

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

ISO New England Inc.)
) Docket Nos. ER16-446-000
)

**COMMENTS OF THE
NEW ENGLAND STATES COMMITTEE ON ELECTRICITY**

Pursuant to the Federal Energy Regulatory Commission’s (“Commission” or “FERC”) December 2, 2015 Combined Notice of Filings #1, the New England States Committee on Electricity (“NESCOE”) hereby files these comments in the above-captioned proceeding.¹ On December 1, 2015, ISO New England Inc. (“ISO-NE” or the “ISO”) filed with the Commission the Installed Capacity Requirement (“ICR”) and other values for annual reconfiguration auctions corresponding with the 2016/2017, 2017/2018, and 2018/2019 periods (the “ARA Filing”).² The ARA Filing follows ISO-NE’s November 10, 2015 filing with the Commission of the ICR and other values for the 2019/2020 Capacity Commitment Period (the “November 10 Filing”).³ Both the ARA Filing and the November 10 Filing describe how ISO-NE has reflected its solar photovoltaic forecast (the “Solar PV Forecast”) into the ICR calculation for those respective capacity commitment periods.

NESCOE filed comments regarding the November 10 Filing that expressed NESCOE’s strong support for including the Solar PV Forecast as an input into the load forecast used to

¹ On December 7, 2015, NESCOE filed a motion to intervene in this proceeding. NESCOE is the Regional State Committee for New England, representing the collective position of the six states in regional electricity matters.

² Capitalized terms not defined in this filing are intended to have the meaning given to such terms in the ISO-NE Transmission, Markets and Services Tariff (the “Tariff”).

³ ISO New England Inc., Filing of Installed Capacity Requirement, Hydro Quebec Interconnection Capability Credits and Related Values for the 2019-2020 Capacity Commitment Period, Docket No. ER16-307-000 (filed Nov. 10, 2015).

calculate the ICR.⁴ In its comments, which are attached hereto as Attachment 1, NESCOE underscored that the ICR “represents the level of consumer investment in the ISO-NE markets that is necessary for resource adequacy, and that level of investment must consider in a timely manner the rapid development of solar PV resources that are affecting system demand.”⁵

NESCOE also discussed how “any attempt to link the Solar PV Forecast with the [Renewable Technology Resource] exemption or other capacity market elements misses” fundamental points about the Solar PV Forecast.⁶

NESCOE incorporates by reference and adopts in this proceeding its comments concerning the November 10 Filing and respectfully requests that the Commission consider these comments with respect to the ARA Filing.

Respectfully submitted,

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⁴ Comments of the New England States Committee on Electricity, Docket No. ER16-307-000 (filed Dec. 1, 2015).

⁵ *Id.* at 6.

⁶ *Id.* at 9-10.

CERTIFICATE OF SERVICE

In accordance with Rule 2010 of the Commission's Rules of Practice and Procedure, I hereby certify that I have this day served by electronic mail a copy of the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Cambridge, Massachusetts this 22nd day of December, 2015.

Respectfully submitted,

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ATTACHMENT 1

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

ISO New England Inc.

)
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Docket Nos. ER16-307-000

**COMMENTS OF THE
NEW ENGLAND STATES COMMITTEE ON ELECTRICITY**

Pursuant to the Federal Energy Regulatory Commission’s (“Commission” or “FERC”) November 12, 2015 Combined Notice of Filings #1, the New England States Committee on Electricity (“NESCOE”) hereby files these comments in the above-captioned proceeding. On November 10, 2015, ISO New England Inc. (“ISO-NE” or the “ISO”) filed with the Commission the Installed Capacity Requirement (“ICR”) and other values for the 2019/2020 Capacity Commitment Period (the “ICR Filing”).¹ The Forward Capacity Auction (“FCA”) to be held in February 2016 (“FCA 10”) is the corresponding auction for the 2019/2020 Capacity Commitment Period.²

This will be the first FCA in which ISO-NE has reflected in the ICR its forecast of certain solar photovoltaic (“PV”) resources (the “PV Forecast”) whose output has a load reduction effect. NESCOE strongly supports ISO-NE’s incorporation of the PV Forecast into the ICR calculation, consistent with the Commission’s directive and improving the accuracy of the ICR values and determination of the region’s resource adequacy needs.

¹ Capitalized terms not defined in this filing are intended to have the meaning given to such terms in the ISO-NE Transmission, Markets and Services Tariff (the “Tariff”).

² ICR Filing at 1, n. 2.

I. COMMUNICATIONS

Pursuant to Rule 203, 18 C.F.R. § 385.203 (2014), the person to whom correspondence, pleadings, and other papers in regard to this proceeding should be addressed and whose name is to be placed on the Commission's official service list is designated as follows:

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II. BACKGROUND

A. Failure to Account for the PV Forecast in Past ICR Values

1. NESCOE's Challenge

In 2014, ISO-NE began applying its first PV Forecast to transmission planning studies.³ This enhancement to the planning process ensured that transmission infrastructure needs properly accounted for reductions in system demand attributed to the growth of solar PV installations across the region. Like the current PV Forecast, this initial forecast discounted the expected contribution of these resources, translating nameplate capability into seasonal claimed capability and taking into account policy implementation uncertainty.⁴

Unfortunately, the ICR values that ISO-NE filed with the Commission last year for the 2018/2019 Capacity Commitment Period did not incorporate the PV Forecast. NESCOE challenged that omission through the stakeholder process and, ultimately, as part of that FERC

³ *Id.* at 6.

⁴ See ISO-NE, 2014 Interim Forecast of Solar Photovoltaic (PV) Resources, April 2014, available at www.iso-ne.com/static-assets/documents/committees/comm_wkgrps/othr/distributed_generation_frct/2014_pv_frct/2014_final_solar_forecast.pdf.

proceeding. NESCOE underscored the rapid growth of PV resources driven largely by state policies and stated that by “failing to account for these increased levels of [PV] resources . . . the region’s power needs are overstated and consumers are exposed to potentially hundreds of millions of dollars in unnecessary costs.”⁵ While NESCOE did not request FERC action in advance of the ninth FCA (“FCA 9”), it expressed, as relevant to the current proceeding, the strong need for changes in time for FCA 10 to ensure that the ICR reflected “contributions to resource adequacy from incremental ratepayer investments in renewable [distributed generation] resources[.]”⁶

A number of New England market participants and stakeholders shared NESCOE’s concerns last year regarding the failure of the ICR to capture load reduction effects from increased distributed generation (“DG”) penetration. The New England Power Pool Participants Committee (“NEPOOL”) did not support the ICR value for FCA 9 that ISO-NE filed with the Commission.⁷

In a December 10, 2014 answer to these challenges, ISO-NE recognized “that there is a commitment to install more PV resources in New England and that the ISO, working with stakeholders, needs to better understand the impact of those resources on power system planning and operations.”⁸ ISO-NE further stated that it was “working to understand whether and how PV resources not currently captured through existing [Forward Capacity Market] mechanisms should impact the ICR calculations based solely on a forecast [and that] the ISO and stakeholders will need to discuss several technical issues associated with developing the parameters associated

⁵ Motion to Intervene and Comments of the New England States Committee on Electricity, Docket No. 15-325-000 (filed Nov. 25, 2015), at 2 (footnote omitted).

⁶ *Id.*

⁷ *See* ISO New England Inc., 150 FERC ¶ 61,1003 (2015) (“2015 Order”) at P 7.

⁸ Answer of ISO New England Inc., Docket No. 15-325-000 (filed Dec. 10, 2015), at 5.

with PV resources for use in bulk electric system planning and operations.”⁹ ISO-NE stated that “[b]ased on the outcome of these discussions, it will be determined whether additional amounts of forecasted PV should be included in the ICR calculations and, if so, how.”¹⁰

2. FERC Order

The Commission accepted ISO-NE’s ICR values associated with FCA 9.¹¹ However, the Commission addressed the concern that NESCOE and others raised regarding ISO-NE’s failure to account for DG resources in the ICR:

While we acknowledge concerns about excluding distributed generation from the ICR calculation, we also agree with ISO-NE and various stakeholders that ISO-NE must examine the market and operational issues associated with incorporating distributed generation into the ICR calculation. Accordingly, while we are accepting ISO-NE’s proposed values for FCA 9, we expect ISO-NE to fully explore the incorporation of distributed generation into the ICR calculation in the stakeholder process. We expect ISO-NE to do this on a schedule that will allow these factors to be reflected, if determined appropriate, in the ICR calculation for FCA 10.^[12]

B. ISO-NE Response for FCA 10

As detailed in the ICR Filing, ISO-NE engaged in numerous regional discussions over a ten month period to develop the 2015 PV Forecast and consider issues related to reflecting the forecast in ICR calculations.¹³ ISO-NE considered a range of issues in evaluating the inclusion of the PV Forecast in the ICR.¹⁴

⁹ *Id.*

¹⁰ *Id.* at 6.

¹¹ 2015 Order at P 18.

¹² *Id.* at P 20.

¹³ ICR Filing at 7.

¹⁴ ISO-NE, Use of the Solar Photovoltaic Forecast to Modify the Long-Term New England Load Forecast, NEPOOL Reliability Committee Meeting, Feb. 17, 2015 (“February 2015 Presentation”), at Slide 4, *available at* www.iso-ne.com/static-

- Avoiding any “double counting of solar PV resources that are already captured in the load forecast or are participating directly in the markets”;
- Obtaining “accurate and timely data to allow for proper modeling of future solar PV development and assessment of existing solar PV and their influence on regional load”;
- Ensuring the “consistent treatment of different resource types”; and
- “Encourag[ing] market participation, whenever practical, of new, solar PV installations to improve visibility and operational awareness[.]”

ISO-NE divided solar PV resources into four distinct categories: (1) solar PV resources participating in the Forward Capacity Market (“FCM”), (2) Settlement Only Resources (“SORs”), which participate in the energy market but have not undertaken a commitment through the FCM, (3) Behind-the-meter (“BTM”) solar PV resources that are already “embedded in load,” meaning that these installed PV resources are currently captured in historical load data that is input into the future load forecast, and (4) BTM solar PV resources not embedded in load (i.e., solar PV resources that are expected to be installed before the relevant Capacity Commitment Period and have a load reduction impact but are not reflected in historical load data).¹⁵

After evaluating the issues listed above and analyzing the categories of solar PV resources, ISO-NE concluded that it was appropriate to adjust the load forecast using data reflecting this last category of resources, BTM solar PV not embedded in load.¹⁶ ISO-NE presented this framework for discussion with market participants and stakeholders beginning in

[assets/documents/2015/02/a8_use_of_solar_pv_forecast_to_modify_long_term_new_england_load_forecast.pdf](#).

¹⁵ ICR Filing at 7.

¹⁶ See February 2015 Presentation at Slides 2, 14.

February 2015.¹⁷ As detailed in the ICR Filing, the effect of the PV Forecast on the ICR associated with FCA 10 resulted in a reduction of 390 MW.¹⁸

III. COMMENTS

NESCOE strongly supports ISO-NE's inclusion of the Solar PV Forecast as an input into the load forecast used in the ICR calculation. The ICR represents the level of consumer investment in the ISO-NE markets that is necessary for resource adequacy, and that level of investment must consider in a timely manner the rapid development of solar PV resources that are affecting system demand. NESCOE has underscored that the "application of an appropriate forecast to system planning and resource adequacy determinations will reflect the fact that New England consumers are increasingly investing in clean, distributed energy resources in furtherance of state energy programs and policies."¹⁹ The ICR cannot be divorced from these significant investments in solar PV resources.

A. Reflection of the PV Forecast in ICR Calculations Achieves a More Accurate Determination of System Needs

As ISO-NE has recognized, the steady development of BTM solar PV resources is having a load reducing impact that should be accounted for in the load forecast.²⁰ In fact, according to data presented to ISO-NE during the development of this year's forecast, solar PV installations are occurring at a significantly faster rate than was projected in the initial PV Forecast. By the end of 2014, solar PV capacity on a region-wide basis was reportedly over 40% greater than

¹⁷ ICR Filing at 7; *see generally* February 2015 Presentation.

¹⁸ ICR Filing at 8.

¹⁹ NESCOE, Comments on Draft 2015 Solar PV Forecast, Mar. 9, 2015 ("NESCOE Comments to ISO"), at 1, available at <http://nescoe.com/resources/solar-pv-forecast-comments-mar2015/>.

²⁰ *See* ICR Filing at 8; *id.* at Prepared Testimony of Mr. Stephen J. Rourke and Mr. Peter K. Wong on Behalf of ISO New England Inc., at 12-13.

ISO-NE had reflected in the initial forecast.²¹ This rapid increase in load reducing resources affirms the need to account for their effect on system demand in resource adequacy determinations. This increase also underscores the conservatism of ISO-NE's forecast.

The resources that are captured in the Solar PV Forecast are small-scale (less than 5 MW) installations.²² Their output, which serves to reduce ISO-NE system load, will eventually be reflected in historical load calculations that are input into the ICR determination. Thus, applying the Solar PV Forecast to the ICR merely eliminates the lag that exists due to the timing of a resource placed in service and historical load calculations catching up to that resource's output. This is the essence of why it is imperative to capture BTM solar PV resources in the ICR: such a lag creates the potential for the FCM to procure, and consumers to ultimately purchase, resources that are unneeded to meet system demands. Such over procurement of resources could have unintended market consequences in future FCAs.

NESCOE appreciates that ISO-NE revisited the "discount factors" that account for uncertainties in the forecast following discussions with states and stakeholders, and it expects that this and other issues will be a subject of ongoing dialogue as the region gains experience with the forecast. In addition, ISO-NE has indicated that it will consider the inclusion of non-PV distributed generation resources as part of a broader DG forecast as significant changes to the system occur.²³ NESCOE agrees with ISO-NE that the focus at this time should remain on the PV Forecast and, as noted above, the forecast will require continued attention to ensure that it

²¹ NESCOE Comments to ISO at 1.

²² See ISO-NE, Classification of PV Forecast Into Four Types, Distributed Generation Forecast Working Group ("DGFWG") Meeting, April 14, 2015, at Slide 8, available at www.iso-ne.com/static-assets/documents/2015/04/classification_of_2015_pv_forecast.pdf.

²³ See DGFWG, April 14, 2015 Draft Meeting Minutes, at 3, available at www.iso-ne.com/committees/planning/distributed-generation.

accurately and fairly captures consumer investments in solar PV. However, the growth of non-solar DG resources not participating in the FCM must be closely monitored for their impact on resource adequacy needs and, as appropriate, the PV Forecast should evolve to capture a greater range of resources.

B. ISO-NE has Adhered to the Commission’s Directives Regarding the Incorporation of the Solar PV Forecast into ICR Calculations

In the 2015 Order, the Commission set forth its expectation that ISO-NE would reflect DG resources in the ICR calculation for FCA 10, as determined appropriate and following an examination of market and operational issues and stakeholder discussions.²⁴ NESCOE agrees with ISO-NE that the Commission’s directives have been met.

As discussed above, ISO-NE identified a range of potential market and operational issues in connection with applying the PV Forecast to the ICR. These included concerns about double counting resources, the ability to obtain accurate information, treating different resource types consistently, and encouraging solar PV resources to participate in the market to the extent practical to “improve visibility and operational awareness.”²⁵ ISO-NE then assigned solar PV resourced to four separate categories—those participating in the FCM, as SORs, or BTM resources that were either embedded in load or not embedded in load.²⁶

ISO-NE presented a framework for stakeholder discussion at the February 2015 Reliability Committee.²⁷ Opportunities to discuss the PV Forecast and its application to the ICR

²⁴ 2015 Order at P 20.

²⁵ February 2015 Presentation at Slide 4.

²⁶ ICR Filing at 7.

²⁷ *See id.*

were made available at several subsequent stakeholder meetings.²⁸ Consistent with the 2015 Order, ISO-NE ultimately determined that reflecting the PV Forecast in ICR calculations was appropriate following its consideration of potential market and operational issues, analysis of the distinct categories of solar PV resources, and discussions with stakeholders.

C. Assertions Regarding the Solar PV Forecast and Market Implications

NESCOE anticipates that some market participants will express in this proceeding their opposition to the ICR values due to a connection they seek to draw between use of the Solar PV Forecast and a narrowly tailored Renewable Technology Resource (“RTR”) exemption to FCM Minimum Offer Price Rules or other market issues. Any attempt to link the Solar PV Forecast with the RTR exemption or other capacity market elements misses at least two fundamental points.

First, these BTM solar PV resources are not participating in the ISO-NE markets as supply side resources. As ISO-NE has demonstrated, they are a distinct category of resources not currently accounted for in the markets or in historical load calculations. Inclusion of these resources merely addresses the lag between such solar PV placed in service and a catching up of historical load forecasts. These are not resources that would seek to apply for the RTR exemption. Indeed, the RTR exemption process is defined by and subject to requirements set forth in the Tariff and relevant FERC orders. Inclusion of the Solar PV Forecast in the ICR does nothing to alter those requirements.

Second, whether these solar PV resources are accounted for in the ICR or not, continued investments in solar PV power will have an effect on ISO-NE system demand. Thus, the interaction between the output of these resources and the markets would occur irrespective of

²⁸ *See id.*

whether the ICR calculation corrects for the lag described above. As discussed above, the significant difference is that the effect would not be fully captured in the ICR, forcing consumers to purchase unneeded future capacity with consequences not only to consumers but to the overall market and the justness and reasonableness of the resulting wholesale rate.

IV. CONCLUSION

For the reasons stated herein, NESCOE respectfully requests that the Commission consider the above comments in this proceeding.

Respectfully submitted,

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Date: December 1, 2015

CERTIFICATE OF SERVICE

In accordance with Rule 2010 of the Commission's Rules of Practice and Procedure, I hereby certify that I have this day served by electronic mail a copy of the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 1st day of December, 2015.

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