170 FERC ¶ 61,002
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Richard Glick and Bernard L. McNamee.

ISO New England Inc. Docket No. ER20-311-000

ORDER ACCEPTING INFORMATIONAL FILING

(Issued January 3, 2020)

1. On November 5, 2019, pursuant to section 205 of the Federal Power Act (FPA),[1] ISO New England Inc. (ISO-NE) filed proposed values for the Installed Capacity Requirement (ICR),[2] Hydro Québec Interconnection Capability Credits (HQICC),[3] and related values for the fourteenth Forward Capacity Auction (FCA 14).[4] As discussed below, we accept the proposed ICR and related values, to become effective January 3, 2020, as requested.

I. Background

2. Through the FCA, ISO-NE procures the capacity that it needs to ensure resource adequacy within its footprint. ISO-NE holds the FCA annually, three years in advance of

[1] 16 U.S.C. § 824d (2018).

[2] ISO-NE states that the ICR is a measure of the installed resources needed to meet the reliability requirements defined for the New England Control Area of disconnecting non-interruptible customers (a loss of load expectation or "LOLE") no more than once every ten years (a LOLE of 0.1 days per year). Transmittal at 10.

[3] Capitalized terms not defined herein are used as they are defined in ISO-NE's Transmission, Markets, and Services Tariff (Tariff). *See* Tariff, Rules of Construction; Definitions (127.0.0) § I.2.

[4] FCA 14 is scheduled to begin on February 3, 2020.

the relevant delivery year (Capacity Commitment Period).[5] Resources compete in the auction to obtain a commitment to supply capacity in exchange for a market-priced capacity payment. The Forward Capacity Market (FCM) rules require ISO-NE to submit a filing containing the ICR and related values to the Commission no later than 90 days prior to each FCA.[6]

II. Filing

A. ICR

3. ISO-NE explains that, for the 2023-2024 capacity commitment period, the voltage reduction assumption it used to calculate the ICR and related values is a load reduction of one percent from implementation of five percent voltage reductions. ISO-NE also states that it used the Equivalent Forced Outage Rate - Demand (EFORd) to model peaking generation resources for the 2023-2024 capacity commitment period.[7] ISO-NE explains that it calculated the proposed ICR and related values based on these Commission-accepted changes and the proposed long-term load forecast methodology changes described below.[8]

4. Specifically, ISO-NE proposes an ICR of 33,431 MW for FCA 14, which reflects tie benefits (emergency energy assistance) assumed obtainable from New Brunswick (Maritimes), New York and Quebec in the aggregate amount of 1,940 MW.[9] However,

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[5] The Capacity Commitment Period associated with FCA 14 begins June 1, 2023 and ends May 31, 2024.

[6] ISO-NE Tariff, III.12 Calculation of Capacity Requirements, § III.12.3 (23.0.0).

[7] Transmittal at 7-8. ISO-NE notes that, on January 8, 2019, the Commission accepted the proposed Tariff changes that modified these two assumptions. Transmittal at 8 n.20 (citing *ISO New England Inc.*, Docket No. ER19-343-000 (Jan. 8, 2019) (delegated letter order) (ICR Revisions Order).

[8] *Id.* at 8.

[9] ISO-NE states that the Mystic Generation Station units 8 and 9 (Mystic 8 and 9) have been retained for fuel security in FCA 14 and that Mystic 8 and 9 have until January 10, 2020 to decide whether they will retire or continue to operate through the 2023-2024 Capacity Commitment Period. Transmittal at 2. Thus, ISO-NE proposes two sets of ICR and related values: one set assumes that Mystic 8 and 9 will remain in

ISO-NE states that the 33,431 MW ICR value does not reflect a reduction in capacity requirements relating to HQICCs. ISO-NE explains that it applies the HQICC value of 941 MW per month to reduce the portion of the ICR that is allocated to the interconnection rights holders. ISO-NE states that the net ICR (NICR), after deducting the HQICC value, is 32,490 MW.[10]

B. Local Sourcing Requirements and Maximum Capacity Limits

5. ISO-NE states that, consistent with the requirement to calculate the Local Sourcing Requirement (LSR)[11] for import-constrained zones and the Maximum Capacity Limit (MCL) for export-constrained zones,[12] it calculated the following values for the import-constrained Southern New England (SENE) Capacity Zone: a Local Resource Adequacy (LRA) requirement of 9,525 MW,[13] a Transmission Security Analysis (TSA) requirement of 9,757 MW,[14] and an LSR of 9,757 MW.[15] For the export-constrained zones, ISO-NE

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service, and the other assumes they will retire. ISO-NE states that the proposed ICR and related values discussed in its transmittal assume that Mystic 8 and 9 will continue operating in the 2023-2024 Capacity Commitment Period. *Id*. at 2.

[10] *Id*. at 10.

[11] *Id*. at 17. An LSR is the minimum amount of capacity that must be electrically located within an import constrained Capacity Zone to meet the ICR. *See* Tariff § III.12.2 (23.0.0).

[12] *Id*. at 17. An MCL is the maximum amount of capacity that can be located in an export-constrained Capacity Zone to meet the ICR. *See* Tariff § III.12.2 (23.0.0).

[13] ISO-NE states that the LRA is a zonal capacity requirement calculated using a probabilistic modeling technique that ensures the zone has sufficient resources to meet the one-day-in-ten years reliability standard. *Id*. at 18. *See* Tariff § III.12.2.1.1 (23.0.0).

[14] ISO-NE states that the TSA uses static transmission interface transfer limits developed based on a series of discrete transmission load flow study scenarios to evaluate the transmission import-constrained area's reliability. ISO-NE adds that, using this analysis, it identifies a resource requirement sufficient to allow the system to operate through stressed conditions. Transmittal at 18. *See* Tariff § III.12.2.1.2 (23.0.0); section 6 of ISO-NE's Planning Procedure No. 10, Planning Procedure to Support the Forward Capacity Market, https://www.iso-ne.com/static-assets/documents/2019/05/pp-10-r23-053119.pdf.

[15] Transmittal at 17-18.

states that it calculated MCLs of 4,020 MW for the Maine capacity zone and 8,445 MW for the Northern New England capacity zone.[16]

C. HQICCs

6. ISO-NE states that it allocates HQICC capacity credits to interconnection rights holders - entities that pay for and hold certain rights over the Hydro Quebec Phase I/II HVDC Transmission Facilities (HQ Interconnection).[17] ISO-NE explains that, pursuant to sections III.12.9.5 and III.12.9.7 of ISO-NE's Transmission, Markets, and Services Tariff (Tariff), it established the tie benefit value for the HQ Interconnection using the results of a probabilistic calculation of tie benefits with Quebec.[18] ISO-NE further explains that it allocates the HQICCs to the interconnection rights holders in proportion to their individual rights over the HQ Interconnection. ISO-NE states that it calculates HQICCs and must file the HQICC values established for each Capacity Commitment Period's FCA. ISO-NE notes that the HQICC value for FCA 14 is 941 MW per month.[19]

D. MRI Demand Curves

7. ISO-NE states that, starting with FCA 11, it began using a new methodology to develop the system-wide and zonal demand curves used in the FCA.[20] That new methodology, the marginal reliability impact (MRI) methodology, reflects the marginal improvement in reliability associated with adding capacity in constrained capacity zones versus adding it to the remainder of the system.[21] ISO-NE explains that, based on this methodology, it developed system-wide and zonal MRI demand curves for use in

[16] *Id.* at 18-19.

[17] *Id.* at 19.

[18] *Id.* at 19.

[19] *Id.* at 19.

[20] *Id.* at 19.

[21] *See ISO New England Inc.*, 155 FERC ¶ 61,319, at P 5 n.2 (2016) (citing to Transmittal, ISO New England Inc., Docket No. ER16-1434-000, at 2 (Apr. 15, 2016) (ICR Revisions Transmittal)).

FCA 14. ISO-NE states that, for the system-wide demand curves and those associated with import-constrained and export-constrained capacity zones, it must determine the MRI of capacity at various higher and lower capacity levels around the requirement.[22] ISO-NE explains that, for the purposes of calculating these MRI values, it must apply the same modeling assumptions and methodology used to determine the export-constrained capacity zone's MCL.

III. Notice of Filing and Responsive Pleadings

8. Notice of the filing was published in the *Federal Register*, 84 Fed. Reg. 61,052 (2019), with interventions and protests due on or before November 26, 2019. Avangrid Networks, Inc.; Avangrid Renewables, LLC; Calpine Corporation; Cogentrix Energy Power Management, LLC (Cogentrix); Eversource Energy Service Company; FirstLight Power; Helix Marine Wind Development, LLC; New England Power Company doing business as National Grid (National Grid); New England Power Generators Association (NEPGA), New England Power Pool Participants Committee (NEPOOL Participants Committee); New England States Committee on Electricity; NRG Power Marketing LLC; and Vistra Energy Corp. filed timely motions to intervene. Cogentrix, NEPGA, and NEPOOL Participants Committee filed comments.

9. On December 11, 2019, ISO-NE filed an answer to Cogentrix's protest and NEPGA's comments, and National Grid filed an answer to NEPGA's comments. On December 24, 2019, NEPGA filed an answer to ISO-NE's answer and National Grid's answer.

Stakeholder Process

10. NEPOOL Participants Committee states that it voted on two sets of the HQICC Values and on two sets of ICR and related values; both with and without Mystic 8 and 9. NEPOOL Participants Committee notes that the HQICC values passed in both cases but the ICR and related values failed in both cases. NEPOOL Participants Committee explains that two participants renewed their long-standing objections to ISO-NE not attributing a tie benefit reliability value to the Cross Sound Cable, while several participants raised concerns about changes to the load forecast methodology that resulted in significantly lower ICR Values and what some perceived as a lack of sufficient notice and stakeholder process.[23]

[22] Transmittal at 19-21.

[23] NEPOOL Comments at 4.

11. NEPOOL Participants Committee adds that stakeholders voiced concerns that the material change in load forecast methodology was only reviewed by the Load Forecast Committee and the Planning Advisory Committee before the decision to use the new methodology to calculate the FCA 14 ICR values. NEPOOL Participants Committee states that, while the Power Supply Planning Committee and the NEPOOL Reliability Committee ultimately reviewed the new methodology and its impact on ICR, ISO-NE had already decided to use the methodology to calculate the ICR Values by then.[24] NEPOOL Participants Committee explains that others raised concerns with the details of ISO-NE's new forecast model changes and whether additional analysis or calibration should be undertaken before ISO-NE made such a significant change.

12. NEPOOL Participants Committee states that some participants raised a concern about assumptions in the calculation of ICR Values related to the performance of solar generation. NEPOOL Participants Committee notes that these participants sought greater transparency in the ISO-NE analysis underlying its calculation of the extent to which projected behind-the-meter photovoltaic solar installations (BTM PVs) will reduce future year peak load.[25]

IV. Discussion

A. Procedural Matters

13. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214, the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

14. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2019), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We accept ISO-NE's, National Grid's, and NEPGA's answers because they have provided information that has assisted us in our decision-making process.

[24] *Id.* at 4.

[25] *Id.* at 5.

B. Substantive Matters

15. We accept the proposed ICR, HQICC, and related values and reject challenges to those values, as discussed below.

1. Implementation of Changed Methods Used to Calculate the ICR

a. Filing

i. 2019 Updates to Load Forecast Methods

16. ISO-NE states that its projected New England Control Area summer 50/50 peak load for the 2023-2024 Capacity Commitment Period is 28,838 MW.[26] ISO-NE explains that the load forecast is represented by a weekly probability distribution of daily peak loads in order to quantify the New England weekly system peak load's relationship to weather. ISO-NE further explains that summer peak loads in New England stem from extreme weather characterized by consecutive hot, humid days overlapping with workdays (i.e., non-holiday weekdays). According to ISO-NE, for the first time since summer 2013, it evaluated its peak demand load forecast model during the 2018 summer season because New England experienced several non-holiday weekdays with peak-eliciting weather.[27] ISO-NE explains that the analysis of the forecast performance for the summer of 2018 showed that the observed peak loads were lower than the forecasts, given the weather conditions. ISO-NE states that it incorporated several improvements to gross demand modeling in its peak load forecast to address this performance issue.[28]

17. ISO-NE notes that it incorporated a second weather variable, referred to as cooling degree days, into the summer model specification in addition to the weighted temperature-humidity index.[29] ISO-NE explains that it made this improvement to mitigate forecast performance issues identified during extreme weather conditions that took place during the 2018 summer. ISO-NE states that it developed separate July and August monthly models for monthly peak demand modeling. ISO-NE explains that, because forecasts of energy are one input variable within peak demand models, it developed monthly demand models consistent with the conversion to monthly energy modeling incorporated in ISO-

[26] Transmittal at 11 n. 34. The 50/50 peak refers to the peak load that has a 50 percent chance of being exceeded.

[27] Transmittal, Attachment 3 (Testimony of Jonathan Black) at 6 (Black Test.); Transmittal at 11-12.

[28] *Id*. at 11-12.

[29] *Id*. at 12.

NE's 2019 Forecast Report of Capacity, Energy, Loads, and Transmission (CELT). ISO-NE adds that it incorporated a second weather variable, heating degree days, in the winter demand model specification and replaced the dry bulb temperature variable used in the 2018 CELT with "effective temperature," which is a wind speed adjusted temperature.

18. ISO-NE states that it evaluated the changes to the specification of the summer model through both in-sample (i.e., how well the model fits the data used in its estimation) and out-of-sample (i.e., how well the model performs on test data not used in model estimation) testing, comparing the forecasting results using the 2018 CELT and 2019 CELT models. ISO-NE explains that its testing showed that the 2019 CELT model produced more accurate forecasts, both in-sample (for summer days for 2004-2018) and out-of-sample (for July/August 2018 and for July non-holiday weekdays for 2011-2018).[30]

19. ISO-NE states that it shortened the historical weather period to generate the probabilistic forecasts from 40 years to 25 years, so the new 25-year period covers 1991 to 2015. ISO-NE explains that it made this change primarily because the new winter demand model incorporates wind speed data, which was not available for all of the years during the former 40-year period (i.e., 1975 to 2014).[31] Finally, ISO-NE notes that it conducted an extensive stakeholder process regarding the development of the CELT forecast.[32]

[30] Black Test. at 9-13.

[31] Transmittal at 12.

[32] ISO-NE states that, on December 14, 2018, February 11, 2019, and March 29, 2019, it discussed its development of the CELT forecast with the NEPOOL Load Forecast Committee and the NEPOOL Planning Advisory Committee. *Id*. at 12-13. ISO-NE states that it provided the NEPOOL Planning Advisory Committee with updates on the development of the forecast at both its March 21, 2019, and April 25, 2019, meetings. *Id.* According to ISO-NE, the forecast was also discussed at four NEPOOL Power Supply Planning Committee meetings on July 25, 2019, August 9, 2019, August 26, 2019, and September 9, 2019, where the topic was discussed relative to the development of the ICR and related values. *Id.* ISO-NE states that it further discussed the 2019 CELT forecast at the August 20, 2019, and September 10, 2019, NEPOOL Reliability Committee meetings. *Id.*

ii. Impacts Resulting from 2019 Updates to Load Forecast Methods

20. ISO-NE states that the updates to the 2019 long-term forecast lowered the ICR by an estimated 1,250 MW.[33] ISO-NE states that the ICR and related values for FCA 14 are based on the latest available resource ratings of existing capacity resources that have qualified for FCA 14 at the time of the ICR calculation. ISO-NE explains that the proposed ICR and related values for FCA 14 reflect generating resource availability assumptions based on historical scheduled maintenance and forced outages of these capacity resources. ISO-NE notes that, in its analysis, it credited tie benefits that reflect the assumed amount of emergency assistance from neighboring control areas (e.g., Quebec, New Brunswick, and New York) that New England could rely on in the event of a capacity shortage in New England. ISO-NE adds that it assumed 700 MW of system reserves in the determination of the ICR and related values for FCA 14.[34]

b. Comments

21. Cogentrix argues that ISO-NE's extrapolation of relatively recent resource performance and load conditions does not accurately reflect expected changes in system conditions. Cogentrix also states that implementing the proposed modeling revisions at this time is imprudent and unjust and unreasonable given the pending process to address regional fuel security concerns.[35] Cogentrix argues that ISO-NE's revised forecasting methodology provides a historic view of the system performance without fully capturing the varying capacity needs that ISO-NE's January 2018 Operational Fuel-Security Analysis requires.[36] Cogentrix asserts that the significant reduction in the ICR would lead to significant capacity reductions beyond what the New England market has experienced

[33] *Id.* at 13. ISO-NE states that the change in the forecast ICR was attributable to the following modeling results: the Forecast Cycle case reduced it by 145 MW, the Second Weather Variable case reduced it by 855 MW, the Shorter History Weather Period case reduced it by 140 MW, and the Separate July and August Peak Load Model case increased it by 45 MW. ISO-NE notes that, while the preliminary load forecast data it used to estimate the impact of the updates to the 2019 long-term forecast methodology on the forecast ICR were not exactly the same as the 2019 CELT forecast, the values are very close.

[34] *Id.* at 14-17.

[35] Cogentrix Protest at 6 (citing *ISO New England Inc.*, 164 FERC ¶ 61,003, at P 28 (2018)).

[36] *Id.* at 3 n.3.

in prior capacity auctions. For these reasons, Cogentrix asks the Commission to direct ISO-NE to delay or phase in any changes to the load forecast methodology.

22. Cogentrix argues that ISO-NE should not change the forecast model until after ISO-NE has considered all relevant changes in the NEPOOL Load Forecast Committee.[37] Cogentrix contends that the ISO-NE's timeframe for its analytical review of the peak demand load forecast, which resulted in a peak load decline of 855 MW, is insufficient to credibly predict future load profiles. Cogentrix also questions ISO-NE's out-of-sample period for optimizing its model. Cogentrix believes that ISO-NE should have selected an out-of-sample validation set across the entire 2004-2018 study period, rather than using an out-of-sample performance for only 2018. Given the significant ICR reduction resulting from the study, Cogentrix asks the Commission to require ISO-NE to provide additional data and analysis, demonstrating why its model is sufficiently robust and stable to produce such a marked change.[38]

c. Answer

23. In response to Cogentrix's arguments that ISO-NE should delay implementation of its revised load forecast methodology until the Commission has accepted rules to address regional fuel security concerns, ISO-NE argues that it has developed the load forecast and the ICR and related values in accordance with its Tariff.[39] To Cogentrix's contention that ISO-NE should delay implementation of the new load forecast methodology until after heating and transportation electrification forecasts have been developed, ISO-NE explains that, while it is in the process of developing these forecasts, the Tariff requires it to use the most accurate load forecast that it can develop each year by using appropriate models and data inputs. ISO-NE adds that Cogentrix's speculation that an increase in electric demand resulting from heating and transportation electrification will "significantly" impact the ICR should not prevent ISO-NE from implementing improvements to the load forecast methodology for FCA 14.[40] ISO-NE asserts that, if the improvements to the load forecast methodology are not implemented, ISO-NE would be using a less accurate forecast, which is contrary to the Tariff's requirements.[41]

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[37] *Id.* at 9-10.

[38] *Id.* at 11.

[39] ISO-NE Answer at 5-6.

[40] *Id.* at 6-7.

[41] *Id.* at 5-6.

24. In response to Cogentrix's request that the Commission require ISO-NE to provide additional data and analysis regarding the revised load forecast methods, ISO-NE states that its filing included summaries of results of both in-sample and out-of-sample performance testing using data spanning 15 summer seasons. According to ISO-NE, these results consistently validate that the model specification changes implemented in the 2019 CELT Report result in an improved forecast, especially during peak load conditions. Further, ISO-NE states that its analysis included an evaluation of eight years of out-of-sample forecast performance (i.e., 2011-2018) and a tabulation that compares out-of-sample mean absolute percent error during 2011-2018 summer days (July non-holiday weekdays). According to ISO-NE, Cogentrix's suggestion that ISO-NE's analysis is inadequate is unfounded and, therefore, the suggestion should be denied by the Commission.[42]

d. Determination

25. We find that ISO-NE has calculated the ICR and related values consistently with its Tariff and has done so based on appropriate models and data inputs.[43] With respect to the proposed changes to its load forecast methodologies, ISO-NE states that it reviewed its peak demand load forecast methodology this year because it found that conditions assumed in the long-term summer peak demand forecast are uncommon and may not occur at all during some summer seasons. ISO-NE explains that the forecast performance for the summer of 2018 illustrated that the observed peak loads were lower than the 2018 CELT forecasts. Therefore, ISO-NE incorporated improvements to the summer demand load forecast models' specification by making improvements in the gross energy modeling and in the gross demand modeling.[44] In its answer, ISO-NE explains that, "[i]f the improvements to the load forecast methodology are not implemented, then [ISO-NE] would be using a less accurate forecast, which is contrary to the requirements of the Tariff."[45]

26. In the ICR Revisions Order, the Commission accepted ISO-NE's proposals to assume a one percent load reduction in response to voltage reductions and to use EFORd when modeling peaking generation resources. With respect to these accepted modeling assumptions, we find that, in calculating the ICR and related values for FCA 14, ISO-NE

[42] *Id.* at 6-7.

[43] Transmittal at 11-12 (citing Tariff § III.12.8 which requires that ISO-NE use "load forecasts [that are] based on appropriate models and data inputs").

[44] Black Test. at 6-8.

[45] ISO-NE Answer at 6.

acted consistently with its Tariff that requires it to take into account resource availability[46] and to estimate expected load relief from voltage reductions.[47] Therefore, we decline to require ISO-NE to delay implementation of the new modeling assumptions as requested by Cogentrix.

27. Cogentrix states that, because future market conditions are uncertain, especially as they relate to fuel security, ISO-NE should delay implementing changes to the methods it uses to calculate ICR, and by extension the ICR calculation itself. We find that these concerns are speculative and unsupported. Further, Cogentrix's arguments appear to be focused on the fact that the modeling changes reduce the ICR and related values, not on whether the modeling methods themselves improve accuracy from the status quo. In contrast, ISO-NE has adequately explained and supported its revised modeling methods and assumptions before utilizing them in calculating the ICR and in doing so, ISO-NE has acted consistently with its Tariff obligations. Our review of the record here supports accepting ISO-NE's calculation of its ICR and related values.

2. Estimated Impact of Solar Installations

a. Comments

28. NEPGA raises concerns about the NICR proposed by ISO-NE, including ISO-NE's estimate of the impact that BTM PVs have on reducing the peak load that must be served by capacity supply (i.e., the peak load used to calculate the FCA demand). NEPGA argues that ISO-NE has not provided metered output or inverter data for each BTM PV installation, asserting that, instead, ISO-NE buys a sample set of inverter data and extrapolates that information to estimate the amount of BTM PV for both future and past Capacity Commitment Periods. NEPGA contends that this estimation process lacks sufficient transparency to be properly vetted through the NEPOOL process and thus does

[46] Transmittal at 7-8 (citing to Tariff § III.12.7.3 ("The Installed Capacity Requirement, Local Resource Adequacy Requirements, Transmission Security Analysis Requirements, Maximum Capacity Limits and Marginal Reliability Impact values shall be calculated taking resource availability into account")).

[47] *Id.* at 7-8 (citing to Tariff § III.12.7.4, stating "[l]oad and capacity relief expected from system-wide implementation of the following actions […] shall be included in the calculation of the Installed Capacity Requirement"). The "following actions" include implementing voltage reduction, Tariff § III.12.7.4(a).

not provide a sufficient basis for stakeholders or the Commission to evaluate whether the estimates are just and reasonable.[48]

29. NEPGA further asserts that ISO-NE's estimates of BTM PV's effect on peak loads appear to inadequately account for the fact that increased BTM PV and Energy Efficiency resource penetration pushes the net peak load hour later in the day. NEPGA contends that, as the net peak load shifts, the marginal impact of additional BTM PVs and Energy Efficiency resources should have a diminishing impact on reducing the region's grid-facing load and NEPGA argues that ISO-NE's estimates fail to acknowledge this diminishing impact.[49]

30. NEPGA argues that stakeholders must have access to data and information used by ISO-NE, including BTM PV installation data. NEPGA contends that, because Electric Distribution Companies (EDCs) are not required to provide actual hourly output data for the BTM PV installations in their service territories, ISO-NE must estimate this data from a sample of inverter data it purchases from a third-party vendor. NEPGA explains that the third-party vendor's data comes from a subset of inverters selected by the inverter vendors that contract with the BTM PV installers, and therefore there is a conflict of interest that may prevent the third-party vendor from providing that information objectively. NEPGA claims that ISO-NE does not provide hourly BTM PV data to NEPOOL stakeholders due to confidentiality requirements imposed by the third-party information vendor.[50] Therefore, NEPGA asks the Commission to direct ISO-NE to prospectively require its third-party vendors, the New England EDCs, and municipal light plants with BTM PV

[48] NEPGA Protest at 2-3.

[49] *Id.* at 2. NEPGA also states that ISO-NE's most recent projections show BTM PV netting 708 MW off of the gross peak load forecast in 2019, increasing steadily to a 1,051 MW net off of the gross peak load forecast in 2028. NEPGA Protest at 5, 5 n.8 (citing Final Draft 2019 CELT ISO-NE and State Annual Energy and Seasonal Peak Forecasts, NEPOOL Load Forecast Committee, at 36 (Mar. 29, 2019), https://www.iso-ne.com/static-assets/documents/2019/03/lfc_29mar2019_final.pdf). Thus, NEPGA argues, BTM PV represents nearly a 1,000 MW reduction to the system-wide NICR value and a greater than 1,000 MW reduction to the MRI demand under the MRI demand curve at prices below Net CONE. *Id*. at 5, 5 n.9.

[50] *Id.* at 5-6.

solar installations in their service territories to provide NEPOOL stakeholders with actual inverter data that shows the generation output of all BTM PV and other solar installations in New England.[51]

b. Answers

31. In its answer, National Grid notes that the Tariff already offers a stakeholder process for addressing parties' concerns regarding the modeling assumptions and/or methodology for determining the ICR and related values.[52] National Grid argues that NEGPA has not shown that it has fully exhausted its options through this stakeholder process. National Grid also contends that, if NEGPA were to file a complaint on this issue under FPA section 206[53] after exhausting its remedies in the stakeholder process, such a complaint would fail to demonstrate that the existing Tariff is unjust and unreasonable and that its requested relief would be just and reasonable.[54]

32. In response to NEPGA's request that ISO-NE revise its Tariff to require its third-party vendor, EDCs, and municipal lighting plants to provide NEPOOL stakeholders with 5-minute inverted data for each operating BTM PV resource in the region, ISO-NE states that it does not have jurisdiction or authority to do so. ISO-NE explains that BTM PV installations are interconnected at the state-jurisdictional distribution level and thus are beyond ISO-NE's jurisdiction. ISO-NE also explains that its third-party vendors are not subject to its Tariff. ISO-NE notes, however, that it could provide the data it currently uses in aggregated form and share this data with NEPOOL stakeholders starting with the ICR process ahead of the fifteenth FCA (FCA 15).[55] Further, specifically with respect to NEPGA's allegation that ISO-NE is failing to take account of the fact that increased BTM PV and Energy Efficiency are pushing the net peak load hour later in the day, ISO-NE states that "the ISO's decision to model BTM PV as an hourly load reduction, for all probabilistic analyses used to calculate the ICR and related values, was made to properly reflect the hourly load reduction associated with BTM PV, which explicitly captures this

[51] *Id.* at 3.

[52] National Grid Answer at 3, 3 n.3 (citing ISO-NE Tariff § III, Market Rule 1, § III.12) (ISO-NE shall make adjustments to the modeling assumptions and/or methodology through the stakeholder process to eliminate the bias in the Installed Capacity requirement).

[53] 16 U.S.C. § 824d (2018).

[54] National Grid Answer at 2.

[55] ISO-NE Answer at 8-9.

diminishing impact of BTM PV as the net of BTM PV peak load becomes later in the afternoon."[56]

33. NEPGA responds to ISO-NE stating that it is not aware of any law or policy that limits access to, or the authority to demand, information necessary to establish accurate reliability needs. NEPGA further states that the jurisdictional divide of retail versus wholesale rate jurisdiction is not relevant to the issue that NEPGA raises here.[57] NEPGA also states that because BTM PV resources do not qualify for FCA participation as supply, such resources should be reflected as reductions in the load forecast.[58] According to NEPGA, the Tariff does not allow for reductions in the load forecast without sufficient monitoring and verification information, but the nature and quality of the information ISO-NE uses does not meet that standard.[59] NEPGA states that BTM PV installations are currently expected to continue to significantly grow in New England over the next decade, but that growth may, in fact, be delayed,[60] so that projections that assume that amount of growth may be inaccurate and could lead to an insufficient ICR. Therefore, NEPGA contends that, as more distributed resources come online, situational awareness and data to meet planning and operational criteria will become increasingly important. NEPGA argues that now is the time to require a more precise accounting of BTM PV generation, before the lack of situational awareness adversely impacts ISO-NE's resource adequacy and operational reliability needs.[61]

34. In response to National Grid's answer, NEPGA states that it is not apparent that the Tariff limits NEPGA to raising its concerns about modeling accuracy in the NEPOOL

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[56] *Id.* at 9 n.25.

[57] NEPGA Answer at 1-2.

[58] *Id.* at 3 (citing to Tariff §§ III.12.8 and I.2.2).

[59] *Id.* at 3 (citing to Tariff § III.12.8(a)).

[60] *Id.* at 3-4.

[61] *Id.* at 4-5 nn.14-15 (citing to ISO-NE Presentation to the NEPOOL Load Forecast Committee Re: *Final Draft 2019 CELT ISO-NE and States Annual Energy and Seasonal Peak Forecasts*, at 35-36, https://www.iso-ne.com/staticassets/documents/2019/03/lfc_29mar2019_final.pdf, and Distributed Energy Resources-Technical Considerations for the Bulk Power System, Tr. pp. 220-352, Docket Nos. RM18-9-000 and AD18-10-000 (April 11, 2018)).

stakeholder process.[62] However, NEPGA states further that it did request during the NEPOOL stakeholder process that ISO-NE collect five-minute BTM PV generation data from the local distribution companies but its request was denied.[63] NEPGA explains that it now asks the Commission for relief.

35. NEPGA states that, as to National Grid's argument that the Commission cannot grant NEPGA's request in this proceeding, the Commission may at any time direct changes to the Tariff under FPA Section 206 to the extent that the Tariff is unjust and unreasonable. NEPGA asks the Commission either to direct Tariff changes under FPA Section 206, or to find that the Tariff presently requires that ISO-NE collect the resource-level BTM PV data.[64]

c. Determination

36. We find that ISO-NE's methods for receiving third-party data on BTM PVs and using that data to calculate the ICR and related values are consistent with the requirements of the Tariff and the Commission's prior decisions. As the Commission has previously recognized, when it is appropriate to change assumptions used to develop the ICR and related values (e.g. estimates of peak load reductions resulting from BTM PV), it is reasonable for "ISO-NE to have sufficient flexibility to update its assumptions as necessary."[65] We find here that the Tariff affords ISO-NE sufficient flexibility to utilize reasonable data and assumptions in calculating the ICR and related values, as ISO-NE has done here.

37. We also disagree with NEPGA's arguments that ISO-NE only relies on data from a subset of BTM PVs in the region. ISO-NE and the Distributed Generation Forecast Working Group have collaborated each year since 2014 to develop forecasted nameplate ratings for BTM PV's over a going-forward ten-year time horizon.[66] These forecasts consider state policy objectives and recent growth trends for BTM PV adjusted for

[62] *Id.* at 5.

[63] *Id.* at 5 n.17 (citing, *inter alia*, to NEPOOL Reliability Committee Meeting Minutes at 8 (Sept. 26, 2018), https://www.iso-ne.com/committees/reliability/reliability-committee/?sort=normalized_document_title_s.asc&eventId=134592).

[64] NEPGA Answer at 5-6.

[65] *ISO New England Inc.*, 154 FERC ¶ 61,008, at P 31 (2016 ICR Order), *reh'g denied*, 155 FERC ¶ 61,145 (2016).

[66] Sedlacek-Wong Test. at 16.

uncertainty in future commercialization by including discount adjustments to the forecast.[67] ISO-NE explains that, similar to previous years' practice, it has used an "hourly profile" methodology that models the forecast of PV output as the full hourly load reduction value of BTM PV in all 8,760 hours of the year.[68] We agree with ISO-NE that this approach is a reasonable way to incorporate the impact of BTM PV into its ICR calculation because it reflects the impact that BTM PV installations have on reducing system load while accounting for the inherent uncertainty associated with BTM PV resources. We encourage ISO-NE to share with NEPOOL stakeholders an aggregated form of the BTM PV data that it currently uses, starting with the ICR stakeholder process ahead of FCA 15, as ISO-NE suggests.

The Commission orders:

ISO-NE's filing is hereby accepted, to become effective January 3, 2020, as requested, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

[67] *Id.* at 16.

[68] *Id.* at 16-17.