

170 FERC ¶ 61,132
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

ISO New England Inc.

Docket No. ER20-308-000

ORDER ACCEPTING INFORMATIONAL FILING

(Issued February 21, 2020)

1. On November 5, 2019, pursuant to Section III.13.8.1 of the ISO New England Inc. (ISO-NE) Transmission, Markets and Services Tariff (Tariff), ISO-NE submitted an informational filing providing information relating to the fourteenth Forward Capacity Auction (FCA 14)¹ for the 2023-2024 Capacity Commitment Period² (Informational Filing), including the qualification of capacity resources to participate in FCA 14. As discussed below, the Commission accepts ISO-NE's Informational Filing.

I. Background

2. As part of its Forward Capacity Market (FCM), ISO-NE administers an annual FCA in which capacity resources compete to provide capacity to New England three years later, during the relevant one-year Capacity Commitment Period.³ The FCM rules require ISO-NE to submit to the Commission an informational filing no later than 90 days prior to each FCA that includes, *inter alia*, the details of the resources accepted or rejected in the qualification process for participation in the FCA and the capacity zones to be modeled for the FCA.⁴ Under Tariff Section III.13.8.1(d), the determinations in the

¹ Per Tariff § III.13.8.1(d), “[i]f the Commission does not issue an order within 75 days after the ISO’s submission of the informational filing that directs otherwise, the determinations contained in the informational filing shall be used in conducting the Forward Capacity Auction[.]” FCA 14 was conducted on February 3, 2020.

² Capitalized terms not defined herein are used as they are defined in the Tariff. See Tariff, Rules of Construction; Definitions (127.0.0) § I.2.

³ The FCA includes the primary auction and a substitution auction conducted for state-sponsored policy resources. Qualification values in the Informational Filing are for both the primary auction and the substitution auction.

⁴ Tariff, § III.13.8.1(c) (22.0.0).

informational filing will be used in the relevant FCA, unless the Commission issues an order within seventy-five days of the filing directing otherwise.

3. As part of the process for qualifying resources to participate in the FCA, ISO-NE's Internal Market Monitor reviews the prices at which certain resources propose to offer their capacity into the auction to prevent the exercise of buyer-side market power. The Internal Market Monitor develops a benchmark price, the Offer Review Trigger Price, for each resource type for new resources that seek to participate in the auction, set at a level that approximates that resource's cost of new entry.⁵ Each new resource that seeks to submit an offer in the FCA at a price below the relevant Offer Review Trigger Price must include in its qualification package the New Resource Offer Floor Price (Offer Floor Price)⁶ and supporting documentation justifying that Offer Floor Price as competitive in light of the resource's costs, as well as relevant financial assumptions and cost projections for the resource. The Internal Market Monitor may consult with the resource sponsor to gather further information to complete its analysis.⁷ The Internal Market Monitor then issues a Qualification Determination Notification to each resource, informing it whether it has qualified to participate in the FCA and at what price or, if applicable, an explanation as to why the resource was not accepted.

II. Filing

4. On November 5, 2019, as required by the Tariff, ISO-NE submitted the instant Informational Filing with the Commission for the 2023-2024 Capacity Commitment Period.⁸

5. ISO-NE explains that it will model four Capacity Zones in FCA 14: the Southeast New England Capacity Zone (Southeastern Massachusetts, Rhode Island, and Northeastern Massachusetts/Boston, which will be modeled as an import-constrained zone), the Northern New England Capacity Zone (Maine, New Hampshire, and Vermont, which will be modeled as an export-constrained zone), the Maine Capacity Zone (modeled as an export-constrained zone nested within the Northern New England

⁵ *ISO New England Inc.*, 146 FERC ¶ 61,084, at P 3 (2014).

⁶ The New Resource Offer Floor Price is a value submitted by new resources that reflects the lowest price at which the resource requests to offer capacity in the FCA. Tariff, § III.13.1.1.2.2.3(a) (63.0.0).

⁷ *Id.*, §§ III.13.1.1.2.2.3(a), III.A.21.2(b)(iv) (55.0.0).

⁸ ISO-NE filed both a public version of its Informational Filing and a version for which it seeks privileged treatment. All citations from the Informational Filing are to the public version.

Capacity Zone), and the Rest-of-Pool Capacity Zone (Connecticut and Western/Central Massachusetts).

6. ISO-NE states that the Installed Capacity Requirement (ICR) is 33,431 MW and, after accounting for 941 MW of Hydro Quebec Interconnection Capability Credits (HQICCs), a net ICR of 32,490 MW remains to be procured in FCA 14.

7. ISO-NE notes that Qualified Existing Capacity Resources consist of 31,054 MW from Existing Generating Capacity Resources (intermittent and non-intermittent); 83 MW from Existing Import Capacity Resources; and 3,768 MW from Existing Demand Capacity Resources. ISO-NE states that a total 913 MW of Static De-List Bids were submitted for FCA 14.⁹

8. ISO-NE explains that, overall, the qualification process for FCA 14 resulted in 7,314 MW of new resources and 34,905 MW of existing resources competing to meet the net ICR of 32,490 MW for the New England Control Area for the 2023-2024 Capacity Commitment Period.¹⁰ ISO-NE adds that, to participate in the substitution auction, ISO-NE qualified 14 demand bids totaling 446 MW and 344 supply offers totaling 749 MW.

9. Regarding requests to offer below the relevant Offer Review Trigger Price for new resources, ISO-NE explains that the Internal Market Monitor's capacity price estimate for qualifying new resources is derived by: (1) entering all relevant resource costs and non-capacity revenue data, as well as assumptions regarding depreciation, taxes, and discount rate, into the capital budgeting model used to develop the relevant Offer Review Trigger Price; and (2) calculating the break-even contribution required from the FCM to yield a discounted cash flow with a net present value of zero for the project.¹¹

10. ISO-NE states that, "[i]f the [Internal Market Monitor] determines that the requested offer price is inconsistent with the [Internal Market Monitor's] estimate, then the resource's [Offer Floor Price] will be set to a level that is consistent with the capacity price estimate, as determined by the [Internal Market Monitor]."¹² ISO-NE further states that market participants were notified of the Internal Market Monitor's final

⁹ A Static De-List Bid is a bid that may be submitted by a capacity supplier in an FCA to remove itself from the FCM for a one-year period. ISO-NE Tariff, § I.2.2 (127.0.0).

¹⁰ Transmittal at 4-5.

¹¹ *Id.* at 16.

¹² *Id.*

determinations in their Qualification Determination Notifications, which ISO-NE provided to them on September 27, 2019.¹³

III. Notice of the Filing and Responsive Pleadings

11. Notice of the filing was published in the Federal Register, 84 Fed. Reg. 61,052 (2019), with interventions and protests due on or before November 20, 2019. Able Grid Infrastructure Holding, LLC (Able Grid); Avangrid Renewables, LLC; Calpine Corporation; Enerwise Global Technologies, Inc.; Eversource Energy Service Company; Exelon Corporation; National Grid; New England Power Pool Participants Committee; New England States Committee on Electricity; NRG Power Marketing LLC; Potomac Economics, Ltd., acting as ISO-NE's External Market Monitor; and RENEW Northeast, Inc. (RENEW) filed timely motions to intervene. Dominion Energy Services, Inc. (Dominion) and Vistra Energy Corp. (Vistra) filed untimely motions to intervene. Able Grid, the External Market Monitor and RENEW filed comments. On December 5, 2019 and December 20, 2019, respectively, the Internal Market Monitor and Able Grid filed answers.¹⁴

IV. Commission Determination

A. Procedural Issues

12. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2019), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedures, 18 C.F.R. § 385.214(d), we grant the late-filed motions to intervene of Dominion and Vistra given their interests in the proceeding, the early stages of the proceeding, and the absence of undue prejudice or delay.

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

¹³ *Id.* at 10.

¹⁴ Able Grid, the External Market Monitor, and the Internal Market Monitor filed both public versions of their responsive pleadings and versions for which they seek privileged treatment. All citations from the responsive pleadings are to the public versions.

B. Substantive Issues

14. We accept ISO-NE's Informational Filing because we find that ISO-NE has complied with its obligations under Tariff Section III.13.8.1 to submit information related to its qualification determinations and to provide supporting documentation. ISO-NE's filing meets these requirements by discussing, *inter alia*, the capacity zones to be modeled for FCA 14 and the details of the resources accepted or rejected in the qualification process for participation in the FCA. ISO-NE has provided evidence that it has appropriately reviewed all resources requesting to participate in FCA 14.

15. In accepting the filing, we are not persuaded by arguments that the qualification results reflect faulty mitigation. We discuss these protested issues below.

1. Background

16. As discussed above, the Internal Market Monitor has developed an Offer Review Trigger Price for some resource technology types (e.g., combustion turbines) at a level that approximates that resource's cost of new entry.¹⁵ All other technology types, including energy storage resources, fall within the "all other technology types" category, with an Offer Review Trigger Price equal to the FCA starting price.¹⁶

17. Also discussed above, each new resource that seeks to submit an offer in the FCA at a price below the relevant Offer Review Trigger Price must include in its qualification package relevant financial assumptions and cost projections for the resource. As part of these estimates, the resource sponsor estimates the revenue that the resource will earn from the sale of energy and ancillary services, expected to offset the resource's costs. The Tariff requires the Internal Market Monitor to replace any submitted information that is "clearly inconsistent with the prevailing market conditions."¹⁷ The Tariff is silent on the methods by which the Internal Market Monitor calculates the replacement information. After the Internal Market Monitor makes these replacements, it derives its own Offer Floor Price values for the resource by: (1) entering relevant resource costs and non-capacity revenue data and assumptions regarding depreciation, taxes, and discount rate into the capital budgeting model used to develop the relevant Offer Review Trigger Price; and (2) calculating the break-even contribution required from the capacity market

¹⁵ See Tariff § III.A.21.1.1 (55.0.0).

¹⁶ The starting price for FCA 14 is \$13.099/kW-month.

¹⁷ Tariff § III.A.21.2(b)(i) (55.0.0) ("The Internal Market Monitor will review capital costs, discount rates, depreciation and tax treatment to ensure that [the resource's proposed offer price] is consistent with overall market conditions. Any assumptions that are clearly inconsistent with prevailing market conditions will be adjusted.").

to yield a discounted cash flow with a net present value of zero for the project. Finally, the Internal Market Monitor sets the Offer Floor Price to the greater of the submitted price and the Internal Market Monitor-determined price.¹⁸

18. The Tariff also requires the External Market Monitor to review the quality and appropriateness of the Internal Market Monitor's mitigation. When the External Market Monitor discovers problems, it must promptly inform several entities, including the Commission, ISO-NE's Board of Directors, and the market participants.¹⁹

2. External Market Monitor Protest and Supporting Protests

19. The External Market Monitor asserts that the Internal Market Monitor over-mitigated the Offer Floor Prices of certain energy storage resources by modeling these resources using unrealistic assumptions and improper historical data. Specifically, the External Market Monitor expresses concern over the Internal Market Monitor's assumptions regarding the amount of revenue that energy storage resources will earn from the sale of energy and ancillary services. The External Market Monitor explains that estimating these net revenues for energy storage resources is complicated because it involves predicting the extent to which the resources can purchase electricity in lower-priced hours to charge in order to sell electricity (or reserves) in higher-priced hours. The External Market Monitor states that, because energy storage resources do not have perfect foresight into future prices, differences in net revenue estimates largely reflect the expected quality of the forecasting and optimization of the resources' charging and discharging cycles.²⁰

20. The External Market Monitor agrees with the Internal Market Monitor's decision to adjust the net revenues and mitigate the Offer Floor Prices of certain energy storage resources. However, the External Market Monitor states that its analyses also indicate

¹⁸ This last rule, which is not in the Tariff, is set forth in training materials that the Internal Market Monitor references in its answer. *See* Internal Market Monitor Answer at 9 n.25.

¹⁹ Section III.A.2.2(d) of the Tariff requires the External Market Monitor to “[m]onitor and review the quality and appropriateness of the mitigation conducted by the Internal Market Monitor. In the event that the External Market Monitor discovers problems with the quality or appropriateness of such mitigation, the External Market Monitor shall promptly inform the Commission, the Commission’s Office of Energy Market Regulation staff, the ISO Board of Directors, the public utility commissions for each of the six New England states, and the Market Participants of its findings.”

²⁰ External Market Monitor Protest at 5.

that the net revenue levels assumed by the Internal Market Monitor in mitigating the Offer Floor Prices were unreasonably low.²¹

21. The External Market Monitor identifies three issues with the Internal Market Monitor's methodology that it believes likely led to the low estimates for net revenues from the sale of energy and ancillary services. First, according to the External Market Monitor, its primary issue with the Internal Market Monitor's method is that it ignores the ability of energy storage resources to use information that becomes available after the close of the day-ahead market, including real-time prices that the resources observe. In addition, the External Market Monitor states that the Internal Market Monitor's model does not consider forecasted prices from the coordinated transaction scheduling (CTS) process, which are publicly available and reflect more recent information on real-time conditions. According to the External Market Monitor, under the Internal Market Monitor methodology, the energy storage resource would not be able to benefit from its abilities to react quickly to changes in real-time conditions.²²

22. Second, according to the External Market Monitor, the Internal Market Monitor's model utilized prices from the last three Capacity Commitment Periods (2016-2017, 2017-2018, and 2018-2019); however, ISO-NE implemented fast-start pricing beginning March 2017, which resulted in higher spreads between on-peak and off-peak prices. Thus, the External Market Monitor contends that using data from 2016 and the first two months of 2017 to estimate energy arbitrage profits is not appropriate and likely led to lower estimates for net revenues from the sale of energy and ancillary services.²³

23. Third, the External Market Monitor takes issue with how the Internal Market Monitor's model constrained the energy storage resource discharge if the real-time prices rose above \$300 per MWh to protect against Pay-for-Performance-related penalties. The External Market Monitor argues that this assumption is overly conservative because energy storage resources likely can use CTS price forecasts when developing their real-time offers to avoid Pay-for-Performance-related penalties. Hence, according to the External Market Monitor, this assumption likely precluded the energy storage resources from profiting from price spikes in the real-time market.²⁴

²¹ *Id.* at 5-7.

²² *Id.* at 8.

²³ *Id.* at 8.

²⁴ *Id.* at 8.

24. For these reasons, the External Market Monitor requests that the Commission direct the Internal Market Monitor to re-estimate the contested net revenues using a more reasonable methodology for energy storage resources and revise its Qualification Determination Notices accordingly. The External Market Monitor further states that the net revenues from the sale of energy and ancillary services produced using one of its own revenue models are reasonable and that the underlying methodology represents a workable approach for determining the Offer Floor Prices of energy storage resources for FCA 14 in the time available.²⁵

25. RENEW and Able Grid support the External Market Monitor's protest.²⁶ RENEW asks the Commission to direct the Internal Market Monitor to re-calculate the Offer Floor Prices for energy storage resources based on the External Market Monitor's proposed method and re-issue Qualification Determination Notifications to all affected energy storage resource developers. RENEW states that RENEW members that are developing energy storage resources in the New England region will be adversely affected by the Internal Market Monitor's over-mitigation of Offer Floor Prices. RENEW states that these high Offer Floor Prices would harm the overall competitiveness of the auction and, by preventing some energy storage resources from clearing the auction, hinder the nascent transition of the region's energy supply mix to renewable energy resources.²⁷

26. In addition to the issues raised by the External Market Monitor, RENEW recommends for FCA 15 the use of more realistic assumptions on the number of cycles per day that an energy storage resource may perform and the extent of an energy storage resource's ability to participate in the regulation market. RENEW claims that New England is increasingly experiencing a dual-peak-load shape during which energy storage resources can profit by operating two cycles per day. RENEW also claims that information in the Qualification Determination Notifications and the External Market Monitor protest reveals that both the monitors may be underestimating the revenues available to energy storage resources in the regulation market.²⁸

²⁵ *Id.* at 9.

²⁶ RENEW Protest at 5; Able Grid Protest at 14-15.

²⁷ RENEW Protest at 3-6.

²⁸ *Id.* at 4.

3. Able Grid Protest

27. Able Grid states that it proposed two battery storage projects for qualification,²⁹ which included submitted Offer Floor Prices that the Internal Market Monitor mitigated by substituting its own Offer Floor Prices. Able Grid contends that it provided documentation to support its proposed Offer Floor Prices, but the Internal Market Monitor nevertheless denied the submissions.³⁰

28. Able Grid asserts that, while the Internal Market Monitor has substantial discretion, the Internal Market Monitor's actions were beyond the scope of that discretion because the Internal Market Monitor is only permitted to substitute its own Offer Floor Price for that submitted by an applicant under two circumstances: if the project's cash flow is supported by a "regulated rate, charge or other regulated cost recovery mechanism" or an applicant's assumptions related to the project's "capital costs, discount rates, depreciation, and tax treatment" are "clearly inconsistent with prevailing market conditions."³¹ Able Grid states that the Offer Floor Prices that it proposed for Ballston and Cahoon do not fit within either of those circumstances.

²⁹ Able Grid initially submitted four battery storage projects for qualification, two of which it later withdrew. Able Grid's concerns in this proceeding therefore deal only with its two projects that remained in the qualification process, Ballston Grid, LLC (Ballston) and Cahoon Grid, LLC (Cahoon). Able Grid Protest at 1 n.3.

³⁰ *Id.* at 4-5.

³¹ *Id.* at 2 (citing Tariff § III.A.21.2(b)(i)) emphasis and footnotes omitted). Section III.A.21.2(b)(i) provides that, when the Internal Market Monitor develops its own Offer Floor Price for a new resource, it does so as follows:

Where possible, the Internal Market Monitor will use like-unit historical production, revenue, and fuel cost data. Where such information is not available (e.g., there is no resource of that type in service), the Internal Market Monitor will use a forecast provided by a credible third party source. The Internal Market Monitor will review capital costs, discount rates, depreciation and tax treatment to ensure that it is consistent with overall market conditions. Any assumptions that are clearly inconsistent with prevailing market conditions will be adjusted.

29. Able Grid asserts that the Internal Market Monitor failed to consider the documentation offered by Able Grid.³² In September 2019, Able Grid received a Qualification Determination Notification from the Internal Market Monitor for each project denying Able Grid's proposed Offer Floor Prices for Ballston and Cahoon. Able Grid states that the Qualification Determination Notifications did not specifically reference the source data the Internal Market Monitor used in lieu of Able Grid's data and did not indicate how Able Grid's data was "clearly inconsistent with prevailing market conditions." Able Grid notes that, in its protest, the External Market Monitor states that the Internal Market Monitor-determined net revenues from the sale of energy and ancillary services are well below what would reasonably be expected by an energy storage resource, particularly for resources that do not earn regulation revenue. Thus, Able Grid asserts that the External Market Monitor argues that the underlying methodology submitted by companies such as Able Grid is reasonable and that the Offer Floor Prices should be calculated using that information.³³

30. Able Grid specifies four areas in which it challenges the Internal Market Monitor's decisions in arriving at its Qualification Determination Notifications for Ballston and Cahoon.

31. First, to support its initial investment costs, Able Grid states that it submitted documentation that included comparability data on battery prices that were calculated by two leading energy storage market research firms. Able Grid states that the Internal Market Monitor did not use those reports because they are proprietary and instead estimated investment costs based on publicly available information from NREL, which analyzed projects on a generic basis. Able Grid contends that, because the Internal Market Monitor did not state the specific inputs to its calculations, it cannot make an "apples to apples" comparison between the Internal Market Monitor's estimated investment costs and Able Grid's actual investment costs.³⁴

32. Second, Able Grid states that, in calculating the salvage value of the batteries to be used in the projects, it forecasted numbers beyond the life of the battery. Able Grid contends that the Internal Market Monitor used a conservative measure and assumed only that whatever remaining value may be left will be enough to cover the decommissioning costs, netting to zero. Able Grid argues that the Internal Market Monitor's choice to replace Able Grid's estimate of salvage value with its own more conservative measure is

³² Able Grid details its communications with the Internal Market Monitor, including providing meeting and email dates and details. Able Grid Protest at 6-7.

³³ *Id.* at 8.

³⁴ *Id.* at 11-12.

“contrary to the goal of a market in which the winner is almost always the least conservative and optimistic about future net cashflows.”³⁵

33. Third, to support its weighted average cost of capital (WACC) Able Grid states that it provided information supporting its assumptions on the cost and level of both debt and equity. Able Grid adds that, to support its assumption on debt load and interest rate, it provided a binding term sheet it had received from a lender for a similarly sized project that will compete in another region on a merchant basis. Able Grid notes that, if its projects clear FCA 14, they will have guaranteed revenue streams and represent less risk for potential lenders. Able Grid states that, for cost of equity, it referenced its experience and current contacts with equity providers as supporting its ability to project what equity investors would require. Able Grid argues that further documentation might have been available had it been requested. Able Grid contends that, in one of its questions to Able Grid, the Internal Market Monitor asked why the cost of capital assumptions used by Able Grid included values in the cost workbook that did not match the supporting documentation. Able Grid states that, while its response indicated that its workbook numbers were based on the “environment for project finance in ISO-NE,” the values in the workbook were, in fact, substantially similar to and more conservative than the supporting documentation. Able Grid claims that, without further discussion, the Internal Market Monitor did not use Able Grid’s information and instead estimated the inputs to the WACC based on the latest FERC-approved cost of new entry study (the CONE study). However, Able Grid argues that the CONE study relies on dated assumptions around capital market conditions and does not take into consideration current and expected conditions and the cost of capital for projects such as Able Grid’s.³⁶

34. Fourth, Able Grid argues that, as explained in the External Market Monitor’s protest, the net revenue levels assumed by the Internal Market Monitor in mitigating the Offer Floor Prices for energy storage resources were unreasonably low.³⁷ Able Grid concurs with the External Market Monitor’s analyses, noting that the use of the Internal Market Monitor’s dispatch model for Ballston and Cahoon significantly decreased the net revenue projection. Further, Able Grid asserts that the Internal Market Monitor replaced both projects’ Availability Value, which was supported by documentation from two service companies, with its own arbitrary value, thus significantly lowering the expected annual Pay for Performance earnings for both projects.³⁸

³⁵ *Id.* at 12.

³⁶ *Id.* at 13-14.

³⁷ *Id.* at 14-15 nn.24-25 (citing External Market Monitor Comments at 7-9).

³⁸ *Id.* at 15.

35. Able Grid states that its projects are large-scale battery resources and that the Commission has directed regional grid operators to remove barriers to the participation of electric storage in wholesale markets.³⁹ Able Grid claims that it sought to communicate with and obtain information from the Internal Market Monitor as to what documentation would be necessary to qualify its battery projects and was unable to get such information. As a result, Able Grid asserts that its Ballston and Cahoon projects will not be able to bid economically into FCA 14, thus possibly leading to a higher clearing price. Able Grid contends that the Internal Market Monitor's failure to develop an Offer Review Trigger Price for battery storage resources is inconsistent with the obligation that the Commission has placed on ISO-NE to remove barriers to the participation of electric storage in wholesale markets.⁴⁰

36. Able Grid asks the Commission to find that: (1) the Internal Market Monitor's rejection of Able Grid's information supporting its requested Offer Floor Prices contravenes the Internal Market Monitor's authority under the Tariff; (2) the Qualification Determination Notifications for Ballston and Cahoon each lacked sufficient information to support a determination that Able Grid's assumptions were clearly inconsistent with prevailing market conditions; and (3) absent an appropriate evaluation of the information submitted by Able Grid to support Offer Floor Prices for battery storage resources, ISO-NE's Informational Filing has not been shown to be just and reasonable and is unduly discriminatory and preferential. Able Grid further asks the Commission to direct ISO-NE to qualify the Ballston and Cahoon projects to participate in the FCA 14 at its requested Offer Floor Prices or, alternatively, to re-evaluate Able Grid's FCA 14 Offer Floor Price submissions based on information provided by Able Grid and to issue Qualification Determination Notifications with sufficient detail to enable Able Grid to be an informed market participant.⁴¹

4. Internal Market Monitor Answer

37. In response to the External Market Monitor's arguments, the Internal Market Monitor states that it followed the Tariff and adjusted the requested Offer Floor Prices of new energy storage resources that were based on unreasonable and/or unsupported assumptions, including overly optimistic estimates of net revenues from the sale of energy and ancillary services. The Internal Market Monitor explains that it had to develop its own model to estimate net revenues to serve as a benchmark and used that benchmark to mitigate offer prices from energy storage resources that were

³⁹ *Id.* at 5 n.12 (citing to Order No. 841, *supra*).

⁴⁰ *Id.* at 17-18.

⁴¹ *Id.* at 19.

unsupported.⁴² The Internal Market Monitor urges the Commission to reject the External Market Monitor's and other parties' requests that the Commission order ISO-NE to use the External Market Monitor's proposed mitigation or grant other relief. The Internal Market Monitor states that, by the time ISO-NE issued the Qualification Determination Notifications, the External Market Monitor had not yet proposed its method of estimating net revenues based on CTS forecast prices, nor had any energy storage resource proposed such a methodology. The Internal Market Monitor argues that its determinations are a just and reasonable exercise of buyer-side mitigation in the face of unreasonable and unsupported assumptions requested by energy storage resources, which if used could otherwise artificially suppress capacity prices.⁴³

38. The Internal Market Monitor states that the External Market Monitor's alternative revenue methodology has potential methodological flaws. The Internal Market Monitor acknowledges that, "in theory more optimal scheduling can arise from more recent information about pricing," such as in the use of CTS prices compared to day-ahead prices, but states the Internal Market Monitor was not able to compare this predictive improvement empirically given the late submission of the External Market Monitor's model.⁴⁴ The Internal Market Monitor further states that there were "potential issues" with the limited CTS pricing and congestion on the one interface represented by CTS that would have to be evaluated before the External Market Monitor's proposal could be adopted. The Internal Market Monitor adds that it has not had time to evaluate multiple aspects of the External Market Monitor's methodology.⁴⁵

39. The Internal Market Monitor states that, without further evaluation and potentially further adjustment, the net revenues estimated by the External Market Monitor could be higher than what could reasonably be expected by a project, particularly for resources that receive only energy and reserve revenues. The Internal Market Monitor urges the Commission to approve the instant filing without change because use of the External Market Monitor's methodology could lead to under-mitigation of some energy storage resources' Offer Floor Prices. The Internal Market Monitor also notes that no project currently before the Commission has used the External Market Monitor's methodology, and the External Market Monitor and RENEW are requesting that the Commission direct the Internal Market Monitor to re-estimate the net revenues using "a *more reasonable methodology* for [energy storage resources]" and revise the Qualification Determination

⁴² Internal Market Monitor Answer at 3.

⁴³ *Id.* at 4.

⁴⁴ *Id.* at 17.

⁴⁵ *Id.* at 17-18.

Notifications accordingly.⁴⁶ The Internal Market Monitor states that this request is outside the bounds of the Tariff. The Internal Market Monitor further states that, even if the [External Market Monitor's] proposed methodology for estimating net revenues for energy storage resources were determined to be "more reasonable" than the Internal Market Monitor's generic benchmark, this would not render the Internal Market Monitor's timely determinations of Offer Floor Prices unjust and unreasonable⁴⁷ nor make a participant-requested Offer Floor Price based on overly optimistic or unsupported assumptions just and reasonable.

40. The Internal Market Monitor states, however, that, as RENEW suggests, discussion with market participants regarding all of the assumptions and modeling approaches that the Internal Market Monitor intends to use for FCA 15 would be useful.⁴⁸ The Internal Market Monitor states that it values timely input from the External Market Monitor on mitigation and agrees with RENEW that there is no perfect revenue model. The Internal Market Monitor favors more open discussion with market participants prior to future auctions. The Internal Market Monitor explains that, with emerging technologies such as batteries, the model for estimating costs and net revenues is likely to continue to evolve and will be improved as more commercialization takes place. But the Internal Market Monitor states that its estimates are reasonable and based on a revenue model that was developed after reviewing many submitted models, reviewed for quality assurance, and properly applied within the qualification period.⁴⁹

41. In response to Able Grid's protest, the Internal Market Monitor states that, pursuant to ISO-NE's Minimum Offer Price Rule, each new generation resource intending to submit offers into the FCA below the Offer Review Trigger Price must provide, in its pre-auction qualification package, the lowest price at which the resource requests to offer capacity (i.e., the Offer Floor Price), and supporting documentation justifying that price as competitive in light of the resource's costs. The Internal Market Monitor explains that the resource's submitted price is subject to review by the Internal Market Monitor and must include "the additional documentation" described in

⁴⁶ *Id.* at 18 (citing External Market Monitor Protest at 9 (emphasis added by Internal Market Monitor); RENEW Comments at 6).

⁴⁷ *Id.* at 19 (citing *ISO New England Inc.*, 166 FERC ¶ 61,060, at P 25 (2019) ("[w]e acknowledge that there is no single method to reach a just and reasonable rate and that entities may have differing views regarding future costs and market conditions," footnote omitted, additional citations omitted)).

⁴⁸ *Id.* at 27 (citing RENEW Comments at 5).

⁴⁹ *Id.* at 5.

Section III.A.21 of the Tariff.⁵⁰ In addition to describing the review process, the Internal Market Monitor notes that the Tariff provides that

[s]ufficient documentation and information *must be included in the resource's qualification package* to allow the Internal Market Monitor to make the determinations described in this subsection (b). . . . If the supporting documentation and information required . . . is deficient, the Internal Market Monitor, *at its sole discretion*, may consult with the Project Sponsor to gather further information as necessary to complete its analysis. If after consultation, the Project Sponsor does not provide sufficient documentation and information for the Internal Market Monitor to complete its analysis, the resource's New Resource Offer Floor Price *shall be equal to the Offer Review Trigger Price*.⁵¹

42. The Internal Market Monitor further states that, if a project sponsor requests to offer below the relevant Offer Review Trigger Price, the Offer Floor Price shall equal the greater of the participant-requested Offer Floor Price or the Offer Floor Price determined by the Internal Market Monitor.⁵² The Internal Market Monitor thus argues that the calculation of an Internal Market Monitor-determined Offer Floor Price requires the Internal Market Monitor to make sure costs, revenues, and other inputs are in line with the Internal Market Monitor's capacity price estimate for both subsidized and merchant generation offering below the relevant Offer Review Trigger Price. The Internal Market Monitor explains that the Minimum Offer Price Rule "was designed to guard against the potential price-suppressing impact of new resources on the capacity market clearing price and the potential negative impact of procuring uneconomic resources to meet capacity requirements."⁵³

43. The Internal Market Monitor states that it accepted the resources' revenue model while changing only a single input to align with expected market conditions for a number of battery resources that provided sufficient documentation and information. The Internal Market Monitor also states that it rejected some proposals by resources, noting, for

⁵⁰ *Id.* at 6 nn.12-13 (citing ISO-NE Tariff, §§ III.13.1.1.2.2.3(a) and III.A.21.2(b)(iv)).

⁵¹ *Id.* at 8 n.22 (citing ISO-NE Tariff, § III.A.21.2(b)(iv) (emphasis added by Internal Market Monitor)).

⁵² *Id.* at 9.

⁵³ *Id.* at 9-10.

instance, that it determined that the inputs used in the latest FERC-approved CONE were a reasonable estimate of costs to be used to determine a project's WACC. The Internal Market Monitor explains that some energy storage resources submitted unsupported WACC values that were lower and therefore likely to be inconsistent with prevailing market conditions.⁵⁴

44. The Internal Market Monitor argues that, even if Able Grid's argument were correct (specifically, that the Internal Market Monitor can only adjust assumptions underlying a project's calculations if those assumptions are "clearly inconsistent with prevailing market conditions"),⁵⁵ the Internal Market Monitor was justified in rejecting Able Grid's requested Offer Floor Prices for the Ballston and Cahoon projects because the values of those prices were driven by unreasonably high estimates of net revenues from the sale of energy and ancillary services.⁵⁶

45. Further, the Internal Market Monitor notes that Able Grid did not provide it with battery price data, as that data came from proprietary reports. The Internal Market Monitor explains that it used publicly available data from a credible third-party source, NREL, to obtain a benchmark estimate of capital costs. The Internal Market Monitor found that the salvage value of the Ballston and Cahoon projects that Able Grid submitted was not supported by external documentation and did not account for decommissioning costs at the end of the projects' projected life.⁵⁷ The Internal Market Monitor states that it used inputs from the latest FERC-approved CONE study as a reasonable estimate for the WACC. The Internal Market Monitor notes that, in contrast, Able Grid only provided partial support for its project financing inputs, while citing proprietary concerns about sharing the methodology used to derive the cost of equity. Regarding the cost of debt, the Internal Market Monitor contends that Able Grid included

⁵⁴ *Id.* at 12. The Internal Market Monitor also set forth the assumptions it used to develop its net revenue model, and noted that it calculated a resource's expected average performance during capacity scarcity conditions by comparing the operational data derived from these assumptions to actual historic events. *Id.* at 13-14.

⁵⁵ As noted above, Tariff § III.A.21.2(b)(i) provides that, when the Internal Market Monitor develops its own Offer Floor Price for a new resource, it "will review capital costs, discount rates, depreciation and tax treatment to ensure that it is consistent with overall market conditions. Any assumptions that are clearly inconsistent with prevailing market conditions will be adjusted." *See supra* note 17.

⁵⁶ Internal Market Monitor Answer at 22.

⁵⁷ *Id.* at 25.

more optimistic values in the cost workbook that did not match the supporting documentation, citing the “environment for project finance in ISO-NE.”⁵⁸

5. Able Grid Answer

46. Able Grid reiterates many of the arguments of its protest. Regarding the replacement of Able Grid’s submitted salvage value, Able Grid argues that it is not clear what constitutes prevailing conditions because Able Grid’s projects and others like them are new to the industry and do not have the full operating life experience, including decommissioning, on which the Internal Market Monitor can base its estimates. Able Grid argues that, instead of replacing Able Grid’s estimate with a “guess,” it would have been more appropriate for the Internal Market Monitor to defer to Able Grid’s judgment when it comes to cost assumptions, any errors in which Able Grid would be fully at risk.⁵⁹

47. Able Grid contends that, contrary to the Internal Market Monitor’s assertion that it has broad authority under the Tariff to substitute “any assumption,” the Tariff’s plain language limits the Internal Market Monitor’s ability to substitute its own values only for “capital costs, discount rates, depreciation, and tax treatment” and only when the submitted values are “*clearly inconsistent* with prevailing market conditions.”⁶⁰ Able Grid argues that the Internal Market Monitor errs by implying that the Tariff’s “clearly inconsistent” standard is met when the participants’ submitted values differ from those of the Internal Market Monitor. Able Grid asserts that the Internal Market Monitor did not provide evidence that Able Grid’s assumptions were clearly inconsistent with prevailing market conditions, only that Able Grid’s assumptions were different from the Internal Market Monitor’s.⁶¹

48. Able Grid claims that the Internal Market Monitor’s answer incorrectly states that Able Grid’s revenues “were not even close to the [Internal Market Monitor]-determined benchmark for these types of resources.”⁶² Able Grid also contends that the Internal Market Monitor mischaracterizes certain statements made by the External Market Monitor in its protest. Able Grid asserts that, because the External Market Monitor does

⁵⁸ *Id.* at 26.

⁵⁹ Able Grid Answer at 3-4.

⁶⁰ *Id.* at 4 (citing Tariff § III.A.21.2(b)(i) (emphasis added by Able Grid)).

⁶¹ *Id.* at 4-5.

⁶² *Id.* at 10 (citing Internal Market Monitor Answer at 22).

not mention specific projects, any attempt by the Internal Market Monitor to apply the External Market Monitor's protest to the Able Grid projects is inappropriate.⁶³

6. Determination

49. We accept ISO-NE's Informational Filing detailing the information related to qualification for FCA 14, including the Offer Floor Prices as proposed by the Internal Market Monitor. When the Offer Floor Prices submitted by resources are below the relevant Offer Review Trigger Price, the Tariff requires the Internal Market Monitor to estimate its own Offer Floor Prices with which to make comparisons with the submitted prices.⁶⁴ We reject the External Market Monitor's request that the Internal Market Monitor should have been required to revise its calculation of Offer Floor Prices for energy storage resources in preparation for FCA 14. The External Market Monitor argues that the Internal Market Monitor used unrealistic assumptions and an inappropriate data set to estimate the net revenues earned by energy storage resources from the sale of energy and ancillary services and proposes its own method for estimating this net revenue, claiming to use more realistic assumptions and a more appropriate data set. We find the Internal Market Monitor's method reasonable because, as the Internal Market Monitor explains in its answer, its assumptions are based on a careful study of submitted models and associated assumptions, conducted in the proper time frame. We make no findings regarding whether the External Market Monitor's method is more or less accurate than the Internal Market Monitor's calculation of the Offer Floor Prices. We agree with the Internal Market Monitor, however, that, even if the External Market Monitor's method is potentially more accurate, that alone does not indicate that the Internal Market Monitor abused its discretion or that the model it used is inconsistent with the Tariff.

50. Although we find that the Internal Market Monitor acted consistently with the Tariff, we acknowledge that the Internal Market Monitor has yet to develop, through the ISO-NE stakeholder process and a filing with the Commission, an Offer Review Trigger Price model specific to energy storage resources. Without such a model at hand, the Internal Market Monitor reasonably created a model with which to mitigate Offer Floor Prices in anticipation of FCA 14. The Internal Market Monitor states that it values timely input from the External Market Monitor on mitigation and favors more open discussion with market participants prior to future auctions, and we encourage that discussion in order to develop an Offer Review Trigger Price for energy storage resources.⁶⁵

⁶³ *Id.* at 10 n.43.

⁶⁴ *See* Tariff §§ III.13.8 (22.0.0) and III.A.21 (55.0.0).

⁶⁵ *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 841, 162 FERC ¶ 61,127

51. With regard to Able Grid's Ballston and Cahoon projects, we find that the Internal Market Monitor acted appropriately, and did not abuse the discretion the Tariff provides it, when mitigating the Offer Floor Prices submitted by Able Grid for the projects.⁶⁶ We agree with the Internal Market Monitor that Able Grid did not provide sufficient support for its estimations of total investment costs, salvage value, and WACC in its qualification packages. Because the Offer Floor Prices were below the relevant Offer Review Trigger Price, the Tariff required the Internal Market Monitor to estimate its own Offer Floor Prices with which to make comparisons with the submitted prices. When calculating its estimations, the Internal Market Monitor reasonably replaced Able Grid's submitted values with values for which it had documented support. Similarly, the Internal Market Monitor produced a generic estimate of net revenue from the sale of energy and ancillary services to serve as a broad benchmark with which to compare Able Grid's submitted values, which differed greatly from that benchmark. Finally, when calculating its net revenue values, the Internal Market Monitor reasonably calculated the expected average performance during capacity scarcity conditions by comparing the resulting operational data to historic events. For the reasons above, we find that the Internal Market Monitor acted reasonably in mitigating Able Grid's projects.

52. We are unpersuaded by Able Grid's argument that the Internal Market Monitor acted improperly by not collaborating with Able Grid during the qualification process to ensure that Able Grid provided sufficient supporting information for its submitted values. Able Grid points to no Tariff provision that requires the Internal Market Monitor to collaborate in such a manner, instead acknowledging that "the Tariff does not impose a strict obligation." The Tariff, in fact, states that "[s]ufficient documentation and information must be included in the resource's qualification package" to enable the Internal Market Monitor to review the resource's proposed Offer Floor Price, and that if a resource sponsor's supporting information is deficient, the Internal Market Monitor, "at its sole discretion," may consult with the resource sponsor to gather further information.⁶⁷ In other words, the responsibility to support its proposed Offer Floor Price rests on the resource; the Internal Market Monitor is not obligated to affirmatively address deficiencies in a resource's proposal. Further, Able Grid states that it received questions from the Internal Market Monitor concerning its data inputs in July 2019. Able Grid states that it replied to the Internal Market Monitor's questions "in a timely and comprehensive fashion." Therefore, based on the record in this proceeding, we find that

(2018), *order on reh'g*, Order No. 841-A, 167 FERC ¶ 61,154 (2019). Order No. 841 defined an electric storage resource as a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy to the grid. *Id.* P 1 n.1.

⁶⁶ See Tariff §§ III.13.8 (22.0.0) and III.A.21 (55.0.0).

⁶⁷ See Tariff § III.A.21.2(b)(iv) (55.0.0).

the Internal Market Monitor appropriately exercised its discretion and we disagree with Able Grid's contention that the Tariff and Order No. 841 dictate that the Internal Market Monitor should have communicated with Able Grid more than it did.

53. We also are unpersuaded by Able Grid's claim that the Internal Market Monitor does not properly support its own data inputs. Able Grid states that neither Qualification Determination Notification for its two projects "particularly referenced the source data the [Internal Market Monitor] used in lieu of the Company's data." Able Grid argues that, because the Internal Market Monitor did not specifically reference the data sources, Able Grid could not understand the Internal Market Monitor's rationale. Able Grid claims that the Internal Market Monitor failed to respond to the company's requests for information on the data used by the Internal Market Monitor and for clarification on the Internal Market Monitor's calculation methodology. We note, however, that the Internal Market Monitor does list in the Qualification Determination Notifications its data sources for its data inputs, namely, "publicly available data produced by NREL" for total initial investment costs; "the decommissioning costs, netting to zero" for salvage value; and "the inputs used in the latest FERC approved Cost of New Entry payments" for WACC.⁶⁸

54. Finally, we disagree with Able Grid's argument that the Internal Market Monitor acted inconsistently with Order No. 841 by not implementing an Offer Review Trigger Price model for energy storage resources. Order No. 841 is silent on the topic of this proceeding: mitigation in the FCM.

The Commission orders:

ISO-NE's Informational Filing is hereby accepted, as discussed in the body of this order.

By the Commission. Commissioner Glick is dissenting with a separate statement attached.

(S E A L)

Kimberly D. Bose,
Secretary.

⁶⁸ Able Grid Protest, Attachment 2 at 1-8.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc.

Docket No. ER20-308-000

(Issued February 21, 2020)

GLICK, Commissioner, *dissenting*:

1. I dissent from today's order because I am concerned that certain energy storage resources are over-mitigated. As explained in my concurrently issued statements involving NYISO, I believe that it is *per se* unjust and unreasonable to apply buyer-side market power mitigation rules to resources that are not buyers with market power.¹ Nothing in today's order concludes that the energy storage resources subject to buyer-side market power mitigation in ISO New England are capacity buyers, much less ones with market power. Accordingly, they should not be subject to buyer-side market power mitigation.

2. Today's order, in particular, illustrates the problems with sweeping market mitigation and the challenges associated with establishing administratively determined offer floors. Those challenges are especially stark for energy storage resources whose optimization must reflect a variety of factors, such as charging cycles and price arbitrage, that reflect operator judgment and other factors, which may differ significantly among market participants. Simply put, there is no one right way to run a battery, which makes it challenging to estimate how a resource will or "should" earn revenue through the market. The disagreement between the External Market Monitor and the Internal Market Monitor also underscores the sensitivity of the litany of assumptions that go into establishing an offer floor for energy storage resources.²

¹ See, e.g., *N.Y. Pub. Serv. Comm'n v. N.Y. Indep. Sys. Operator*, 170 FERC ¶ 61,119, at P 38 (2020) (Glick, Comm'r, dissenting at PP 15-16).

² The External Market Monitor analyzed different methodologies to estimate the energy and ancillary services (E&AS) net revenues of a hypothetical resource and found that the results would range between \$30 per kW-year to \$63 per kW-year. External Market Monitor Protest at 6. The External Market Monitor asserts that there are a series of assumptions that likely resulted in estimates for E&AS net revenues that are well below what could be reasonably expected, which, the External Market Monitor asserts, led to over-mitigation of some energy storage resources. This includes the quality of price forecasting, whether the resource also receives additional net revenues from the sale

3. The better course of action is to rely on energy storage market participants' own expertise and judgement about the revenue that their business model can earn in the market. Doing so would recognize that these resources have no incentive or ability to lower prices and would properly place the risk of overestimating revenues on the market participants themselves, which helps to ensure that market outcomes are competitive, prices are efficient, and that innovation is rewarded. *That* is the best way to ensure that rates remain just and reasonable.

For these reasons, I respectfully dissent.

Richard Glick
Commissioner

of spinning reserves, and overly conservative constraints placed on discharge in the model to protect against Pay-for-Performance penalties, which precluded storage resources from profiting from price spikes. *Id.* at 8.