

152 FERC ¶ 61,065
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Norman C. Bay, Chairman;
Philip D. Moeller, Cheryl A. LaFleur,
Tony Clark, and Colette D. Honorable.

ISO New England Inc.
New England Power Pool Participants Committee

Docket Nos. ER15-1509-000
ER15-1509-001

ORDER CONDITIONALLY ACCEPTING, IN PART AND REJECTING, IN PART,
TARIFF REVISIONS AND DIRECTING COMPLIANCE FILING

(Issued July 23, 2015)

1. On April 15, 2015,¹ ISO New England Inc. (ISO-NE), joined by the New England Power Pool Participants Committee, filed revisions to the ISO-NE Transmission, Markets and Services Tariff (Tariff)² pursuant to section 205 of the Federal Power Act,³ to provide for the dispatch of certain wind and hydro resources using Do Not Exceed (DNE) Dispatch Points.⁴ In this order, we conditionally accept, in part, and reject, in part, ISO-

¹ On April 16, 2015, ISO-NE filed an errata correcting several errors in its April 15, 2015 Filing.

² ISO New England Inc., ISO New England Inc. Transmission, Markets and Services Tariff, I.2, I.2 Rules of Construction; Definitions, 71.1.0; Section III TOC, Section III - Table of Contents, 21.1.0; III.1, III.1 Market Operations, 24.1.0; III.2, III.2 LMPs and Real-Time Reserve Clearing Prices Calculation, 17.1.0; III.13.6, III.13.6 Rights and Obligations of Capacity Resources, 20.1.0; and Appendix F, Appendix F Net Commitment Period Compensation Accounting, 22.1.0.

³ 16 U.S.C. § 824d (2012).

⁴ According to ISO-NE, solar resources are not included at this time because of (1) the lack of a need to dispatch solar resources to ensure reliable operations and (2) ISO-NE's current inability to develop accurate, short-term, plant-specific forecasts for solar resources. ISO-NE explains that the technology has not yet been developed to make plant-specific forecasts feasible. ISO-NE Filing, Attachment A (Testimony of Jonathan B. Lowell) at 12 (Lowell Testimony).

NE's proposed Tariff revisions, with the conditionally accepted revisions to become effective April 10, 2016, as requested. We further direct ISO-NE to submit a compliance filing within 30 days of the date of this order.

I. Background

2. ISO-NE states that the recent increase in the integration of renewable resources, whose output is variable, and the location of many of these resources in relatively remote areas of the transmission system, has caused increased congestion.⁵ ISO-NE explains that intermittent power resources, which do not have direct control over their net power output, are not currently electronically dispatchable and must be manually curtailed to manage congestion.⁶ ISO-NE states that this manual process is inefficient, as the curtailment and thus, the congestion, are not reflected in real-time prices.⁷ ISO-NE states that this results in a mismatch of economic signals and reliability requirements as the energy prices indicate that low cost resources should continue operating at the same time that manual curtailment instructions are being issued to ensure reliable operation.⁸ According to ISO-NE, the manual process also takes time, forcing system operators to curtail conservatively to preserve system reliability.⁹

II. ISO-NE's Filing

3. In the instant filing, ISO-NE proposes a modified electronic dispatch method, called DNE Dispatch Points, for certain wind and hydro resources that are classified as Intermittent Power Resources under ISO-NE's market rules,¹⁰ specifically non-settlement-only¹¹ wind and hydro intermittent power resources greater than 5 MW

⁵ ISO-NE Transmittal Letter at 4.

⁶ *Id.*

⁷ *Id.* and Lowell Testimony at 4-6.

⁸ ISO-NE Transmittal Letter at 4.

⁹ *Id.*

¹⁰ *Id.*

¹¹ Settlement-Only Resources are generators of less than 5 MW or otherwise eligible for Settlement-Only Resource treatment as described in ISO New England Operating Procedure No. 14 and that have elected Settlement-Only Resource treatment as described in the ISO New England Manual for Registration and Performance Auditing. Tariff § I.2.2. According to ISO-NE's Glossary, Settlement-Only resources are not

(continued ...)

(hereafter referred to as DNE Dispatchable Generators).¹² ISO-NE states that the new method would manage localized congestion through DNE Dispatch Points, which would be the lesser of the maximum output level at which the resource would operate in economic dispatch, or a reliability limit representing the maximum acceptable output that is consistent with reliability constraints.¹³ ISO-NE further states that the reliability limit will be determined, in part, using a “high-confidence” forecast of the potential unconstrained output of each DNE Dispatchable Generator.¹⁴ ISO-NE explains that a DNE Dispatchable Generator would be allowed to operate at any level between zero and its DNE Dispatch Point.¹⁵

4. In support of these changes, ISO-NE asserts that, by allowing wind and hydro resources to be dispatched on an economic basis, the DNE Dispatch Changes will minimize the need to use manual curtailment processes for those resources and should allow for both more efficient economic outcomes and better system reliability. ISO-NE argues that reducing manual curtailment will maximize use of current transmission resources and intermittent resources.¹⁶ ISO-NE states that this is because the restrictive nature of manual curtailment forces system operators to be more conservative than they would be otherwise.¹⁷ In addition, the new dispatch method should align long term locational price signals with actual economic conditions.¹⁸

centrally dispatched by ISO-NE (*See* <http://www.iso-ne.com/participate/support/glossary-acronyms#s>).

¹² ISO-NE, Proposed Tariff § III.1.11.3(e).

¹³ ISO-NE Transmittal Letter at 4.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ Lowell Testimony at 5.

¹⁷ *Id.* at 10.

¹⁸ ISO-NE Transmittal Letter at 5.

5. ISO-NE states that under the proposed tariff revisions, DNE Dispatchable Generators, will not be eligible to provide operating reserves or regulation service, because they are intermittent in nature and therefore, according to ISO-NE cannot be expected to dependably follow dispatch instructions to increase output.¹⁹

6. ISO-NE requests an effective date of April 10, 2016, to allow all parties time to prepare for the changes.²⁰ To make intermittent resources dispatchable, ISO-NE's proposed Tariff revisions require all such resources to be capable of receiving and responding to electronic dispatch instructions, through the installation of a remote terminal unit, no later than April 30, 2017.²¹ ISO-NE explains that, between the effective date and April 30, 2017, only those resources which already have that capability will be required to be dispatchable.²² According to ISO-NE, resources that do not have remote terminal units installed would have until April 30, 2017, to do so.²³ However, ISO-NE states that, between April 10, 2016 and April 30, 2017, resources that do not yet have remote terminal units installed will participate in the market as price-takers at an implied energy offer price equal to the energy offer floor price of negative \$150/MWh, and will be eligible to set price at this level when manually dispatched.²⁴

III. Notice and Responsive Pleadings

7. Notice of ISO-NE's April 15, 2015 filing was published in the *Federal Register*, 80 Fed. Reg. 22,173, with interventions and protests due on or before May 6, 2015. Notice of ISO-NE's April 16, 2015 errata was published in the *Federal Register*, 80 Fed. Reg. 22,731, with interventions and protests due on or before May 7, 2015. On May 5, 2015, RENEW Northeast, Inc. (RENEW) filed a request to extend the deadline for interventions and protests to May 14, 2015, which was granted by notice issued on May 6, 2015.

¹⁹ Lowell Testimony at 11.

²⁰ ISO-NE Transmittal Letter at 9.

²¹ *Id.* at 5.

²² *Id.*

²³ Lowell Testimony at 14.

²⁴ *Id.*

8. Entergy Nuclear Power Marketing, LLC, Dominion Resources Services, Inc., Exelon Corporation, and Northeast Utilities Service Company filed motions to intervene. RENEW Northwest, Inc. (RENEW) and SunEdison Utility Holdings, Inc. (SunEdison) filed motions to intervene and comments. ISO-NE filed an answer.

A. Responsive Pleadings

9. SunEdison and RENEW state that they support ISO-NE's proposed Tariff revisions, but have concerns regarding: (1) excluding wind resources from participating in regulation and reserve markets; (2) the implementation date for hydro resources; (3) a requirement to make all intermittent resources dispatchable; (4) providing notice to all parties affected by the new rules; and (5) data accuracy and transparency issues.

10. SunEdison and RENEW state that wind resources are capable of participation in the regulation and reserves markets and request ISO-NE remove the proposed Tariff provisions barring them from doing so.²⁵ RENEW argues that many wind resources can provide this service by holding the resource down below its unconstrained capability by the quantity of regulation or reserve service desired; however, RENEW states, at the current time, such an approach may not be economically efficient for these resources.²⁶ Nonetheless, RENEW asserts that these resources may participate in these markets in the future when there is a higher proportion of zero-fuel generation on the system.²⁷ Thus, according to RENEW, ISO-NE should not explicitly exclude these resources.²⁸ RENEW requests that, if ISO-NE believes that additional Tariff language would be required in order to further define how these resources would participate in these markets before removing this exclusionary language from the Tariff, ISO-NE work with stakeholders to develop rules for how these resources will participate in these markets when participation becomes economically desirable.²⁹

²⁵ SunEdison Comments at 7 and RENEW Comments at 14-15.

²⁶ RENEW Comments at 14.

²⁷ *Id.* at 15.

²⁸ *Id.*

²⁹ *Id.*

11. SunEdison states that, at a minimum, wind resources are well-suited to providing a regulation down service, often more efficiently than other regulation service providers.³⁰ Sun Edison asserts that, as noted in a National Renewable Energy Lab report, regulation provided by wind power plants was shown to provide benefits, including reductions in production costs, which can be passed on to consumers.³¹ SunEdison argues that, to avoid undue discrimination, eligibility for providing regulation service should be based on capability and performance characteristics rather than categorical exclusions.³²

12. SunEdison also requests the Commission direct ISO-NE to eliminate the one-year deferral for hydro resources to comply with the requirement to install remote terminal units and instead, require all DNE Dispatchable Generators to have remote terminal units installed by April 30, 2016.³³

13. RENEW explains that some intermittent resources have unique constraints, such as a hydro resource that must sound an alarm prior to altering water flow.³⁴ RENEW requests ISO-NE work with stakeholders to ensure the dispatching process takes into account these limitations, such that the DNE Dispatch Point of each DNE Dispatchable Generator reflects its actual physical characteristics.³⁵ Should a resource's limitations prevent it from being feasibly dispatchable, RENEW requests ISO-NE report to stakeholders and the Commission explaining the circumstances and setting conditions under which the resource will be eligible to set the market price at the offer floor price.³⁶ SunEdison also requests that ISO-NE formalize the ramping procedures applicable to hydro units with special circumstances.³⁷

³⁰ SunEdison Comments at 7.

³¹ *Id.*

³² *Id.*

³³ *Id.* at 5.

³⁴ RENEW Comments at 5.

³⁵ *Id.*

³⁶ *Id.* at 6.

³⁷ SunEdison Comments at 5.

14. SunEdison and RENEW state that there are other types of non-settlement-only nondispatchable resources to which the proposed Tariff changes do not apply, and argue that, if those are allowed to remain nondispatchable, these resources could crowd out dispatchable resources.³⁸ RENEW argues that, if the proposed Tariff changes become effective prior to all non-settlement-only nondispatchable resources being included, the changes will be unduly discriminatory to the DNE Dispatchable Generators.³⁹ SunEdison and RENEW further explain that ISO-NE has stated its intention to make all non-settlement-only intermittent resources dispatchable, but they request ISO-NE accelerate its timeline and expand the DNE dispatch changes to incorporate all forms of currently nondispatchable, non-settlement-only, and intermittent resources.⁴⁰

15. SunEdison and RENEW further request that all hydro resources be required to confirm that they are aware of the new procedures, since smaller resources may not follow ISO-NE filings with the Commission or the stakeholder process.⁴¹ RENEW also asks that hydro resources be required to confirm they understand the implications of remaining nondispatchable past the April 10, 2016 effective date.⁴²

16. Finally, SunEdison requests ISO-NE use the most recently available data for each dispatch period, including putting a mechanism in place to send confirmation to the resource that it has received the resources' updated data.⁴³ RENEW is similarly concerned about data currency and requests ISO-NE keep the duration of calculations for DNE Dispatch Points to less than the dispatch interval of five minutes.⁴⁴ RENEW further requests ISO-NE provide reports to stakeholders on the accuracy of hydro forecasts, as ISO-NE does with wind forecasts.⁴⁵ Finally, RENEW requests ISO-NE provide each

³⁸ SunEdison Comments at 6 and RENEW Comments at 7-8.

³⁹ RENEW Comments at 9.

⁴⁰ SunEdison Comments at 6 and RENEW Comments at 9. RENEW points to three biomass generators, for example. *Id.*

⁴¹ SunEdison Comments at 5 and RENEW Comments at 14.

⁴² RENEW Comments at 14.

⁴³ SunEdison Comments at 3-4.

⁴⁴ RENEW Comments at 12.

⁴⁵ *Id.*

DNE Dispatchable Generator with the inputs used to calculate their DNE Dispatch Point, to allow the resource to verify its accuracy.⁴⁶

B. Answer

17. In response to RENEW and SunEdison's request that ISO-NE develop the rules necessary for wind resources to participate in the regulation or reserve markets, ISO-NE states that the current regulation market and its software are based on the presumption that participating resources are bidirectional and can respond quickly (up or down) to instructions.⁴⁷ ISO-NE contends that it has no ability at this time to incorporate resources that respond only in one direction into the regulation market.⁴⁸ ISO-NE adds that the stakeholder process is available for RENEW and SunEdison to discuss the potential provision of regulation or reserves by intermittent resources.⁴⁹

18. Regarding RENEW's comments that some hydro resources may choose to remain subject to manual dispatch, ISO-NE argues that under the new rules, there is no exception for an eligible DNE Dispatchable Generator to choose to continue using manual dispatch after April 30, 2017.⁵⁰ Regarding the notification concerns, ISO-NE states that it has already individually contacted affected market participants and plans additional notification and training as this process ensues.⁵¹

19. ISO-NE also states that it has been meeting with hydro resource operators to better understand the operational characteristics of their resources, such as ramp-down notification time issues.⁵² However, ISO-NE states that the dispatch software is intended to work automatically, in a very short timeframe, and incorporating all of the individual characteristics of hydro resources could delay implementation.⁵³

⁴⁶ *Id.*

⁴⁷ ISO-NE Answer at 8.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.* at 4.

⁵¹ *Id.*

⁵² *Id.* at 7.

⁵³ *Id.*

20. ISO-NE disagrees with RENEW's and SunEdison's requests to accelerate the implementation of the DNE Dispatch Changes or extend the changes to include more resources.⁵⁴ ISO-NE states that it agrees that there would be increased benefits if more resources were capable of responding to economic dispatch instructions;⁵⁵ however, the current schedule includes a stakeholder review of this project in the fourth quarter of 2015.⁵⁶ Further, ISO-NE asserts that it and its stakeholders have finite resources and other also important projects, such as the forward capacity market, that need to be addressed.⁵⁷ ISO-NE argues that, through its stakeholder process, it has developed these revisions that reflect the different characteristics of different types of resources.⁵⁸

21. Finally, as to SunEdison's concerns over the accuracy of the data utilized, ISO-NE contends that it will be using the most current available information in calculating the DNE Dispatch Points.⁵⁹ Further ISO-NE states that it intends to "echo back" to each DNE Dispatchable Generator the information as to equipment availability and the forecasted unconstrained energy output values used to calculate the DNE Dispatch Points.⁶⁰ ISO-NE states that this information will not be available in real time in part because the system is not designed to communicate the amount of information necessary to reproduce or validate all of the input values used in dispatch calculations.⁶¹

⁵⁴ *Id.* at 3.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.* at 5.

⁶⁰ *Id.* at 6.

⁶¹ *Id.*

IV. Discussion

A. Procedural Matters

22. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure,⁶² the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Rule 213(a)(2) of the Commission's rules of Practice and Procedure⁶³ prohibits an answer to a protest unless otherwise ordered by the decisional authority. We will accept ISO-NE's answer because it has provided information that assisted us in our decision-making process.

B. Commission Determination

23. We conditionally accept, in part, and reject, in part, ISO-NE's proposed Tariff revisions with the conditionally accepted revisions to become effective April 10, 2016, as requested. We further direct ISO-NE to submit a compliance filing within 30 days of the date of this order. We find that ISO-NE's proposed Tariff revisions, which make wind and hydro resources more readily dispatchable, will minimize the need to use manual curtailment processes and thus, provide for a more economically efficient use of these resources. We find that these changes are particularly important given not only the amount of wind and hydro resources in operation today (878 MW⁶⁴ and 321 MW,⁶⁵ respectively), but also the large amount of wind and hydro resources active in the interconnection queue (over 4,000 MW).⁶⁶ We agree with ISO-NE that these changes will improve price formation, particularly in areas that have a high penetration of renewable resources and limited transmission capacity, and system reliability because of the reduced reliance on manual curtailments. Further, these proposed changes will allow for better alignment between price signals and operational requirements. Accordingly, with the exception of two issues discussed below, one substantive and one ministerial, we find ISO-NE's proposed Tariff revisions to be otherwise just and reasonable and not unduly discriminatory.

⁶² 18 C.F.R. § 385.214 (2014).

⁶³ 18 C.F.R. § 385.213(a)(2) (2014).

⁶⁴ Lowell Testimony at 4.

⁶⁵ RENEW Comments at 3.

⁶⁶ *Id.*

24. We now turn to the issues raised by RENEW and SunEdison. Generally, these parties raised issues concerning: (1) excluding wind resources from participating in regulation and reserves markets; (2) the implementation date for hydro resources; (3) a requirement to make all intermittent resources dispatchable; (4) providing notice to all parties affected by the new rules; and (5) data accuracy and transparency issues.

25. RENEW and SunEdison argue that ISO-NE should not add Tariff language that explicitly excludes intermittent resources from the regulation and reserves markets. We find that ISO-NE has not sufficiently justified the addition to its Tariff of a blanket exclusion of DNE Dispatchable Generators from the regulation and reserves markets.⁶⁷ We agree with RENEW and SunEdison that eligibility for providing these services should be based on capability and performance characteristics rather than categorical exclusions. Accordingly, we reject this proposed tariff provision. We will direct ISO-NE to submit a compliance filing within 30 days of the date of this order to remove the relevant tariff provisions. Furthermore, in recognition of the fact that, as RENEW explains, it is not currently economic for wind resources to participate in the frequency regulation market,⁶⁸ we also encourage ISO-NE to work with its stakeholders to develop rules integrating intermittent resources into its markets.

26. We disagree with SunEdison that ISO-NE's proposal to allow hydro resources until April 30, 2017, to become dispatchable is unreasonable. ISO-NE states that while all wind resources currently have remote terminal units installed, some hydro facilities do not.⁶⁹ Accordingly, ISO-NE proposes to provide an additional year for hydro facilities that do not currently have remote terminal units installed to accommodate the time required to install and test the remote terminal units.⁷⁰ We find that ISO-NE's proposal to give hydro resources that do not currently have remote terminal units installed an additional year to comply is reasonable because such resources have to undertake additional steps to become DNE Dispatchable Generators compared to resources that currently have remote terminal units installed.

⁶⁷ While not explicitly excluding resources based on technology type, we note that participation in the ISO-NE regulation market is contingent upon a resource fully meeting the current eligibility criteria outlined in ISO-NE Tariff III.14.2 (Regulation Market Eligibility), while participation in the ISO-NE reserves market is contingent upon fully meeting the current eligibility criteria outlined in ISO-NE Tariff III.9.5.2 (Forward Reserve Resource Eligibility Requirements).

⁶⁸ Renew Comments at 14.

⁶⁹ Lowell Testimony at 13.

⁷⁰ Lowell Testimony at 13-14.

27. We reject RENEW and SunEdison's proposal to require all resources that are technically capable of being dispatched, such as biomass resources, to become dispatchable resources.⁷¹ This proposal would affect a broad range of resources beyond the resources at issue in the instant ISO-NE proposal. We are not persuaded by RENEW's and SunEdison's claims that it is necessary to expand the proposed dispatchability requirements beyond resources addressed in the instant filing. Further, ISO-NE indicated in its Answer that its Wholesale Markets Project Plan contemplates a stakeholder review of Resource Dispatchability Requirements at the end of this year.⁷² Also, as ISO-NE explains, while it is quite possible that the use of DNE Dispatch Points is appropriate for non-settlement-only intermittent wind and hydro resources, it may not be the appropriate solution for biomass or other types of non-dispatchable resources.⁷³ We note that ISO-NE's filing here is the first step in making intermittent resources dispatchable.⁷⁴ Accordingly, given that ISO-NE plans to address this issue through its stakeholder process, and the lack of evidence in the record of the instant proceeding, we are not persuaded that all non-dispatchable resources should be subject, at this time, to the new rules proposed herein.

28. We further disagree with commenters that certain resources require special notice of these proceedings from ISO-NE. It is each market participant's obligation to follow regulations and be aware of changes occurring. However, we support ISO-NE's efforts to inform and train smaller hydro resources, as they prepare for the changes.

⁷¹ A dispatchable resource submits a resource supply offer to ISO-NE that has a dispatchable range whereby ISO-NE can dispatch the resource on the basis of its economic offer.

⁷² ISO-NE Answer at 3. The Wholesale Markets Project Plan describes key market initiatives underway and planned for the upcoming three years.

⁷³ *Id.* at 4.

⁷⁴ In addition to this filing, we note that ISO-NE is continuing to address price formation issues. *See, e.g.*, ISO-NE's proposal in Docket No. ER15-1238-000 to better align dispatch rates and real-time prices, accepted by delegated letter order on April 17, 2015.

29. As for RENEW and SunEdison's remaining comments,⁷⁵ we find that they raise details best addressed in the stakeholder process. These concerns refer to processes not at issue in this filing and not yet settled by ISO-NE. We encourage ISO-NE to work closely with its stakeholders to resolve these issues.

30. Finally, we note that there is a typographical error in section II.13.6.2.1.1.2, Real-Time Energy Market Participation, which currently reads:

[a] Market Participant with a Generating Capacity Resource having no Capacity Supply Obligation that did not submit an offer for the resource into the Day-Ahead Energy Market *the resource or was offered* into the Day-Ahead Energy Market and did not clear, must be Self-Scheduled⁷⁶

31. In conditionally accepting ISO-NE's proposal here, we assume this language should read "[a] Market Participant with a Generating Capacity Resource having no Capacity Supply Obligation that did not submit an offer for the resource into the Day-Ahead Energy Market *or the resource ~~or~~ was offered* into the Day-Ahead Energy Market and" ISO-NE must include in the compliance filing directed here Tariff revisions that correct the typographical error accordingly.

The Commission orders:

(A) ISO-NE's proposed Tariff revisions are hereby conditionally accepted in part and rejected in part, with the conditionally accepted revisions effective April 10, 2016, as discussed in the body of this order.

(B) ISO-NE is hereby directed to submit a compliance filing within 30 days of the date of this order, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

⁷⁵ These include data accuracy, transparency, and constraints to certain hydro resources.

⁷⁶ ISO-NE Tariff § II.13.6.2.1.1.2 (Real-time Energy Market Participation) (*emphasis added*).