146 FERC ¶ 61,084
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Acting Chairman;
Philip D. Moeller, John R. Norris,
and Tony Clark.

ISO New England Inc. Docket No. ER14-616-000

ORDER ON PROPOSED TARIFF REVISIONS

(Issued February 11, 2014)

1. On December 13, 2013, pursuant to section 205 of the Federal Power Act,[1] ISO New England Inc. (ISO-NE) submitted proposed revisions to its Forward Capacity Market (FCM) Offer Review Trigger Price (ORTP) provisions.[2] As set forth below, we accept in part and reject in part the proposed tariff revisions, with the accepted provisions to become effective February 11, 2014, as requested, as discussed in the body of this order.

I. Background

2. ISO-NE administers a forward market for capacity, the FCM, in which resources compete in an annual Forward Capacity Auction (FCA) to provide capacity to New England three years in advance of the relevant Capacity Commitment Period. Resources whose capacity clears the FCA acquire capacity supply obligations, which they must fulfill three years later.

3. Prior to the FCA, ISO-NE compares capacity supply offers from new resources to benchmark prices in order to protect against the exercise of buyer-side market power that could inappropriately suppress capacity prices. ISO-NE calculates a benchmark price, known as an ORTP, for each resource technology type (e.g. combustion turbine) based on certain revenue and cost assumptions. When market participants submit supply offers for

[1] 16 U.S.C. § 824d (2012).

[2] The FCM rules are set forth in section 13 of Market Rule 1 of the Transmission, Markets and Services Tariff (Tariff). Capitalized terms used but not defined herein are intended to have the meaning given to such terms in the Tariff.

new resources, the ORTP acts as a screen: offers at or above the relevant ORTP are accepted into the FCA with no further review; offers below the relevant ORTP may be accepted into the FCA, but must first be justified to the Internal Market Monitor (IMM) during a unit-specific review process.

4. The Tariff framework for calculating ORTPs and the currently-effective ORTPs were accepted by the Commission in February 2013.[3] Under the current framework, for generation resources, ISO-NE uses a publicly-available capital budgeting model to calculate ORTPs equal to the FCM revenue required in the first year for a new project to break even.[4] The model considers likely non-capacity revenues and expected capital and operating costs, along with assumptions regarding depreciation, taxes, and the discount rate, to reach a specific ORTP for each technology type. For demand resources, the current Tariff allows ISO-NE to calculate ORTPs based on the incremental operating costs associated with the demand response business activities of selected industry firms engaged primarily in the demand response business. ISO-NE has stated that it sets ORTPs at the low end of the competitive range of expected offers in order to subject resources to unit-specific review only when it appears that their offers could not be commercially plausible, absent out-of-market (OOM) revenues. The Commission accepted this rationale in the February 2013 Order.[5]

5. The Tariff requires ISO-NE to conduct a full recalculation of the ORTPs at least every three years.[6] The ORTPs approved in the February 2013 Order became effective, beginning with FCA 8, which was held February 3, 2014.

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[3] *ISO New England Inc.*, 142 FERC ¶ 61,107 (2013), *reh'g pending* (February 2013 Order).

[4] More precisely, the Tariff states that the model looks at 20 years of real-dollar cash flows, discounted at the weighted-average cost of capital consistent with that expected of a project whose output is under contract (i.e. negotiated at arm's length between two unrelated parties), and determines the contribution required from the FCM to yield a discounted cash flow with a net present value of zero for the project. Tariff, § III.A.21.1.2(b) (26.0.0).

[5] February 2013 Order, 142 FERC ¶ 61,107 at P 38 ("[W]e are satisfied by ISO-NE's rationalization that, in the case of New England, use of trigger prices at the low end of the spectrum strikes a reasonable balance by not subjecting clearly competitive offers to IMM evaluation, but only addressing those offers that plainly appear commercially implausible absent [OOM] revenues.")

[6] Tariff, Section III.A.21.1.2(a).

II. Proposed Tariff Revisions

6. ISO-NE proposes (i) revisions to ORTPs for various technology types based on updated model inputs, (ii) revisions to the methodology used to calculate the ORTPs for load management and distributed generation demand resources, (iii) a new mechanism to adjust ORTPs using indices in years for which a full recalculation is not conducted, and (iv) minor clarifying Tariff revisions. ISO-NE states that the revised ORTPs will apply beginning with FCA 9. ISO-NE states that it recalculated the ORTPs earlier than required under the three-year cycle to set them at a level consistent with expected prevailing market conditions for the pertinent 2018-2019 Capacity Commitment Period to continue to ensure effective implementation of buyer-side mitigation.

7. ISO-NE based its recalculation of ORTPs on recommendations included in a report issued by the Brattle Group.[7] ISO-NE explains that some notable input updates include a change in the year in which the prices are identified (i.e. expressing prices in 2018 dollars to correspond to the 2018-2019 Capacity Commitment Period); an increase in the after-tax weighted-average cost of capital (Cost of Capital) from 6.3 percent to 7.2 percent; and an increase in the Renewable Energy Credit price from $9.25/MWh to $49.30/MWh to better reflect market prices.[8]

8. For generation resources, ISO-NE proposes to retain the current ORTP calculation methodology but recalculate the ORTPs based on the updated model inputs discussed above. ISO-NE thus proposes the following revised ORTPs: $13.424/kW-month for a combustion turbine; $8.866/kW-month for a combined-cycle gas turbine; and $0.000/kW-month for onshore wind.[9]

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[7] The Brattle Group is the consultant for ISO-NE that prepared a report entitled *2013 Offer Review Trigger Prices Study* to explain the stakeholder input process, the analysis of costs and revenues, and the key assumptions used to develop the ORTPs. This report is included as part of ISO-NE's filing.

[8] ISO-NE states that the Brattle Group recommended that Renewable Energy Credit revenues be based on the most recent available future prices traded for Massachusetts Class I Renewable Energy Credits. In its ORTP analysis, the Brattle Group used 2016-vintage Renewable Energy Credits.

[9] Currently-effective ORTPs are as follows: $10.00/kW-month for a combustion turbine; $11.00/kW-month for a combined-cycle gas turbine; $24.00/kW-month for a biomass resource; and $14.00/kW-month for onshore wind.

9. For energy efficiency resources, ISO-NE proposes to retain the existing ORTP calculation methodology but divide the energy efficiency ORTP into two technology types: commercial and industrial energy efficiency and residential energy efficiency. The proposed ORTP for both types is $0/kW-month.

10. For demand resources, ISO-NE proposes to divide the current technology type, Real-Time Demand Response, into the following separate technology types, each with a different ORTP: commercial and industrial load management ($1.145/kW-month); residential load management ($7.094/kW-month); and distributed generation[10] (based on generation technology type). The proposed load management ORTPs reflect a revised calculation methodology that ISO-NE asserts is more consistent with how generation resource ORTPs are calculated. ISO-NE states that the proposed ORTP for distributed generation (i.e. "based on generation technology type") clarifies that the ORTP for those resources would be set to the corresponding ORTP for the underlying generation technology type.[11]

11. Under ISO-NE's revisions, resources of a technology type for which a specific ORTP is not calculated will fall into the category "all other technology types" and be assigned an ORTP equal to the FCA starting price. ISO-NE explains that this category includes technology types for which it could not obtain specific information, or that would have had an ORTP above the FCA starting price. For example, ISO-NE states that it did not calculate a specific ORTP for offshore wind because there was not sufficiently reliable cost information available to develop an ORTP using a full, "bottom-up" analytical approach.[12]

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[10] ISO-NE's Tariff defines distributed generation as "generation resources directly connected to end-use customer load and located behind the end-use customer's meter, which reduce the amount of energy that would otherwise have been produced by other capacity resources on the electricity network[.]" Tariff Section I.2.2.

[11] For instance, a distributed generation resource utilizing a combustion turbine would be assigned the ORTP for a combustion turbine of $13.424/kW-month.

[12] ISO-NE Transmittal at 7. The Brattle Group states that the "bottom-up" methodology requires first estimating the capital and fixed operations and maintenance costs for each analyzed technology type to determine the amount of net revenue a resource of that type must earn in its first year of operation to achieve a net present value of zero for the project. It then requires estimating non-capacity revenues and subtracting them from the required first-year revenue to calculate the revenue required solely from the FCM in order to be competitively viable. The ORTP for a technology type is set to this FCM revenue requirement per kilowatt of qualified capacity per month. ISO-NE

(continued…)

12. ISO-NE also proposes a new mechanism to adjust ORTPs using indices in years for which a full recalculation is not conducted. In brief, the mechanism relies on a series of different indices that would be applied to the various cost items reflected in the ORTP calculation. Finally, ISO-NE proposes minor clarifying Tariff revisions.

III. Notice of Filing and Responsive Pleadings

13. Notice of the filing was published in the *Federal Register*, 78 Fed. Reg. 77,116 (2013), with interventions, comments, and protests due on or before January 3, 2014. The deadline was subsequently extended through January 8, 2014.[13] Timely motions to intervene were filed by Brookfield Energy Marketing LP, Deepwater Wind Holdings, LLC, Dominion Resources Services, Inc., Eastern Massachusetts Consumer-Owned Systems (EMCOS), Electric Power Supply Association (EPSA), Energy Management, Inc. (EMI), EnerNOC, Inc. (EnerNOC), Exelon Corporation (Exelon), First Wind Energy, LLC (First Wind Energy), Massachusetts Attorney General, National Grid,[14] New England Power Generators Association (NEPGA), New England Power Pool Participants Committee (NEPOOL), New England States Committee on Electricity (NESCOE), NextEra Energy Resources, LLC (NextEra), Northeast Utilities Service Company, NRG Companies, PSEG Companies (PSEG),[15] and United Illuminating Co. Motions to intervene out-of-time were submitted by Conservation Law Foundation and Renewable Energy New England, Inc. (RENEW). Comments were filed by Exelon, First Wind Energy, NEPOOL, NESCOE, and the New Hampshire Public Utilities Commission (New Hampshire Commission). Protests were filed by American Wind Energy Association *et al.* (AWEA),[16] EMCOS, EnerNOC, National Grid, NEPGA and EPSA, and NextEra.

Transmittal, Aff. of Dr. Samuel A. Newell, Attachment B (*2013 Offer Review Trigger Prices Study*) at 4-5.

[13] *See* Notice of Extension of Time, Docket No. ER14-616-000 (Dec. 26, 2013).

[14] National Grid is comprised of Massachusetts Electric Company, Nantucket Electric Company, and Narragansett Electric Company.

[15] PSEG is comprised of PSEG Power LLC, PSEG Energy Resources & Trade LLC, and PSEG Power Connecticut LLC.

[16] AWEA, Conservation Law Foundation, Energy Management Inc., the Massachusetts Attorney General, the Offshore Wind Development Coalition, Inc., and Renewable Energy New England, Inc.

14. On January 23, 2014, ISO-NE[17] and the Renewable Parties[18] submitted answers to the pleadings. On February 3 and February 7, respectively, NEPGA and EPSA, and EnerNOC, submitted answers to the pleadings.

IV. Discussion

A. Procedural Matters

15. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2013), the timely-filed motions to intervene serve to make the entities that filed them parties to this proceeding. We will grant the motions to intervene out-of-time by Conservation Law Foundation and Renewable Energy New England given their interest in this proceeding, the early stage of the proceeding, and the absence of any undue prejudice or delay.

16. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2013), prohibits an answer to a protest and an answer to an answer unless otherwise ordered by the decisional authority. We will accept the answers of ISO-NE, the Renewable Parties, NEPGA and EPSA, and EnerNOC because they provided information that assisted us in our decision-making process.

B. Substantive Matters

17. As discussed below, we accept ISO-NE's proposed tariff revisions in part and reject them in part, with the accepted provisions to become effective February 11, 2014, as requested. We direct ISO-NE to submit, within 30 days of the date of this order, a compliance filing to remove the rejected tariff language, consistent with the findings in this order.

18. As an initial matter, we find that ISO-NE has supported as just and reasonable its proposed recalculated ORTPs for combustion turbines, combined cycle gas turbines, energy efficiency demand resources, and load management demand resources; and its proposal to use an indexing mechanism to revise ORTPs in years for which a full recalculation is not performed. We note that, aside from the issue of Cost of Capital, no party disputes these aspects of ISO-NE's proposed Tariff revisions, and we accept them without further discussion here.

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[17] ISO-NE submitted an errata to its answer on January 24, 2014.

[18] The Renewable Parties are RENEW, First Wind Energy, and the Conservation Law Foundation.

19. Comments and protests largely focus on proposed Tariff revisions regarding the ORTP for onshore wind, offshore wind and distributed generation, which we address by issue below.

1. Recalculated ORTP for Onshore Wind

a. Comments and Protests

20. First Wind Energy supports ISO-NE's revisions overall[19] and requests that the Commission approve the revisions without modification or hearing. First Wind Energy further states that it supports ISO-NE's choice to use capacity factors for onshore wind resources that reflect advances in turbine technology.[20] Likewise, NESCOE supports ISO-NE's revisions to the ORTP value for onshore wind.

21. NEPOOL states that NextEra offered an amendment that would set the ORTP for onshore wind resources at $8.53/kW-month based on an alternate capacity factor of 29.74 percent, itself based on an alternate set of wind resource data from New England onshore resources that NextEra states is more directly applicable to the New England control area. NEPOOL reports that NextEra's amendment failed to receive the necessary stakeholder support.

22. New Hampshire Commission urges the Commission to reject ISO-NE's proposed ORTP of $0/kW-month for onshore wind and, instead, accept an ORTP of $8.34/kW-month, which New Hampshire Commission states is based on an historical analysis of onshore wind plant performance conducted by NextEra.[21] New Hampshire Commission argues that the onshore wind capacity factor used by the IMM is artificially high because the Brattle Group restricted the sample to wind farms with average capacity factors greater than 25 percent.[22] New Hampshire Commission states that the resulting ORTP of

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[19] First Wind Energy notes that it does not support each of ISO-NE's assumptions, and states that there are a number of assumptions, particularly those related to onshore wind, where ISO-NE both over-estimates the costs of a number of inputs as well as under-estimates the percentage of a wind plant's nameplate capacity that should qualify for the FCM. First Wind Energy Comments at 4.

[20] *Id*. at 4-5.

[21] New Hampshire Commission Comments at 4.

[22] New Hampshire Commission notes that NextEra states that there were 22 operating on-shore wind plants in the New England region over the 2011 to 2012 period, but that the Brattle Group included just four in their sample. *Id*. at 4-5.

$0/kW-month will not prevent market participants with buyer-side market power from artificially lowering the price of capacity in the FCM. New Hampshire Commission states that it agrees that there are sound policy reasons for relieving onshore wind resources from the requirements of ISO-NE's buyer-side mitigation policy, but that it should not be done by allowing all wind resources to participate in the FCM at their offer prices. Rather, New Hampshire Commission urges the Commission to approve NESCOE's pending request in another docket to exempt a limited quantity of renewable resources from mitigation.[23]

23. NEPGA and EPSA jointly protest the IMM's calculation of a $0/kW-month ORTP for onshore wind resources. They state that the IMM used an unjustified and unrealistic capacity factor assumption, a faulty assumption that the Federal Renewable Energy Production Tax Credit (Production Tax Credit) for wind resources will continue to be in effect during the 2018-2019 Capacity Commitment Period, and an inappropriately low estimate of the market Cost of Capital in New England.[24] They further argue that a $0/kW-month ORTP effectively represents a categorical exemption for onshore wind resources from the Minimum Offer Price Rule.[25]

24. Exelon supports NEPGA's protest. Exelon states that revenues from the Production Tax Credit and Renewable Energy Credits are OOM subsidies that are available only to a very limited subset of resources and should not be included in the calculation of ORTPs. Exelon thus urges the Commission to disallow their inclusion in the IMM's ORTP calculations.[26]

25. NextEra also supports NEPGA's protest[27] and further asserts that the ORTP for onshore wind resources of $0/kW-month reflects three calculation errors. First, NextEra states that the IMM improperly assumes that onshore wind resources will receive revenues from the Production Tax Credit and investment tax credit that expired on January 1, 2014. Second, NextEra states that the IMM overstated energy and ancillary services revenues because it applied a wind resource capacity factor of 35 percent to all

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[23] *Id*. at 4 (citing to NESCOE's pending rehearing request in *New England States Committee on Electricity v. ISO New England Inc.*, Docket No. EL13-34-001).

[24] NEPGA and EPSA Protest at 6-7, 21.

[25] *Id*. at 5.

[26] Exelon Comments at 1-3.

[27] NextEra Protest at 3.

wind resources in New England. NextEra argues that a single locational assumption (i.e., Maine) for all of New England inflates the revenue projections for all onshore wind resources, particularly those located in less wind-rich areas like Massachusetts, Rhode Island, and Connecticut. Third, NextEra states that the IMM inappropriately ties future Renewable Energy Credit prices – and thus Renewable Energy Credit revenues for wind projects – to inflation, even though there is no relationship between the two. NextEra argues instead that Renewable Energy Credit prices are impacted by supply and demand, state policies, and other factors.[28]

b. Answers

26. In its answer, ISO-NE states that the ORTP for onshore wind resources is appropriate and well-supported. ISO-NE states that, to estimate the low end of the range of competitive offers, the Brattle Group targeted developers' preferred locations within New England considering each technology type, and that the onshore wind reference plant capacity factor of 35 percent is consistent with this approach. ISO-NE further states that the energy and ancillary services revenue inputs are appropriate because they correspond to the reference plant data. ISO-NE also asserts that inclusion of Production Tax Credit revenues is justified because Congress has extended the Product Tax Credit numerous times and including Production Tax Credit revenues is consistent with the February 2013 Order's guidance to develop ORTPs at the low end of the range of competitive offers. ISO-NE states that its decision to increase the Renewable Energy Credit price by the annual inflation rate is appropriate because it assumes that prices remain constant in real terms from 2016-2019, whereas the protesters' alternative – to hold 2016 market prices constant – implicitly assumes that prices decline in real terms over time.

27. Renewable Parties state that the protesting parties attempt to improperly redefine what revenues are considered OOM and revise the standard for competitiveness in the ORTP calculations. Renewable Parties state that Renewable Energy Credits and the Production Tax Credit both fall outside of the tariff definition of OOM revenues, and that ISO-NE has correctly included Renewable Energy Credits and the Production Tax Credit in its non-capacity revenue assumption in the capital budgeting model. Renewable Parties challenge NEPGA's assertion that the proposed onshore wind ORTP of $0/kW-month will allow resources receiving OOM revenues to displace economic resources and suppress capacity market prices. Renewable Parties state that NEPGA seeks to subject onshore wind alone to an OOM revenue screen on a case-by-case basis rather than establish a benchmark price for the entire class of onshore wind resources. Renewable Parties state that this mischaracterizes the purpose of the ORTP and constitutes an

[28] *Id*. at 2-3.

impermissible collateral attack on the February 2013 Order. Renewable Parties counter that the ORTP is not intended to exclude any resource that receives OOM revenues, but is rather intended to ensure that resource offers are not uneconomic, i.e., they could not compete in the FCM absent such revenues.

28. Renewable Parties assert that NEPGA and other protesting parties seek to cherry-pick only those assumptions most favorable to excluding competition from the market. Renewable Parties argue that, if anything, ISO-NE was too conservative in its ORTP calculation assumptions regarding onshore wind. They also state that NEPGA's analysis is flawed in its argument that the onshore wind capacity factor assumption should be lower than 35 percent, the Production Tax Credit should not be included in the revenue assumption, and the Renewable Energy Credit assumption should not include an inflation adjustment. Renewable Parties state that the values used by ISO-NE for these factors are just and reasonable. Lastly, Renewable Parties state that a $0/kW-month ORTP for onshore wind does not constitute a categorical exemption from the Minimum Offer Price Rule. Renewable Parties state that unlike a categorical exemption, whereby the resource would forever be exempt from the price floor, setting the ORTP to $0/kW-month does not guarantee that it will remain at that level in any subsequent FCA.

29. NEPGA and EPSA request that the Commission reject the arguments made by ISO-NE and Renewable Parties in their answers. NEPGA and EPSA state that, contrary to ISO-NE's claims, their protest is not a collateral attack on the February 2013 Order, but rather asks the Commission to order the IMM to base its ORTP for onshore wind resources on reasonable assumptions and to consider the price-suppressing effects of a $0/kW-month ORTP for those resources. NEPGA and EPSA also state that ISO-NE criticized their capacity factor analysis because it examined only 2012 data, but an analysis of the most recent five years of capacity factor data in New England yields an average annual capacity factor that is not significantly different from the 2012 value. Lastly, NEPGA and EPSA state that Renewable Parties inaccurately characterize NEPGA and EPSA's requested relief as seeking to subject only onshore wind resources to IMM review for OOM revenues. NEPGA and EPSA state that, on the contrary, they seek only a reasonable benchmark price for onshore wind resources.

c. <u>Commission Determination</u>

30. We reject ISO-NE's proposed ORTP for onshore wind without prejudice to ISO-NE resubmitting a revised proposal consistent with the guidance below.

31. As an initial matter, we agree with ISO-NE that its capacity factor assumption of 35 percent for onshore wind is consistent with its stated goal of subjecting to IMM review only those offers that plainly appear commercially implausible absent OOM revenues, a principle underlying the Tariff framework for calculating ORTPs that the Commission accepted in the February 2013 Order. ISO-NE developed this 35 percent capacity factor by assuming that a developer would seek to build a new wind resource in

a location that is preferred for wind (i.e., Maine), and that the project would use the latest technology. We find that consideration of those factors is appropriate for establishing the ORTP at the low end of the range of competitive offers.

32. We disagree with Exelon's argument that the Production Tax Credit and Renewable Energy Credits should be considered OOM revenues. The relevant, Commission-approved Tariff provision defines OOM revenues as any revenues that are (i) not tradable throughout the New England Control Area or that are restricted to resources within a particular state or other geographic sub-region; or (ii) not available to all resources of the same physical type within the New England Control Area, regardless of the resource owner.[29] Neither Production Tax Credit nor Renewable Energy Credits revenues fall within this definition. We also find that ISO-NE's use of an inflation rate in determining the price of Renewable Energy Credits is a reasonable estimate of Renewable Energy Credits for the 2018-2019 Capacity Commitment Period.

33. However, we find the assumption that a resource participating in FCA 9 for the 2018-2019 Capacity Commitment Period will receive Production Tax Credit revenues to be inappropriate. The Tariff states that the calculation of ORTPs for generation resources will account for "expected non-capacity revenues."[30] At this time, the Production Tax Credit has expired, and thus, it is not a source of expected non-capacity revenue for new wind resources participating in FCA 9. While Congress has previously renewed the Production Tax Credit, it is currently unavailable to wind projects that did not begin construction by December 31, 2013. We agree with protesters that given the relatively short construction period for onshore wind resources, it is unlikely that a wind resource participating as a new resource in FCA 9 will have begun construction by the December 2013 deadline. For this reason, we reject ISO-NE's proposed ORTP for onshore wind resources.

2. Recalculated ORTP for Offshore Wind

a. Comments and Protests

34. In response to ISO-NE's proposal to set the ORTP for offshore wind to the FCA starting price, NEPOOL states that during the stakeholder process, EMI, the developer of the nation's first offshore wind project, proposed an amendment to include a technology category for offshore wind in the ORTP table and to set the ORTP value to $0/kW-month, based on what it deemed sufficiently reliable cost information for a "bottom-up"

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[29] Tariff, Section III.A.21.2(b)(i).

[30] Tariff, Section III.A.21.1.2(b).

analysis similar to the one used by the IMM for other technology types. NEPOOL reports that stakeholders supported EMI's amendment.

35. AWEA protests the lack of a specific ORTP for offshore wind resources.[31] AWEA contends that ISO-NE did not use the best available data on capacity factors or costs for offshore wind projects, and that ISO-NE applied a far lower standard of information sufficiency in opting to calculate an ORTP for demand resources. AWEA states that ISO-NE ignored extensive government and third-party empirical studies and data, as well as the existence of more than 50 offshore wind projects that are now in commercial operation worldwide, making ISO-NE's argument that there is no sufficiently reliable cost information inaccurate.[32] AWEA argues that by setting the ORTP for offshore wind to the auction starting price, offshore wind projects will not be afforded the level of critical investor certainty that is afforded to other generation technologies for which a specific, calculated ORTP has been established, and potential investors will face discriminatory and disproportionate financial uncertainty that will unduly chill investment in offshore wind technology, contrary to both state and federal energy policies.[33] AWEA asks the Commission to direct ISO-NE to file an ORTP for offshore wind of $0/kW-month, a value that AWEA states reflects a capacity factor input of 45 percent or higher.

36. National Grid also protests the lack of a specific ORTP for offshore wind resources, stating that ISO-NE failed to either consider reliable and publicly-available data or explain to stakeholders why it chose to not do so.[34] National Grid states that various parties submitted extensive, independent third-party information to ISO-NE supporting a higher ORTP capacity factor input and lower capital and operations and maintenance costs for offshore wind, but that ISO-NE refused to have its consultant consider the updated wind data. More specifically, National Grid states that EMI provided information to ISO-NE that documents third-party and governmental sources supporting an offshore capacity factor of 45 percent or more, and an area-specific offshore capacity factor of 47.4 percent.[35] National Grid requests that the Commission order ISO-NE to consider the best available capacity factor, capital cost, and operations

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[31] AWEA Protest at 1.

[32] *Id.* at 3, 19.

[33] *Id*. at 2.

[34] National Grid Protest at 1.

[35] *Id*. at 7.

and maintenance cost data in setting a resource-specific ORTP for all resources, including offshore wind resources. National Grid also asks that the Commission require ISO-NE to clearly and transparently explain to NEPOOL stakeholders and the Commission its reasons when rejecting data submitted by parties in support of ORTP determinations for all resource types.[36]

37. NESCOE requests that the Commission direct ISO-NE to consider the best available capacity factor, capital cost, and operations and maintenance cost data in setting the ORTP for offshore wind resources for FCA 9 and subsequent auctions.

b. Answers

38. ISO-NE asserts that the absence of an ORTP is not prejudicial to resource development, and that the Commission rejected a similar argument from EMCOS in the filing of the current ORTPs accepted in the February 2013 Order. Specifically, ISO-NE states that the Commission rejected the argument that the unit-specific review process creates undue uncertainty or imposes an unduly discriminatory burden because the review process concludes prior to the FCA, and thus in advance of the time when most developers must make significant construction expenditures to build their new projects.[37] ISO-NE also states that the capital budgeting model used by the IMM to conduct asset-specific reviews is readily-available for any developer to evaluate its own project. ISO-NE further asserts that the data cited in AWEA's protest is insufficient for use in a "bottom-up" calculation because there are no actual offshore wind projects in operation in the United States, and data sources from outside the United States do not provide any detail on the characteristics of the projects underlying that data. Lastly, ISO-NE states that it did not apply lower informational standards for demand response technologies than for offshore wind resources.

c. Commission Determination

39. With regard to offshore wind resources, we find that ISO-NE has adequately explained its determination that insufficient cost data exists to conduct a full calculation pursuant to section III.A.21.1.2(b) of its Tariff. ISO-NE and the Brattle Group state that they considered available cost data related to offshore wind, including that provided by stakeholders, and found it insufficient to conduct a "bottom-up" analysis to develop an

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[36] *Id*. at 10-11.

[37] ISO-NE answer at 16 n.34 (citing to February 2013 Order, 142 FERC ¶ 61,107 at P 56).

ORTP for offshore wind.[38] We agree with ISO-NE's determination, recognizing that there are no offshore wind projects currently in operation in the United States, and that deducing accurate capital and operational cost data from projects in other countries may lead to faulty or misleading input assumptions. We are concerned that inaccurate assumptions may, in turn, undermine the buyer-side market power mitigation that is the purpose of the ORTP construct.

40. We also note that a market participant that anticipates that the costs of an offshore wind resource will be lower than the FCA starting price may seek approval for a lower offer price through the unit-specific review process. For these reasons, we accept ISO-NE's decision to set the offshore wind ORTP to the FCA starting price.

3. Distributed Generation and Demand Resources with Multiple Technology Types

a. Comments and Protests

41. EnerNOC protests ISO-NE's filing to set the ORTP for demand resources that include distributed generation equal to the corresponding ORTP for the generation technology type of the distributed generation asset. EnerNOC states that because real-time demand response resources potentially include one or more customer assets, under ISO-NE's filing the ORTP will be set to the highest ORTP of any of the associated assets. EnerNOC states that this contradicts ISO-NE's stated goal of setting trigger prices at the low end of the spectrum of competitive offers because, according to EnerNOC, the ORTP for demand resource with distributed generation will be set at the highest cost estimate of any generation asset associated with the overall resource. EnerNOC states that ISO-NE's revisions will set the ORTP for the demand resource equal to the ORTP for a standalone merchant generator of the same technology type.[39] EnerNOC argues that it is inappropriate to base the ORTP of an entire demand resource, composed of customers with and without distributed generation, on the ORTP of a merchant generator that Commission rules, according to EnerNOC, prohibit from participating in a demand resource.[40]

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[38] ISO-NE Transmittal, Aff. of Dr. Samuel A. Newell, Attachment B (*2013 Offer Review Trigger Prices Study*) at 7; ISO-NE Answer at 16.

[39] EnerNOC Protest at 2.

[40] *Id*. at 7.

42. EnerNOC further argues that under ISO-NE's proposed tariff revisions, the purported solution – namely, unit-specific review by the IMM – requires a curtailment service provider to present specific cost information on each of the customers that make up its supply offer. EnerNOC states that such information cannot realistically be produced for potential customers that may not yet be under a contract more than three years prior to the Capacity Commitment Period.[41] EnerNOC states that this is a change from the currently-effective ORTP methodology, whereby a curtailment service provider can provide to the IMM specific evidence based on its own cost structure to justify a supply offer below the ORTP. EnerNOC argues that, by tying the ORTP of a distributed generation demand resource to the highest ORTP of its associated generation assets, ISO-NE is denying a curtailment service provider any reasonable opportunity to provide contrary cost information.

43. EnerNOC offers an alternative proposal whereby curtailment service providers would have to disclose, during the qualification process, any OOM revenues received by distributed generation installations that it knows or expects it will enroll.[42] Those revenues will then be added to the ORTP for a load management demand resource, which ISO-NE's filing sets at $1.145/kW-month. EnerNOC also offers a second, additional proposal to allow curtailment service providers to qualify a demand resource with one measure type, such as load management, but enroll customers with a different measure type, such as distributed generation, so long as the customers had not received OOM revenue to install or implement the new measure type. EnerNOC states that the second proposal received 75.97 percent support in the stakeholder process.[43] NESCOE states that it supports this second proposal.[44]

b. <u>Answers</u>

44. With regard to distributed generation resources, ISO-NE states that EnerNOC's alternative to set the ORTP for distributed generation resources to the ORTP for load management resources, subject to disclosure of expected OOM revenues, is unworkable. ISO-NE states that EnerNOC fails to describe how ISO-NE would increase the ORTP to account for OOM revenues, or how a demand resource provider will provide authoritative data about distributed generation-related OOM revenues three years prior to

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[41] *Id.* at 12.

[42] *Id.* at 15.

[43] *Id*. at 15-16.

[44] NESCOE Comments at 3-5.

the FCA if, as EnerNOC states, it is difficult for that demand resource provider to know three years prior to the FCA which of its resources will include distributed generation.

45. EnerNOC states that, regardless of whether the Commission accepts ISO-NE's criticism of EnerNOC's alternative proposals, ISO-NE has not met its burden to demonstrate that its own proposal is just and reasonable. EnerNOC states that ISO-NE has neither provided evidence that setting the ORTP for a distributed generation demand resource equal to that of a standalone merchant generator is just and reasonable, nor explained how a meaningful unit-specific review can be conducted when a demand resource provider may not have specific customer information years before the delivery year.

46. EnerNOC states that its first proposal will allow a demand resource provider to appropriately qualify a demand resource for the FCA even if the provider does not have customer-specific information at the time of qualification. EnerNOC asserts that the availability of OOM revenues is highly public, so a demand resource provider can assess the likelihood that it will enroll resources receiving OOM revenues and qualify the demand resource accordingly. EnerNOC states that, under its proposal, if the demand resource provider declares at the time of qualification that it will not enroll customers receiving OOM revenue, it is then prohibited from doing so later. EnerNOC argues that its second proposal is necessary to close a loophole in the tariff. Specifically, EnerNOC states that the tariff does not currently prohibit a demand resource provider from qualifying a resource with load management and then later enrolling distributed generation customers receiving OOM revenue, a scenario that could subvert the buyer-side market power mitigation mechanism.

c. Commission Determination

47. With regard to distributed generation demand resources and demand resources composed of both load management and distributed generation, ISO-NE proposes to tie the ORTP for a given resource to the ORTP of its underlying generation technology type. We reject this proposed construct as unjust and unreasonable for the reasons discussed below. Our rejection is without prejudice to ISO-NE submitting a revised proposal that addresses the issues we have identified.

48. First, ISO-NE's proposal deviates from its goal, as discussed in the February 2013 Order, of subjecting to IMM review only those offers that plainly appear commercially implausible absent OOM revenues. As EnerNOC asserts, distributed generation resources offering in the FCM for the first time may not be newly-installed generators; they could be existing facilities offering at their incremental costs of participating in the FCM. These incremental costs will likely be far less than the capital costs associated with a new merchant generation resource. We find this inconsistent with the goal of setting ORTPs to the low end of the competitive range of expected offers.

49. Second, the proposal can result in an illogical ORTP for demand resources composed of both load management and distributed generation assets. Section III.A.21.1 of the Tariff, as revised in the instant filing, states that, "[w]here a new resource is composed of assets having different technology types, the resource shall have an Offer Review Trigger Price equal to the highest of the applicable Offer Review Trigger Prices."[45] When combined with ISO-NE's proposal to separate the current ORTP category, Real-Time Demand Response, into two separate categories, load management and distributed generation, the effect could be a dramatically higher ORTP for the resource.[46] We find this significant increase to be unjustified.

4. Additional Issues

a. Comments and Protests

50. EMCOS urge the Commission to reject the filing based on what they believe are fundamental flaws to the calculation methodology. Specifically, EMCOS state that the capital budgeting model that ISO-NE uses is ill-suited to properly evaluate the legitimacy of public sector financing of new capacity resources. They aver that the inadequacy of the model, as it applies to them, relegates their capacity market supply offers to ISO-NE's unit-specific review process. EMCOS also highlight the lack of stakeholder support for ISO-NE's proposed changes.[47] They note that their previous criticisms of the ORTP construct and implementation are either pending appeal or awaiting Commission rehearing and that the instant filing exacerbates those perceived flaws in an arbitrary and unreasonable manner and should be rejected.[48]

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[45] Tariff, Section III.A.21.1.1.

[46] An example helps to illustrate this point: ISO-NE proposes an ORTP for load management (commercial) of $1.145/kW-month. Under ISO-NE's proposal, a demand resource whose supply offer MWs are composed of 90 percent load management (commercial) and 10 percent distributed generation would be assigned an ORTP equal to that of the applicable generation technology. If the distributed generation asset is a combustion turbine, the ORTP for the resource will be $13.424/kW-month; if it is a solar facility, the ORTP for the resource will be the FCA starting price of greater than $16/kW-month. Thus, the ORTP for the resource would be 13-16 times higher than it would be for a resource composed solely of load management (commercial), even though distributed generation represents only a small part of the resource's total supply offer.

[47] EMCOS Protest at 2.

[48] *Id*. at 3.

51. NEPGA and EPSA state that a Cost of Capital of 8.3 percent, as calculated by New York Independent System Operator, Inc. (NYISO) as part of its demand curve reset, better reflects the true market cost of new development faced by resource developers.

52. NextEra requests that, should the Commission approve ISO-NE's Performance Incentives proposal[49] for FCA 9, the Commission should condition the ORTP order by requiring ISO-NE to revise its ORTP calculation to take into account costs (negative revenues) associated with Performance Incentives or to explain why such costs are not applicable to the ORTP calculation.

b. <u>Answers</u>

53. ISO-NE states that its use of a Cost of Capital of 7.2 percent is consistent with its aim to develop ORTPs based on the low end of competitive entrants and its previously approved practice of assuming a power purchase agreement for non-capacity revenues. ISO-NE also states that protesters' request that ISO-NE adopt and use a Cost of Capital of 8.3 percent, a figure developed by NYISO, should be rejected because the aim of the ORTP calculation is inconsistent with certain of NYISO's assumptions that produced its Cost of Capital figure.[50] Lastly, ISO-NE states that the Commission should not condition its acceptance on a requirement that ISO-NE revise its ORTP calculation to take into account costs associated with the pending Performance Incentives market rule changes. ISO-NE states that it would be premature to find that the proposed Performance Incentives market rules changes would have an impact on expected net costs of capacity resources sufficient to trigger a full recalculation of ORTPs.

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[49] NextEra refers to ISO-NE's proposed Tariff revisions pending in Docket Nos. ER14-1050-000 and ER14-1050-001. ISO-NE proposes to use a new payment structure in the FCM that it states will incent resource performance during scarcity conditions.

[50] ISO-NE states that, although NYISO used similar market data to the Brattle Group in estimating the return on equity and cost of debt, NYISO made additional adjustments taking into account the risks of a pure-play merchant generator to reach its final values, and adjusted the outcome of its analysis upwards based on those risk factors. ISO-NE states that, by contrast, and consistent with the February 2013 Order, it aimed to develop ORTPs based on the "low end of competitive entrants," and assumed the existence of a power purchase agreement for non-capacity revenues, which would lower a resource's risk and therefore its cost of capital. *Id.* at 25.

c. Commission Determination

54. We reject protesters' claims that a Cost of Capital of 7.2 percent is unjust and unreasonable, including both EMCOS' claims that the Cost of Capital is too high, and NEPGA's claims that the Cost of Capital is too low. We find that ISO-NE used appropriate assumptions in considering the historical Costs of Capital of two independent generation companies, and that its proposal reasonably balances ISO-NE's aims of setting ORTPs at the low end of the range of competitive offers and identifying offers that are clearly commercially implausible. We disagree with NEPGA's argument that ISO-NE should use NYISO's Cost of Capital of 8.3 percent. As ISO-NE points out, NYISO's Cost of Capital accounted for risk factors facing pure-play merchant generators that are unlikely to be faced by a resource that holds a power purchase agreement for non-capacity revenues. Given ISO-NE's aim of setting ORTPs at the low end of the range of competitive offers, and consistent with our finding in the February 2013 Order,[51] we find that ISO-NE appropriately based its Cost of Capital on that of a resource with a power purchase agreement.

55. We reject as beyond the scope of this proceeding, speculative, and premature arguments pertaining to ISO-NE's Performance Incentives filing. Additionally, that filing is pending, and we will not prejudge the merits of that filing here. However, we recognize that various changes are occurring in the FCM, including the implementation of a sloped demand curve consistent with a previous Commission order.[52] Nothing in this order prevents ISO-NE and its stakeholders from proposing further revisions to the ORTP construct at any time, if it is determined that additional changes are appropriate.

The Commission orders:

(A) The proposed Tariff revisions are hereby accepted in part and rejected in part, with the accepted provisions to become effective February 11, 2014, as requested, as discussed in the body of this order.

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[51] February 2013 Order, 142 FERC ¶ 61,107 at P 38.

[52] *ISO New England Inc.*, 146 FERC ¶ 61,038 (2014).

(B) Within 30 days of the date of this order, ISO-NE shall submit a compliance filing to remove the rejected tariff language, as discussed in the body of this order.

By the Commission. Commissioner Norris is concurring with a separate statement attached.

(S E A L)

Kimberly D. Bose,
Secretary.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc. Docket No. ER14-616-000

(Issued February 11, 2014)

NORRIS, Commissioner, *concurring*:

I agree with the determinations in this order, which address revisions to the Forward Capacity Market's Offer Review Trigger Price provisions, including the determination of the appropriate benchmark prices for various resource technology types. But, I believe this order touches upon a larger issue regarding the appropriateness of the application of ISO-NE's minimum offer price rule (MOPR) to all new resources, including renewable resources. As I noted in my dissent in *New England States Committee on Electricity v. ISO New England Inc.*,[1] I believe there are valid questions regarding whether ISO-NE's MOPR appropriately accommodates the states' pursuit of legitimate public policy objectives within their jurisdiction. I continue to believe that the Commission should more thoroughly consider whether the ISO-NE MOPR should apply broadly to all new resources, and whether this broad application unfairly inhibits state goals for the procurement of renewable resources. As ISO-NE makes modifications to its capacity market design, including the incorporation of a sloped demand curve, I encourage policymakers and the Commission to consider whether adjustments to ISO NE's buyer-side mitigation measures are needed to allow for states to pursue their public policy goals, including fuel diversity and the procurement of renewable resources.

For these reasons, I respectfully concur.

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John R. Norris, Commissioner

[1] 142 FERC ¶ 61,108 (2013).