should require base payments of at least this level to be willing to acquire the CSO. Thus, this expected cost of the share of system obligation under PFP is a Market Participant's *minimum* de-list bid.

The de-list bid must also take account of the participant's next best alternative: the resource will either remain active in the energy and ancillary services markets without a CSO, or it will become inactive in the energy and ancillary services markets without a CSO.

For a resource that the participant indicates would remain active, the de-list bid *b* (per CSO MW) is based on the following formula:

$$b = PPR * Br * H + NGFC_{active} + RP$$

where $NGFC_{active}$ is the resource's going forward cost that would be avoided by the participant by not taking on the CSO but still remaining active (at the participant's discretion) in the energy and ancillary services markets, and *RP* is a resource-specific risk premium that may be appropriate for a risk-averse Market Participant.

[2] The IMM's de-list bid training workshop conducted on April 28 and 29 of 2014 covered, in detail, the methodology explained here for calculating de-list bids, under the section that addresses the optimal competitive bidding strategies under Pay-for-Performance. The training materials are available on the ISO's website at http://www.iso-ne.com/static-assets/documents/2014/08/fcm_delist_april_28-29_2014.pdf

For a resource that a participant indicates would not remain active without a CSO, the de-list bid *b* (per CSO MW) is based on the following formula:

$$b = PPR * Br * H + max\{0\ , NGFC_{inactive} - PPR * A * H\} + RP$$

where *A* is the resource's expected average performance per unit of CSO (averaged over all Capacity Scarcity Condition hours during the Capacity Commitment Period), and $NGFC_{inactive}$ is the going forward cost that would be avoided by not taking on the CSO and mothballing (or retiring) the resource. This formula reflects, in the subtraction of *PPR * A * H*, the fact that when a resource becomes inactive it willingly foregoes the energy and reserve payments that it would otherwise be entitled to were it to remain active for the commitment period. Note also that the decision of whether a resource should remain active or become mothballed has implications for the risk premium component, which appears as the term *RP* in the formula above, as discussed further in Section 5.

*b. Use of published 2010 through 2014 scarcity conditions data and study results in IMM review.*

Calculation of a bid reflecting reasonable estimates of the expected cost of the share-of-system performance obligation, as well as future Capacity Performance Payments (which may be positive or negative), can be based, in part, on information regarding past Capacity Scarcity Conditions in the New England system and simulation studies of scarcity conditions when the system is "at criteria," meaning that sufficient capacity has been procured to meet the 1 day in 10 years resource adequacy planning criteria. In May 2014, at the request of a number of participants in advance of submitting de-list bids, the ISO published a memo and a spreadsheet providing details of historical Capacity Scarcity Conditions and corresponding Balancing Ratio values. The memo and spreadsheet included the historical data from January 2010 through April 2014 on the number of scarcity condition hours under current and prior Reserve Constraint Penalty Factor ("RCPF") values, details on when the conditions occurred by time of day and season, their duration, and the values for the system Balancing Ratio during these scarcity conditions.[3] In addition, the ISO published in July 2013 simulation study results on the expected value and percentiles of Capacity Scarcity Condition hours when the New England system is "at criteria" and at various capacity surplus levels, which are useful given recent changes in total installed capacity levels.[4]

[3] Materials available at http://www.iso-ne.com/static-assets/documents/markets/othrmkts_data/fcm/doc/opr_reserve_deficiency_info_hist_data_updated_5_21_2014.zip

[4] See July 2013 Markets Committee memo to NEPOOL on *'Operating Reserve Deficiency Information – At Criteria And Extended Results'* at http://www.iso-ne.com/committees/comm_wkgrps/mrkts_comm/mrkts/mtrls/2013/jul10112013/a12a_iso_memo_07_05_13.pdf

Collectively, all of these data were intended to provide participants with a useful baseline for forming reasonable estimates of the parameters *H* and *Br*, as defined above, for the corresponding 2018/19 Capacity Commitment Period. Where estimates contained in a participant's de-list bid were based on data that varied significantly from the data provided by the IMM, the IMM requested additional explanation from the participant on the reasonableness of its estimates and the use of the underlying data. Where that additional explanation was inadequate, the IMM utilized the data provided by the IMM and ISO in evaluating the participant's de-list bid and calculating any alternative values.

## 3. Net Going Forward Costs

The IMM reviewed net going forward costs in accordance with Section III.13.1.2.3.2.1.2 of the Tariff. The IMM provides participants with a cost workbook to use as the basis for the de-list bid calculations.[5] In addition to the completed cost workbook, participants are required to submit supporting documentation and information that would assist the IMM in validating the submissions and in making its determination. Further, all de-list bids are required to include an affidavit from a corporate officer attesting to the accuracy of the participant's submitted costs and estimates. The IMM reviewed each de-list bid for compliance with the above requirements and consulted with participants, as needed, asking clarifying questions to help resolve deficiencies in the participant's submittal. Where submitted values were significantly different from the IMM's calculation, and where the participant did not provide sufficient support for that value, the IMM's estimate was substituted for the value submitted by the participant in the approved de-list bid.

The IMM undertook a detailed review of the submitted net going forward cost data with particular emphasis on the following areas:

a) The reasonableness of the avoidable operating costs relative to historical operating costs, considering the following:
   - Whether the bid was a static or a permanent de-list bid. In general, a participant will have greater avoidable costs if a resource permanently exits the capacity market versus becoming inactive for a Capacity Commitment Period;
   - Consistency of avoidable costs with the participant's election either (a) to remain in the energy and ancillary services markets without a CSO, or (b) to mothball the resource for the

[5] The cost workbook and guidelines document can be found at http://www.iso-ne.com/static-assets/documents/markets/othrmkts_data/fcm/qual/forms/de_list_temp_and_manuals.zip

Capacity Commitment Period. In general, a participant's avoidable costs are lower if the resource continues operation in energy and ancillary services markets, compared to mothballing the plant;

- Whether adequate documentation and a sound methodology was provided demonstrating the avoidance of major expenditures such as centralized corporate overhead costs allocated to individual market regions or resources;
- Consistency in the use of annual historical cost and revenue data, for instance using the most recent year's data or an average of two of the past three year's data;
- Reasonableness of any adjustments to historical operating and production cost data, and to ISO revenue data, including adjustments to account for expected inframarginal rents ("IMR") and Peak Energy Rents ("PER");
- Comparison of costs submitted for FCA8 versus FCA9 for participants that submitted de-list bids for the same resource in both auctions;
- Comparison of costs across comparable resources; and
- Correctness of numerical calculations.

b) The reasonableness of avoidable incremental capital costs, considering the following:
   - Whether documentation was provided to support the inclusion of major capital expenditures, such as engineering reports, benchmark cost data, or feasibility studies;
   - Whether the calculation of annualized costs was done in accordance with the cost recovery schedule prescribed in Section III.13.1.2.3.2.5; and
   - Whether such costs were avoidable in the absence of a CSO for the Capacity Commitment Period, and whether such costs were already included in a previous year's de-list bid that did not clear in a prior auction (*i.e.*, retained a CSO).

Station Common Costs among resources at a Station were allocated in accordance with Section III.13.1.2.3.1.6.3 of the Tariff.

The IMM's determination of a reasonable value of NGFCs is entered into the relevant de-list bid formula shown in Section 2 of this document, with the relevant formula dependant on whether the NGFCs were provided on the basis of the resource remaining active in the energy and ancillary services market or becoming inactive and mothballing or retiring the resource.

## 4. Expected Capacity Performance Payments

The treatment of expected Capacity Performance Payments (or "CPP", which may be positive or negative) in a de-list bid is described in Section III.13.1.2.3.2.1.3 of the Tariff. The following sections describe the IMM's methodology for evaluating the participant-submitted CPP calculation.

### 4.1 Summary of Capacity Performance Payment calculation

To complete its evaluation, the IMM accepted each participant's expected number of Capacity Scarcity Condition hours (H), and performed an evaluation of each participant's submittal of (1) expected average performance per unit of CSO during a Capacity Scarcity Condition (A), and (2) expected average Balancing Ratio (Br). In situations where one or both of the (A) and (Br) components in the participant-submitted CPP values was significantly different from the IMM's calculation, and where the participant did not provide sufficient support for that component, the IMM substituted its alternative estimate of expected CPP values for the value submitted by the participant in the approved de-list bid. The IMM consulted with participants, as needed, asking clarifying questions to help resolve deficiencies in the participant's submittal.

The values of each component of the CPP calculation, *A*, *H* and *Br* are entered into the relevant de-list bid formula shown in Section 2 of this document.

### 4.2 Overview of Calculation of Capacity Performance Payments

The methodology for determining the CPP component of the de-list bids is prescribed in the Tariff as follows:

$$CSO * PPR * H * (A - Br)$$

Each term in this formula has the same definition as in Section 2 above, namely:

CSO: Capacity Supply Obligation, in MW

PPR: Performance Payment Rate, which is $2,000/MWh for FCA9

A: Expected average performance per unit of CSO during a Capacity Scarcity Condition

Br: Expected average Balancing Ratio

H: Number of expected Capacity Scarcity Condition hours during the Capacity Commitment Period

Participants are required to submit documentation for each de-list bid detailing their calculation of the resource's expected Capacity Performance Payments. The documentation must include details on the assumed expected values for *A*, *Br* and *H*.

In performing its evaluation of submitted *A*, *Br* and *H* values, the IMM relied upon historical data from January 2010 through April 2014 on the number of Capacity Scarcity Condition hours under current and prior Reserve Constraint Penalty Factor (RCPF) values, details on when the Capacity Scarcity Conditions occurred by time of day and season, the duration of Capacity Scarcity Conditions, and the corresponding values for the system Balancing Ratio during the Capacity Scarcity Conditions, all of which are important inputs into the calculation of *A*, *Br* and *H* values. The data relied upon by the IMM was the same data that the ISO published and provided in May 2014, also outlined in Section 2 above.

The IMM evaluated each submission to ensure that the components reflected the expected value (mean) of possible future outcomes, rather than accounting for potential deviation from the expected value, which is appropriately reflected in the risk premium component. Variability in both *H* and *A* around the expected value are addressed in the IMM's evaluation of the risk premium component of de-list bids in Section 5.

### 4.3 Capacity Scarcity Condition Hours ("H")

In its evaluation the IMM relied on the estimates of *H* from the ISO system simulation study summarized in the July 5, 2013, memorandum *Operating Reserve Deficiency Information – At Criteria and Extended Results*, ("July 5 Reserve Deficiency Memo") to determine the reasonableness of submitted values representing expectations for 2018/19.[6] Participants' submitted values for *H* were within a reasonable range, relative to the ISO's simulation study results as described in the memorandum.

However, the seasonal period in which the Capacity Scarcity Conditions hours occur is an important factor to accurately account for in order to calculate reasonable CPP values (in particular the expected future performance (A) and Balancing Ratio (Br) components corresponding to the Capacity Scarcity Conditions). Establishing assumptions at this level of granularity is important because a resource's

[6] See http://www.iso-ne.com/committees/comm_wkgrps/mrkts_comm/mrkts/mtrls/2013/jul10112013/a12a_iso_memo_07_05_13.pdf

average performance during a Capacity Scarcity Condition (A) can vary significantly depending on the season. Therefore, in cases where the participant did not provide a breakout of *H* into appropriate periods, when calculating a resource's expected future performance (A) and Balancing Ratios (Br) the IMM applied a breakdown of Capacity Scarcity Condition hours reflecting the following seasonal and time-of-day allocations to the participant's total expected *H*:

**Table 1:**

| | **Allocation of H** |
|---|---|
| **Summer Peak** | 79% |
| **Winter Peak** | 14% |
| **Off-Peak** | 7% |

The definition and relative proportion of these three types of reserve shortages are as follows:

1. "Summer Peak" hours include all peak hours in June, July, and August through September 15, where peak hours are the hours between 7am and 11pm, Monday through Friday excluding NERC holidays. The expected future level of Summer Peak reserve shortages is based on market simulations performed by the ISO, as reported in Table 1 of ISO's July 5 Reserve Deficiency Memo.
2. "Winter Peak" hours include all peak hours in December, January, and February and hours when the Balancing Ratio was greater than or equal to 0.6. Winter Peak H Mean is the annual average of winter peak reserve shortage hours in the 2012-2013 and 2013-2014 winter seasons.
3. "Off-Peak" hours include all other events that are not Summer Peak or Winter Peak events (*i.e.*, all events that occur off-peak or occur during Spring or Fall). Off-Peak H Mean is the annual average of off-peak reserve shortage hours from 2010 through 2013.

### 4.4 Resource average performance during Capacity Scarcity Condition Hours ("A")

A resource's average performance during Capacity Scarcity Condition hours, or "A," measures the resource's delivered energy and reserves during a Capacity Scarcity Condition as a fraction of its CSO. In formula, it is expressed as:

$$A = \frac{\text{Energy} + \text{Reserves}}{\text{H x CSO}}$$

Where the numerator, *Energy + Reserves*, is the total MWh of energy and reserves the resource expects to deliver during all Capacity Scarcity Condition hours over the course of the Capacity Commitment Period. The value of *A* is a number normally between zero and one.

The relationship between a resource's value of *A* and the Balancing Ratio ("Br") determines whether the resource over- or under-performs compared to its share of the total system obligation, and consequently whether its annual Capacity Performance Payments will be a net credit or a net charge. The performance of a resource can depend on many factors, including the season in which the Capacity Scarcity Condition occurs, expected load conditions prior to and during the Capacity Scarcity Condition, and the duration of the condition. For example, a high operating-cost resource with a long start-up time will be less likely to be on-line and available during an unanticipated Capacity Scarcity Condition that occurs in an off-peak, lower-load period. On the other hand, the same unit is more likely to be online and performing during an anticipated longer duration Capacity Scarcity Condition in the high-load summer peak period.

When a participant's submission included an expected value of *A* that did not reflect seasonality, load conditions and/or duration of Capacity Scarcity Conditions in the Capacity Commitment Period, the IMM calculated an appropriately time-weighted value for *A* using resource-specific historical average performance from January 2010 through April 2014. The resource-specific historical average performance during Capacity Scarcity Conditions was obtained from ISO system data on the resource's energy and reserves provided during historical actual and simulated Capacity Scarcity Conditions, using current RCPF values. The IMM then adjusted the actual historical performance to account for the difference between historical and expected future allocations of Capacity Scarcity Condition hours across seasons and time of day.

Some participants did not apply a duration weighting to their historical or simulated *A* values. Using an example to illustrate the need to weight the duration of Capacity Scarcity Conditions when calculating a historical average *A*, assume an average performance of 80% during a summer On-Peak period spanning two hours and an average performance of 40% during a winter On-Peak shortage condition with duration of 1 hour. This translates to a weighted average performance of 70%, which is a more accurate measure of average performance than a simple average of 60%. When a participant's submission did not apply duration weighting in the calculation of it's *A* values, the IMM factored in duration weighting in re-calculating the *A* values for the participant's de-list bids.

### 4.5 Balancing Ratios ("Br") during Capacity Scarcity Conditions

The Balancing Ratio measures the proportion of total system CSO required, in the form of energy and reserves, during a Capacity Scarcity Condition. It can be expressed as a formula in terms of CSO values, load and required reserves, as

$$\text{Br} = \frac{\text{Load} + \text{Required Reserve}}{\text{Total CSO}}$$

In reviewing market participants' de-list bid assumptions the IMM adopted the following approach. If a participant provided a value for the Balancing Ratio without any supporting detail on the underlying assumptions, or if the value did not reflect a reasonable estimate of future market conditions, the IMM substituted a value for the Balancing Ratio that it calculated using the same data provided to participants in the July 5, 2013 memo. The IMM's calculations reflect Capacity Scarcity Conditions observed from January 2010 through April 2014, with adjustments. The adjustments accounted for differences between historical and expected future occurrences of scarcity conditions across seasons due to changes in underlying market conditions, as reflected in Table 1. The IMM's final calculated weighted-average Balancing Ratio value is 0.85.

## 5. Risk Premium

Section III.13.1.2.3.2.1.4 of the Tariff allows participants to include in their de-list bids risks that can be quantified and analytically supported. The IMM consulted with each participant, asking detailed questions regarding the assumptions and methodology underlying their calculations and requesting information demonstrating that the risk premium submitted is consistent with the company's risk management practices. The IMM also performed an independent evaluation of each submission by developing a benchmark model for estimating a participant's risk premiums within reasonable range. Where submitted risk premium values were significantly higher than the results of the IMM's benchmark model, and the differences were unexplained or insufficiently supported, the IMM's estimate was used in place of the participant's submitted risk premium in the approved de-list bid.

### 5.1 IMM Observations on Submitted Risk Premiums

The IMM consulted with participants who included a significant risk premium component in de-list bids, and which seemed to indicate a level of risk tolerance inconsistent with what one might expect in the

competitive power generation industry. The IMM generally found submissions to be deficient in considering risk in a balanced risk/return framework.

Specifically, when participants accounted for so-called "lower tail" risk of large losses in their de-list bids, these risks frequently reflected a dollar-for-dollar tradeoff between risk and return. For example, where a participant calculated potential losses at the 95th percentile to be $3/kW-month, that total $3/kW-month low-probability loss was added to the de-list bid. The participant did not consider the fact that pricing risk this way has an opportunity cost in the form of lower expected profits overall should the resource clear in the auction (*i.e.*, not retain a CSO). While the IMM agrees that an industry-standard Value-at-Risk ("VAR") approach is an acceptable framework for participants to manage and measure risk in the context of the PFP capacity market, the IMM disagrees with the approach taken by many participants of pricing the resulting total exposure (negative income) from a VAR stress test model into a resource's de-list bid; that approach ignores (sometimes entirely) the reduction in expected profit associated with the risk premium adjustment if the resource clears in the FCA. The risk of clearing in the FCA will tend to attenuate the risk associated with higher-than-expected PFP losses (as evaluated in a VAR stress test model) on the risk premium, and ignoring this risk can therefore produce inappropriately inflated de-list bid prices. Further, the IMM does not believe that this "total exposure" approach to pricing risk is consistent with how participants, in practice, manage their power market portfolios.

As background, VAR is a probabilistic simulation technique designed to estimate the maximum loss a participant or resource is likely to incur with a given frequency (*e.g.*, once in 10 years, or once in 20 years, or some other specific threshold). VAR and similar measures are widely used by financial institutions and businesses to measure risk and determine whether action is needed to bring risks within acceptable corporate risk tolerances. For example, suppose the maximum one-year loss a participant is willing to accept in the New England wholesale electricity markets is $1 million at a 95% level of confidence. This level of risk is equivalent to the participant incurring a loss of $1 million or more less than once every 20 years. If the participant calculates a possible loss for the 1-year period to be $3 million at a 95% confidence level based on a simulated distribution of profits and losses, the participant should take action to reduce their loss exposure to remain within the participant's prescribed VAR limit. The cost of reducing or hedging this $3 million exposure down to $1 million is unlikely to be $2 million; it would cost $2 million only if the $3 million loss occurs with a probability of one, rather than with a probability of one-in-twenty (or 5%). In reality, the cost of reducing the one-in-twenty $3 million exposure is the cost of undertaking risk-management transactions that will lower its one-in-twenty risk exposure to $1 million (*e.g.*, entering into financial hedges, acquiring insurance, or diversifying the participant's portfolio of risky assets). The IMM has observed some participants bidding risk premiums

in their submitted de-list bids in a manner that is equivalent, in the context of the present example, to assuming it will cost $2 million to reduce their VAR from $3 million to $1 million. Such an approach, which prices in the full exposure of $2 million in a de-list bid price, is inconsistent with the appropriate use of VAR methods and is non-sensical from a financial standpoint.

### 5.2 Overview of IMM Analytical Framework

The IMM recognizes that there are multiple approaches to measuring and valuing risk. A comprehensive solution would take into account, among other things, each participant's corporate risk/return evaluation practices, its full portfolio of power supply contracts and resources within New England and corporate-wide, its quantitative and qualitative methodologies for projecting future market conditions, any over-arching corporate strategy regarding future holdings in various markets, and competing industries or investment opportunities that are contemplated by the company. The IMM designed a framework for measuring and valuing risk that addresses resource-level specific risk factors under the Pay-for-Performance construct.

The IMM anticipates that its framework to assess risk will evolve, as indeed it will also evolve for participants, as experience with Pay-for-Performance is developed over time. For this reason, for FCA9 the IMM has adopted a conservative approach that aims to estimate a range of risk premium values that is sufficiently high so as not to mitigate competitive bids appropriate to the level of risk participants face. The approach implicitly recognizes the challenges of measuring risk associated with a market design that is new to participants, and for which there are currently limited tradable products to hedge specific risks under PFP. Further, while risk is typically managed and measured on a portfolio basis, the IMM's approach for FCA9 did not attempt to calculate incremental risk premiums across participants' portfolios, and therefore did not account for the covariance of performance across the resources comprising a participant's portfolio. Instead, the IMM approach for FCA9 calculated a stand-alone premium for each resource.

The IMM's methodology factored in three specific sources of risk:

1) Risk of greater than expected number of Capacity Scarcity Condition hours ("$RP_H$")
2) Risk of worse than expected average performance during Capacity Scarcity Condition hours ("$RP_A$")
3) Risk of the resource experiencing a Significant Decrease in Capacity ("$RP_P$")

The methodology for measuring the above risks is described in detail in the following sections.

### *5.2.1 Risk of greater than expected number of Capacity Scarcity Condition hours ("$RP_H$")*

The expected value of Capacity Performance Payments was calculated as outlined in Section 3 above. As explained above, the risk premium is based upon the possible range and frequency of outcomes that differ from these expectations.

The IMM utilized a VAR method for each individual resource that submitted a de-list bid, and conservatively set the loss level to be controlled in the capacity market over the commitment period at $0.

The IMM applied the VAR approach by calculating the estimated loss at the 95th percentile of possible Capacity Scarcity Condition hours (H). In other words, the IMM set a one-in-twenty maximum acceptable net loss. However, rather than pricing the exposure dollar-for-dollar, the IMM placed a cost of risk for negative income at the chosen exposure level. The rationale for the chosen cost of risk is covered below.

*a. Data used for calculating loss at the 95$^{th}$ percentile*

When implementing the VAR approach, ISO evaluated variability of *H* assuming the mean values provided in de-listbids and calculating the 95th percentile values based on an ISO published memo on the distribution of *H* with the system at ICR.[7] As shown in Table 1 of the published memo, this data indicates that, based on ISO simulations, the mean *H* is 21.2 hours while the 95th percentile value is 36.2 hours. To calculate the 95th percentile value of *H* for each de-list bid, the de-list bid mean value of *H* was multiplied by the ratio of the mean to the 95th percentile *H* values from the ISO data (*i.e.*, 1.71 = 36.2 / 21.2).

*b. Cost of risk*

As described above, the approach that prices the full financial exposure at the 95$^{th}$ percentile in a bid or offer price is inconsistent with the proper use of the VAR method to evaluate and price risk. However, factors such as the infancy of the PFP market and the lack of liquid financial instruments at this time to

[7] See http://www.iso-ne.com/committees/comm_wkgrps/mrkts_comm/mrkts/mtrls/2013/jul10112013/a12a_iso_memo_07_05_13.pdf

directly manage non-performance risks, on a three-year forward basis, provide challenges in deriving an appropriate cost of risk.

When considering benchmarks in formulating a cost of risk, the IMM examined rates of return on risky asset classes that exhibit some of the risk/return characteristics perceived by participants. Table 2 below shows that the average performance for a set of benchmarks, including High Yield Bonds and Hedge Funds, was 7% and 12% per year, respectively. The benchmarks are generally consistent with participant concerns highlighted in submissions regarding so-called "lower tail" risk of large losses, and potential revenue uncertainty generally.

**Table 2**

| Financial Benchmark Returns | |
|---|---|
| **High Yield Bond Return[1]** | **Hedge Fund Return[2]** |
| 7% | 12% |

[1] High Yield Bond Return is the 2010-2013 average return from the Bloomberg 1-5 year High Yield Corporate Bond index.
[2] Hedge Fund Return is the 1990-2009 hedge fund index average, from the CFA Institute's "Expected Returns on Major Asset Classes."

Considering the above factors, as well as the historical returns on benchmarked asset classes, the IMM believes a cost of risk of 25% of the calculated financial exposure is reasonable in evaluating de-list bid risk premiums for the first FCA in which the PFP design will apply.

*c. Risk Premium Calculation*

The calculation of the risk premium associated with greater than expected number of Capacity Scarcity Condition hours reflects the participant's bid given its bidding strategy, as described in Section 2.

Consider first resources that participants indicate would *not* continue to operate in the energy and ancillary services market. In this case, the bids above the price floor are designed to provide base payments to exactly cover the resource's NGFC and expected CPP, while bids that are at the minimum de-list bid price (*i.e., PPR*H*BR*) will provide base payments in excess of these costs that result in

positive expected returns.[8] Thus, the risk premium for resources with bids at the minimum de-list price will be lower, all else equal, than those for resources with bids above the minimum de-list price.

For a resource with bids above the minimum de-list bid price, then the risk premium is calculated as follows:[9]

$$\boldsymbol{RP_H = max[0, PPR * (\bar{H} - H_{95}) * (\bar{A} - \overline{Br})] * r}$$

Where:

| | |
|---|---|
| $\bar{A}, \overline{Br}, \bar{H}$ | expected values used for A, Br and H |
| $H_{95}$ | 95th percentile from the distribution of H |
| r | risk cost per dollar of exposure ($0.25 per $1) |

However, if the resource bids at the minimum de-list bid price given by the expected cost of the share of system obligation, then the risk premium is calculated as:

$$\boldsymbol{RP_H = max[0, GFC - PPR * \bar{H} * \overline{Br} - PPR * H_{95}(\bar{A} - \overline{Br})] * r}$$

These two risk premiums differ by the positive net income the resource would be expected to earn because of the minimum bid price, that is, *PPR*H*A – GFC*.

When a participant indicates that the resource *will* remain in the energy and ancillary services market without a CSO, the following formula is used for the risk premium:

$$\boldsymbol{RP_H = max[0, -PPR * \bar{H} * \overline{Br} - PPR * H_{95}(\bar{A} - \overline{Br})] * r}$$

In this case, the risk premium reflects a de-list bid at the expected cost of the CSO financial obligation plus the avoidable going forward costs of fulfilling the CSO.

### *5.2.2 Risk of worse than expected average performance during Capacity Scarcity Condition hours ("A")*

The IMM utilized two approaches to assess the impact of performance risk during the Capacity Commitment Period (*i.e.*, variability around expected *A*).

- *EFORd Adjustment Approach*: This approach considers performance risk independent of *H*. The IMM estimated the additional Capacity Performance Payments by reducing the resource's expected average performance during Capacity Scarcity Condition hours (A) by a measure of the

[8] A participant's bids depends on the difference between NGFC and expected Capacity Performance Payments (i.e., *PPR*H*A*). For example, consider a resource with a NGFC of $1/kW-month and expected Capacity Performance Payments of $2/ kW-month. Thus, without a CSO, the participant expects to earn $1/kW-month from operating the resource without a CSO. If the expected cost of the financial obligation (i.e., *PPR*H*A*) is $2 /kW-month, the participant would submit a bid equal to $2/kW-month, and earn an expected return of $1/kW-month.

[9] This corresponds to resources with $GFC - PPR*H*A < 0$.

likelihood of poor availability, which was proxied through a measure of the past historical Equivalent Demand Forced Outage Rate or "EFORd." The IMM utilized the minimum of resource specific values and the most-recent available NERC class-average EFORd values.

- *Monte Carlo Simulation Approach*: Monte Carlo simulation was performed to simultaneously account for uncertainty in *A*, *Br* and *H*. Using data on performance during past Capacity Scarcity Conditions and the distribution of likely future Capacity Scarcity Conditions (summarized in Table 1), the Monte Carlo simulation calculated the distribution on net income based on the joint variability of *H* and (*A* - *Br*). Having simulated the distribution of net income, the risk premium associated with this distribution was calculated in the same manner as the risk of higher than expected Capacity Scarcity Condition hours described above. That is, the risk premium reflects the amount of estimated negative net income at the 95% confidence level and a cost of risk equal to $0.25 per dollar of negative income.

For FCA9, the IMM used the EFORd adjustment approach because it is a simple and transparent method to estimate performance risk. The IMM used the results of the Monte Carlo simulations as a secondary validation of the results using the EFORd adjustment approach. Over time, the Monte Carlo simulation approach should evolve to be a more valuable method and tool as more performance data during Capacity Scarcity Condition hours becomes available and if other variables (IMR for example) are added to the analyses. The results of the Monte Carlo simulations indicated that the simpler risk metrics used for high *H* and low *A* reasonably captured the risk premiums, as calculated using the Monte Carlo analysis.

The EFORd adjustment approach is in line with the overall conservative approach the IMM adopted in evaluating risk premium submissions for FCA9. The formula below describes the EFORd adjustment approach:

$$RP_A = PPR * H * A * \min\{EFORd, Class\ Avg\ EFORd\}$$

### *5.2.3 Risk of the resource experiencing a Significant Decrease in Capacity ("$RP_P$")*

The IMM estimated the risk of the resource experiencing a significant decrease in capacity such that the participant is required to offer a portion or all of a resource's capacity in a reconfiguration auction prior to the start of the capacity commitment period. The IMM estimated this risk based on the FCA9 auction starting price, the IMM's estimate of the resource's bid without the risk premium[10], as well as the

[10] The estimate was derived by using the formulas outlined in section 2, without the risk premium (RP) component.

estimated probability of a unit experiencing a significant decrease in capacity based on resource Seasonal Claimed Capability values from January 2010 through December 2013.

$$\boldsymbol{RP_P = P * [FCA\ Starting\ Price - b\ ]}$$

Where:

P estimated Probability of a Significant Decrease, which was calculated to be 7%

b is the FCA bid excluding the Risk Premium components, as described above, which depends on whether the resource will continue to participate in the energy and ancillary service markets.

### *5.2.4 Benchmark Risk Premium ("$RP_{Total}$")*

Combined, the risks of higher *H* and lower *A* are limited by the stop-loss amount, which for the purposes of the risk premium is calculated as follows:

$$\boldsymbol{Stop\ Loss = [FCA\ Starting\ Price - \ b] * 3\ months}$$

The IMM's benchmark risk premium for resources submitting de-list bids in FCA9 was therefore limited by the Stop Loss and calculated as follows:

$$\boldsymbol{RP_{Total} = RP_P + min(\ RP_H + \ RP_A, Stop\ Loss)}$$

The IMM's determination of a reasonable risk premium is entered into the relevant de-list bid formula shown in Section 2 of this document.