138 FERC ¶ 61,042
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Philip D. Moeller, John R. Norris,
and Cheryl A. LaFleur.

ISO New England Inc. Docket Nos. ER11-4336-000
ER11-4336-001
ER11-4336-002
ER11-4336-003

ORDER ON COMPLIANCE FILING

(Issued January 19, 2012)

I. Introduction

1. On August 19, 2011, ISO New England Inc. (ISO-NE) submitted a compliance filing and proposed tariff changes pursuant to section 205 of the Federal Power Act (FPA)[1] (Compliance Filing) addressing the demand response compensation requirements established by the Commission in Order No. 745.[2] To comply with Order No. 745, ISO-NE proposes revisions to its Transmission, Markets and Services Tariff (Tariff) as a two-stage implementation process. Specifically, it proposes to put in place an interim set of demand response compensation rules, effective June 1, 2012 (Transition Period rules),[3] which would be replaced by a second set of rules that would fully integrate demand response resources into the energy market effective June 1, 2016 (Fully Integrated

[1] 16 U.S.C. § 824d (2006).

[2] *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, 76 Fed. Reg. 16,658 (Mar. 24, 2011), FERC Stats. & Regs. ¶ 31,322 (2011), *order on reh'g*, Order No. 745-A, 137 FERC ¶ 61,215 (2011).

[3] ISO-NE's current demand response programs, the Day-Ahead Load Response Program and the Real-Time Response Program, expire on May 31, 2012.

solution).[4] In support of its Transition Period proposal, ISO-NE states that it will require a multi-year effort to reach the ultimate goal of fully integrating demand response resources into the energy market and system dispatch and that, as a comprehensive package, the two-stage approach complies with Order No. 745.[5]

2. For the reasons discussed below, we accept ISO-NE's proposed Tariff revisions, subject to conditions, with the Transition Period rules to become effective June 1, 2012 and the Fully Integrated rules to become effective June 1, 2016, as either in compliance with Order No. 745 or just and reasonable under section 205 of the FPA.[6] We also require ISO-NE to make an additional compliance filing, within 90 days of the date of this order.

II. Background

3. On March 15, 2011, the Commission issued Order No. 745, a Final Rule amending the Commission's regulations under the FPA, regarding compensation for demand response resources participating in wholesale energy markets, i.e., the day-ahead and real-time markets, administered by Regional Transmission Organizations (RTO) and Independent System Operators (ISO).[7] Specifically, Order No. 745 requires each RTO

[4] ISO-NE states that it initially chose an effective date of 2015 for the Fully Integrated solution because, during the stakeholder process, several demand response providers indicated a preference to have market rule certainty prior to participating in a Forward Capacity Auction. Therefore, ISO-NE chose 2015 since the auction associated with the 2015-16 capacity commitment period takes place in April 2012. ISO-NE subsequently filed an amendment proposing an effective date of June 1, 2016 for the Fully Integrated solution. ISO-NE states that this later effective date is necessary because stakeholders require additional time to develop and approve the revisions necessary to make the Forward Capacity Market provisions consistent with the demand response modifications proposed in this proceeding. Further, market participants desire certainty with respect to how they will offer into the Forward Capacity Market (for which the auction occurs three years in advance). The next auction will be held in April 2012, which does not allow for sufficient time for the process outlined above to occur. The following auction will occur in February 2013.

[5] ISO-NE designated its compliance filing package in eTariff as a filing under FPA section 205 (rather than as a compliance filing under FPA section 206 (16 U.S.C. 824e (2006)), with a requested effective date of June 1, 2012.

[6] 16 U.S.C. § 824d (2006).

[7] Order No. 745, FERC Stats. & Regs. ¶ 31,322.

and ISO to pay a demand response resource the market price for energy, i.e., the locational marginal price (LMP), when two conditions are met. First, the demand response resource must have the capability to balance supply and demand as an alternative to a generation resource. Second, dispatching the demand response resource must be cost-effective as determined by a net benefits test in accordance with Order ``No. 745. The net benefits test, as described more fully below, is necessary to ensure that the overall benefit of the reduced LMP that results from dispatching demand response resources exceeds the costs of dispatching and paying LMP to those resources.

4. In order to implement the net benefits test, the Commission directed each RTO and ISO to develop a mechanism to approximate the price level at which dispatching demand response resources will be cost-effective. The Commission required each RTO and ISO to make a compliance filing by July 22, 2011, proposing Tariff revisions necessary to implement the compensation approach adopted in Order No. 745, including the net benefits test, the cost allocation mechanism, and an assessment of their demand response measurement and verification protocols and any modifications to those protocols that may be necessary to ensure adequate baseline measurement and verification of demand response performance. This order addresses ISO-NE's compliance filing.

5. On June 27, 2011, ISO-NE filed a motion requesting that the Commission extend the deadline for submitting its compliance filing from July 22, 2011 to August 19, 2011; the motion was granted on July 8, 2011.[8]

6. On December 22, 2011, ISO-NE filed an amendment that changes the proposed effective date for the Fully Integrated solution from June 1, 2015 to June 1, 2016, in order to allow for sufficient time for ISO-NE to file conforming changes in the Forward Capacity Market, which will ensure for consistency between the energy and capacity markets.

III. Notice of Filing and Responsive Pleadings

7. Notice of ISO-NE's compliance filing was published in the *Federal Register*, 76 Fed. Reg. 53,674 (2011), with interventions and protests due on or before September 9, 2011. Notices of intervention and timely-filed motions to intervene were filed by the entities noted in the appendix to this order. In addition, Dominion submitted a motion to intervene out-of-time on September 19, 2011. ISO-NE's amendment was noticed, with

[8] *ISO New England Inc.*, Docket No. RM10-17-000, (July 8, 2011) (Notice of Extension of Time).

intervention and protests due on or before December 29, 2011. No interventions or protests were filed.

8. Protests and comments were submitted by the parties listed in the appendix to this order. On September 13, 2011, ISO-NE filed an initial answer (Initial Answer). On September 22, 2011, IECG filed an answer in opposition to ISO-NE's Initial Answer. On September 23, 2011, ISO-NE filed a second, "comprehensive" answer (Comprehensive Answer), and the ISO-NE Internal Market Monitor (IMM) and EPSA also filed answers. On October 11, 2011, the Maine Public Parties filed an answer to the ISO-NE, IMM and EPSA answers. On October 12, 2011, IECG filed an answer to ISO-NE's Comprehensive Answer and the IMM's answer. On October 17, 2011, Verso Paper filed an answer to the ISO-NE and IMM answers. On October 18, CDRI filed an answer to ISO-NE's Comprehensive Answer. On October 27, 2011, ISO-NE filed a limited answer to Verso Paper's answer.

IV. Discussion

A. Procedural Matters

9. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2011), the notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. In addition, we will grant Dominion's unopposed late-filed intervention, given its interest in this proceeding, the early stage of this proceeding, and the absence of undue prejudice or delay.

10. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2011), prohibits an answer to a protest and/or an answer to an answer unless otherwise ordered by the decisional authority. We will accept the answers to protests filed by ISO-NE, the IMM, and EPSA, because they have provided information that assisted us in our decision-making process. However, we are not persuaded to accept the answers to answers filed by the CDRI, IECG, the Maine Public Parties, Verso Paper, and ISO-NE and will, therefore, reject them.

B. Net Benefits Test

1. Order No. 745

11. In Order No. 745, the Commission recognized that, depending on the change in the LMP relative to the size of the energy market, dispatching demand response resources may result in an increased cost per unit ($/MWh) to the remaining wholesale load, due to

the inherent, overall decreased amount of load paying the bill. This is referred to as the "billing unit effect."[9] In order to address this effect, the Commission required each RTO and ISO to implement a net benefits test to determine whether a demand response resource is a cost-effective alternative to generation for balancing supply and demand in any given hour.[10]

12. Specifically, Order No. 745 directed each RTO and ISO to undertake an analysis on a monthly basis, based on historical data and the prior year's supply curve, to identify a price threshold to estimate where customer net benefits would occur. The Commission further explained that the RTO or ISO should determine the threshold price corresponding to the point along the supply stack for each month at which the benefit to load from the reduced LMP resulting from dispatching demand response resources exceeds the increased cost to load associated with the billing unit effect, and update the calculation monthly as new information becomes available.[11]

13. The Commission further explained that the threshold point along the supply stack for each month will fall in the area where the supply curve becomes inelastic, rather than the extreme steep portion at the peak or in the flat portion of the supply curve. In other words, LMP will be paid to demand response resources during periods when the nature of the supply curve is such that small decreases in generation being called to serve load will result in price decreases sufficient to offset the billing unit effect.[12]

---

[9] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 3.

[10] Although the Commission noted that integrating the billing unit effect into the RTO/ISO dispatch processes has the potential to more precisely identify when demand response resources are cost effective, the Commission acknowledged the position of several RTOs and ISOs that it may be difficult to modify their dispatch algorithms in the near term. Therefore, the Commission required RTOs and ISOs to perform a net benefits test on a monthly basis to determine under which conditions it is cost-effective to pay full LMP to demand response resources. Additionally, the Commission directed RTOs and ISOs to study the feasibility of developing a dynamic net benefits approach to dispatching demand response resources that takes into account the billing unit effect in the economic dispatch in both the day-ahead and real-time energy markets and file the results of their study with the Commission by September 21, 2012.

[11] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 79.

[12] *Id.* P 80.

2. ISO-NE's Proposal

14. To comply with Order No. 745's requirement that ISO-NE determine, on a monthly basis, when it is cost-effective to pay full LMP to demand response resources, ISO-NE proposes to: (1) select a representative supply curve for the reference month; (2) determine a smooth approximation to the representative supply curve using numerical methods; and (3) use the smooth approximation to determine the Demand Reduction Threshold Price[13] for the reference month. ISO-NE explains that, to select a representative supply curve, the reference month will be 12 months prior to the study month,[14] and ISO-NE will retrieve from its databases all generation supply offers submitted to the real-time energy market during the reference month. For each day during the reference month, all generation supply offer blocks (meaning, price-MW pairs) will be assembled in ascending price order to produce a market-level, daily supply curve. The market-level, daily supply curve prices will be averaged to obtain the monthly aggregate supply curve for the reference month.

15. ISO-NE explains that it will determine the relevant sample range for the reference month and then approximate the aggregate monthly supply curve for the reference month with a smooth mathematical function using regression analysis. ISO-NE states that it conducted a separate analysis of smoothed supply curves for the New England electric system, which showed that a functional form equivalent to the one PJM will use fits the New England supply offer data well.[15] Under regression analysis, the relevant sample range will consist of that portion of the aggregate monthly supply curve between a lower sample range price and an upper sample range price. The lower sample range price will equal the product of a system heat rate of approximately 5,500 BTU per KWh times a reference month fuel price index, and the upper sample range price will equal the product

---

[13] Capitalized terms used but not defined herein have the meaning given in ISO-NE's proposed Tariff language.

[14] For example, if the study month is August 2011, the reference month is August 2010.

[15] The functional form is $P(x) = e^{(Ax+B)} + C$, where x is the supply in MW, P is the price in $/MWh, e is the mathematical constant 2.718281828…, and A, B, C are the parameters to be estimated through regression analysis. Compliance Filing, Attachment 5, Testimony of Henry Y. Yoshimura (Yoshimura Testimony) at 35 (citing PJM's Order No. 745 compliance filing submitted in Docket No. ER11-4106-000). We note that the Commission has accepted PJM's net benefits test. *See PJM Interconnection, L.L.C.*, 137 ¶ 61,216 (2011).

of a system heat rate of approximately 14,000 BTU per KWh times the same reference month fuel price index. ISO-NE explains that detailed production-cost simulation analyses of the New England electric system indicated there would be no additional consumer net benefits if a Demand Reduction Threshold Price were set below the price corresponding to the lower sample range heat rate and that consumer net benefits would *decline* if a Demand Reduction Threshold Price were set above the price corresponding to the upper sample range heat rate;[16] thus, ISO-NE's regression-based supply curve approximation is restricted to the portion of the monthly aggregate supply curve data between those points.

16. Finally, to calculate the Demand Reduction Threshold Price for the reference months, ISO-NE explains it will find the price/quantity pair at which the slope of the smooth approximation function equals P/x, where P is the price (in $ per MWh) and x is the aggregate MW supplied; this condition is the simple algebraic equivalent of Order No. 745's requirement that the threshold price be set where the supply elasticity equal one. ISO-NE explains that this price is the Demand Reduction Threshold Price for the reference month, which will then be adjusted for the percent change in the fuel price index between the reference month and the effective month using the existing monthly Forward Reserve Fuel Index.

17. ISO-NE's proposed rules require market participants to submit a Demand Reduction Offer in the day-ahead and real-time energy markets for each demand response resource in order to be eligible for demand reduction payments. ISO-NE's proposed Tariff revisions require that a Demand Reduction Offer must be equal to or greater than the Demand Reduction Threshold Price on the day the offer is made. ISO-NE explains that the Demand Reduction Threshold Price establishes the LMP level above which demand reductions from demand response resources meet the consumer net benefits test. ISO-NE argues that, by restricting Demand Reduction Offers to prices at or above the Demand Reduction Threshold Price, "a reduction in quantity everywhere along [the] upward sloping supply curve would be cost-effective" by definition.[17] ISO-NE further argues that, conversely, if a demand response resource is dispatched at a price below the Demand Reduction Threshold Price, payment would exceed the benefit; therefore, ISO-NE proposes to reject offers below the Demand Reduction Threshold Price. ISO-NE argues that a demand response resource offer price below the monthly Demand

[16] Compliance Filing, Attachment 5, Exhibit A, Charles River Associates, "Development of Demand Response Price Thresholds."

[17] Yoshimura Testimony at 30 (citing Order No. 745 FERC, Stats. & Regs. ¶ 31,322 at n.161).

Reduction Threshold Price would violate the Commission's consumer net benefits test as requested by Order No. 745.[18]

18. ISO-NE explains that its current Day-Ahead Load Response Program allows program participants to submit two other bid parameters: a curtailment initiation price, which enables the market participant to declare a fixed cost that must be recovered per interruption/start-up; and up to a four-hour minimum interruption duration period, which enables the market participant to state the minimum amount of time for which the energy consumption of the real-time demand response asset must be interrupted if scheduled.[19] During the Transition Period, ISO-NE proposes to continue to use these inter-temporal bid parameters, which are comparable to, but simpler than, those used by generators. Continued use of the minimum interruption duration bid parameter in the Transition Period could result in clearing and scheduling a Demand Reduction Offer in hours where the LMP falls below the Demand Reduction Threshold Price. However, under ISO-NE's proposed rules, Demand Reduction Offer prices must be at or above the Demand Reduction Threshold Price. Therefore, ISO-NE would clear an offer with a minimum interruption duration greater than one hour for an hour in which the LMP was below the Demand Reduction Threshold Price only if the LMP in other hours in which the offer cleared exceeded the Demand Reduction Threshold Price by an equal or greater amount.

3. Protests and Comments

19. Constellation states that ISO-NE proposes a reasonable methodology for establishing a net benefits threshold and addressing operational, bidding, and settlement issues which would result from Order No. 745 implementation.

20. EPSA generally supports ISO-NE's net benefits test but disagrees with ISO-NE's inclusion of the minimum interruption duration bid parameter. EPSA states that requiring bids with duration greater than one hour is inconsistent with Order No. 745 because it could result in a demand response resource being paid LMP in an hour in which the resource was scheduled but in which the net benefits test Threshold Price was not met. However, should the provision be approved, EPSA requests that the Commission require that each hour of energy market compensation within the minimum interruption bid parameter be evaluated separately and that the hour's LMP must exceed the Demand Reduction Threshold Price. EPSA states that ISO-NE's threshold prices were developed without considering multiple hour contiguous load reduction payments

[18] Yoshimura Testimony at 41.

[19] *See* Yoshimura Testimony at 70-71 (citing proposed Transition Period Tariff Appendix E at § 3.2).

(potentially spanning hours with different marginal generation). EPSA argues that, with the minimum interruption duration bid parameter, ISO-NE would pay full LMP in all hours in which the demand response resource was scheduled, including hours where the net benefits threshold price was not met. According to EPSA, this outcome would not satisfy the net benefits test condition under Order No. 745. In addition, EPSA contends that implementing the proposed cost allocation Tariff language could result in the allocation of demand response payment costs to load in an hour in which not only is there inadequate, or no, LMP savings to justify the payment, but there is simply no evaluation of whether savings would be expected under the net benefits test.

4. Answer

21. ISO-NE disagrees with EPSA's contention that the minimum interruption duration parameter would require payment of full LMP in all hours in which a demand response resource was scheduled, including hours where the net benefits threshold was not met. ISO-NE explains that the compliance filing does not require bids with duration longer than one hour, but simply permits a Demand Reduction Offer to have a minimum interruption of *between* one and four hours.[20] ISO-NE explains that, while it is possible that ISO-NE would clear an offer when some of the hourly day-ahead LMPs during the minimum interruption duration period are less than the Demand Reduction Threshold Price, for this to happen, the day-ahead LMPs in the other hours during the minimum interruption duration period must be higher than the threshold price by an equal or greater amount.

5. Commission Determination

a. Determination of Monthly Demand Reduction Threshold Price

22. We accept ISO-NE's proposed Tariff provisions implementing the Commission's net benefits test. Order No. 745 directed RTOs and ISOs to identify a price threshold at which customer net benefits would occur, that is, the point on a representative supply curve where the price elasticity of supply is equal to one. We find that both ISO-NE's calculation of the net benefits test and the threshold price level methodology comply with the Commission's directive. ISO-NE's Demand Reduction Threshold Price methodology

[20] ISO-NE Comprehensive Answer at 46. *See also,* Yoshimura Testimony at 71 ("Therefore, the ISO would clear an offer with a minimum interruption duration greater than one hour for an hour in which the LMP was below the Demand Reduction Threshold Price only if the LMP in other hours in which the offer cleared exceeded the Demand Reduction Threshold Price by an equal or greater amount.").

establishes the LMP level at which demand reductions meet the consumer net benefits test, thus ensuring that demand response is only dispatched and paid LMP when it meets the net benefits test. ISO-NE's proposed Tariff provisions implementing the Commission's net benefits test, and establishing a single price point RTO-wide, are sufficient to enable ISO-NE to estimate where customer net benefits will occur, as contemplated by Order No. 745.

23. As described in its proposed Tariff language, ISO-NE will determine the monthly Demand Reduction Threshold price through an analysis of a smoothed supply curve for the month. The smoothed supply curve will be derived from real-time generator and import offer data for the same month of the previous year. ISO-NE may adjust the offer data to account for significant changes in generator and import availability or to other significant changes to the historical supply curve. ISO-NE's rules stipulate that it will post the resulting Demand Reduction Threshold Price on its website. These provisions are consistent with Order No. 745's requirements.

b. Minimum Interruption Duration Bid Parameter

24. We accept ISO-NE's provisions related to the minimum interruption duration bid parameter. ISO-NE has taken steps, as described in its proposed Tariff revisions, to reasonably ensure that demand response resources with a minimum interruption offer between one and four hours are dispatched only when cost-effective as determined by the net benefits test approved herein. While one hour of the resource's bid may not be considered cost-effective, the entire duration of the bid must average out to being cost-effective. We find ISO-NE's solution to be a workable compromise for the Transition Period, considered in conjunction with the Fully Integration solution, further discussed below.

c. Offers Below the Bid Floor

25. As noted above, ISO-NE proposes to require that a Demand Reduction Offer must be equal to or greater than the Demand Reduction Threshold Price.[21] ISO-NE argues that establishing such a bid floor is necessary to comply with the net benefits test requirement of Order No. 745.[22] Order No. 745, however, does not require the net benefits test to be used as a bid floor. We find that ISO-NE has not provided sufficient justification for its proposal to use a bid floor to limit which demand response resources may qualify for compensation when the LMP is equal to or greater than the threshold price. Recognizing that the Commission has previously approved a bid floor for demand response resources

[21] Yoshimura Testimony at 30.

[22] *Id.* at 29-30.

in ISO-NE,[23] we will require ISO-NE in its compliance filing to either provide further justification for this aspect of its proposal or to submit revised Tariff sheets to eliminate this bid floor.[24]

C. Measurement and Verification

1. Order No. 745

26. In Order No. 745, the Commission noted concerns that compensating demand response resources at LMP during all hours could make it difficult to determine baselines for demand response providers. However, because Order No. 745 required payment of LMP for demand response subject to a net benefits test — and not during all hours — the Commission found that implementation of Order No. 745 would not appear to prevent the determination of appropriate baselines.[25] Nonetheless, noting that measurement and verification protocols are critical to the integrity and success of demand response programs the Commission directed each RTO and ISO to include in its compliance filing an explanation of how its current measurement and verification procedures will continue to ensure that appropriate baselines are set and that demand response will continue to be adequately measured and verified as necessary to ensure the performance of each demand response resource. The Commission directed each RTO and ISO to propose, if necessary, any changes needed to ensure that measurement and verification of demand response will adequately capture the performance (or non-performance) of each participating demand response market participant to be consistent with the requirements of Order No. 745.[26]

2. ISO-NE's Proposal

27. ISO-NE states that it reviewed its existing measurement and verification rules for demand response resources and found that the current baseline methodology,[27] combined

---

[23] *See, e.g., ISO New England, Inc.,* 123 FERC 61,021 at P 49-65 (2008).

[24] The Commission offers this opportunity for ISO-NE to provide further justification for this aspect of its proposal because ISO-NE's rationale for its previously approved bid floor may present issues that were not addressed in Order No. 745.

[25] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 94.

[26] *Id.*

[27] ISO-NE's current "90/10 baseline calculation method" is effectively a 10-day rolling average of interval meter data from days on which no events have occurred.

(continued...)

with a symmetrical baseline adjustment as explained below, generally compares favorably to alternative methodologies in terms of accuracy, bias and variability.[28] Accordingly, ISO-NE proposes to continue to use its existing measurement and verification methodology but, based on a study performed by its consultant (the KEMA study), revise three elements of the baseline calculation, by utilizing[29] (1) symmetric baseline adjustment; (2) periodically refreshed baselines with contemporary meter data; and (3) more stringent establishment criteria for new demand response resources. First, ISO-NE proposes to replace its existing asymmetric baseline adjustment with a symmetric formula because its current asymmetric baseline adjustment can move a baseline only to represent an increase in demand, whereas a symmetric baseline adjustment can either raise or lower the baseline expected consumption level. ISO-NE states that a measurement and verification methodology requires baseline adjustments to account for conditions, such as changes in weather, that differ on the current operating day from those present during the days used to compute the baseline.

28. Second, ISO-NE proposes to refresh baselines with recent meter data to ensure that the customer's baseline accurately reflects its demand. ISO-NE notes that currently it calculates a baseline using meter data from days when the demand response resource is not dispatched (does not curtail its demand), while excluding data from days when the demand response resource is dispatched. ISO-NE explains that, as the number of days where the demand response resource is dispatched increases, the number of days with available data decreases, leading to decreased baseline accuracy. To remedy this problem, based on the KEMA study recommendations, ISO-NE proposes to implement the "X of Last 10 Days" approach. ISO-NE explains this approach as follows:

> Under the "X of Last 10 Days" method, the decision to include a resource's metered demand data in the baseline calculation on any given day is made by counting the number of days, over the past 10 days of the same day type (e.g., weekdays), on which metered demand data was included in the baseline calculation. If the number of "included" days over the past 10

Currently, the initial baseline is a 5-day average of the metered load. The baseline for each day going forward is calculated as .90 times the baseline from the previous day plus .10 of the meter data for the current day. Exhibit C to Yoshimura Testimony at n. 2

[28] Compliance Filing, Transmittal Letter at 9; *see also* Yoshimura Testimony at 50 ("The ISO's current baseline methodology, combined with a symmetrical baseline adjustment as explained later in the testimony, is one of the best methodologies in use today.").

[29] Yoshimura Testimony at 50.

> days is less than the minimum criteria, then today's metered demand data are included in the baseline calculation regardless of whether the resource cleared for today or not.[30]

Relying on the KEMA study, ISO-NE explains that setting the minimum number of days at three, resulting in "3 of Last 10 Days," provides an accurate calculation that is transparent and easy to administer.[31]

29. Last, ISO-NE explains that to remain consistent with its new "X of Last 10 Days" approach, a minimum of 10 consecutive days of meter data must be available to establish a baseline. ISO-NE states that increasing the number of days of meter data needed to establish an initial baseline for a new demand response resource will improve the estimate that the methodology provides.

3. Protests and Comments

30. Southern New England States and EPSA generally support ISO-NE's proposed measurement and verification modifications.[32] In particular, EPSA supports the proposed "3 of Last 10 Days" methodology because it is more transparent and allows for easier management of demand response resources than alternatives that use a bidding threshold price. Additionally, EPSA believes these changes ensure economic efficiency in dispatch.

31. CDRI asserts that ISO-NE's proposed measurement and verification revisions are unnecessary and that ISO-NE explains neither why the current measurement and verification methodology does not accurately capture demand response resource performance, nor why there have not been any accuracy issues thus far. Nonetheless, CDRI endorses ISO-NE's proposed "3 of Last 10 Days" approach and admits that stale baselines, as found under the current measurement and verification methodology, give demand response resources the opportunity to show a curtailment without actually reducing demand. CDRI further asserts that the problem with stale baselines lies with the

---

[30] *Id*. at 62.

[31] *Id.* at 63.

[32] Southern New England States Comments at 8-9; EPSA Comments at 11. EPSA's Answer generally supported Order No. 745's requirement that RTOs and ISOs review their measurement and verification methodologies, but did not provide support specific to ISO-NE's proposed modifications.

failure to refresh baselines, rather than the measurement and verification methodology itself.[33]

32. Joint Parties generally support ISO-NE's proposed measurement and verification modifications[34] but argue that ISO-NE should be required to consider an alternative baseline methodology that is shown to be accurate, encourages demand response resource participation, and removes barriers to participation. Joint Parties argue that alternative baseline methodologies should be reflective of the variety of demand response resources, such as commercial, industrial, and residential customers.

4. Answer

33. In its Answer, ISO-NE responds to Joint Parties' request that the Commission require ISO-NE to consider alternative baseline methodologies.[35] ISO-NE states that it is open to considering other baseline methodologies that could improve upon the current methodology. ISO-NE further states that, on August 3, 2011, it initiated a review of its baseline adjustment mechanism to determine whether an alternative method would be more appropriate for use with demand response resources.[36] ISO-NE notes that, through this review, it hopes to quantify baseline bias for customers that pre-position demand reductions, analyze alternative baseline methodologies, define alternative baseline eligibility criteria, and file market rules specific to an alternative baseline adjustment mechanism.[37] Lastly, ISO-NE points out that, as it prepared for compliance with Order No. 745, it continued to evaluate its baseline adjustment mechanism due to stakeholder concerns, eventually moving from the originally proposed baseline accuracy price method to the now proposed "3 of Last 10 Days" approach.[38]

---

[33] CDRI Protest at 30.

[34] Joint Parties Protest at 31.

[35] ISO-NE Comprehensive Answer at 42-43.

[36] *Id*. at 42.

[37] *Id*. at 42-43.

[38] *Id*. at n.67.

5. Commission Determination

34. The Commission finds that ISO-NE's proposed measurement and verification methodology satisfies Order No. 745's compliance requirements. We agree with ISO-NE, as supported by the KEMA study,[39] that the three proposed modifications—the symmetric baseline adjustment, the refreshed baselines, and the more stringent baseline establishment criteria – will result in an accurate and appropriate baseline calculation methodology that will account for more recent meter data and changes in conditions, such as weather, which differ on the current operating day from those present during the days used to compute the baseline. The KEMA study identified a serious potential problem with the accuracy of the current ISO-NE baseline methodology when used in conjunction with the existing asymmetric adjustment.[40] However, KEMA's analysis found the current ISO-NE baseline methodology with a symmetric adjustment to be the most accurate. Therefore, ISO-NE proposes to change the current asymmetric baseline adjustment to a symmetric baseline adjustment to improve accuracy. We further agree that this methodology, as explained by ISO-NE, is transparent and not overly burdensome on the affected entities. In accepting ISO-NE's proposed measurement and verification revisions, we note that commenters generally support the changes, although Joint Parties request that we direct ISO-NE to consider alternative methods. Nothing in Order No. 745 or this proceeding prevents ISO-NE from pursuing alternative measurement and verification methodologies through it stakeholder process and submitting proposed tariff revisions pursuant to section 205 of the FPA.[41] Indeed, ISO-NE states that it currently is conducting, in conjunction with market participants, an analysis of alternatives, including, for example, alternative baseline methodologies, that may be more appropriate for certain demand response resources, including those operating in shifts.[42]

---

[39] Exhibit C to Yoshimura Testimony at 20.

[40] *Id.* at 4, 21.

[41] *See id*. at 42 (ISO-NE states that it changed its proposed baseline refreshment methodology from a baseline accuracy price to the "3 in Last 10 Days" approach in response to stakeholder concerns. Yoshimura Testimony at 60-62.).

[42] ISO-NE Comprehensive Answer at 42.

D. Cost Allocation

1. Order No. 745

35. The Commission explained in Order No. 745 that while dispatching demand response resources results in lower LMPs, transmission constraints may affect which customers benefit from that lower LMP. In hours without transmission constraints, RTOs establish a single LMP for their entire system, in which case demand response would result in a benefit to all customers on the system. In hours when transmission constraints exist, LMPs may vary by zone or other geographic area and dispatching a demand response resource in a particular geographic region may not reduce LMPs system-wide and, consequently, not all system customers would benefit.[43]

36. For these reasons, the Commission determined that it is just and reasonable to allocate the costs associated with demand response compensation proportionally to all entities that purchase from the relevant energy market in the area(s) where the demand response reduces the market prices for energy at the time the demand response resource is committed or dispatched.[44] Thus, the Commission required each RTO and ISO to make a compliance filing that either demonstrates that its current demand response cost allocation methodology appropriately allocates costs to those that benefit from the demand reduction or proposes revised tariff provisions that conform to this requirement.[45]

2. ISO-NE's Proposal

37. ISO-NE states that its proposed cost allocation rules will take effect in the Transition Period and remain unchanged upon implementation of the Fully Integrated solution. At present, ISO-NE allocates the cost of its current demand response programs to Network Load.[46] Here, ISO-NE proposes to allocate costs hourly, proportional to the Real-Time Load Obligation,[47] on a system-wide basis.[48] ISO-NE states that allocating

---

[43] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 100.

[44] *Id.* P 102.

[45] *Id.*

[46] Network Load refers to the aggregate transmission customers' demand placed on the transmission system at the time of monthly peak.

[47] Real-Time Load Obligation refers to the total load serving entities' MWh load obligation of market participants at each location during a given hour of operation. *See*

(continued...)

costs to Real-Time Load Obligation is consistent with Order No. 745 because: (1) transmission constraints generally are not severe at this time, and therefore demand reductions in one location tend to lower LMPs in multiple locations; (2) demand response resources are located throughout the New England region, making simultaneous demand reductions in multiple zones relatively common, so that LMPs from dispatched demand response resources are likely to affect LMPs across the region even where binding transmission constraints do arise; (3) it would be extremely difficult to identify and allocate specific costs based on analysis of price impacts on a nodal or sub-regional basis; and (4) the analysis to discern how a demand reduction in one location affects (or does not affect) LMPs in other locations is extremely complex and, for the reasons stated above, appears to be unnecessary in the New England region.[49] However, ISO-NE proposes two exceptions to the cost allocation rule. First, Real-Time Load Obligation incurred at external nodes will be excluded so as to avoid imposing costs on energy traded between regions and, potentially, restricting such trade. Second, Dispatchable Asset Related Demand postured by ISO-NE (typically pumped storage hydro units) also will be excluded because these resources' are charged for energy based on the resource's Demand Bid, not LMP. ISO-NE states that under these two circumstances, the market participant does not benefit from any changes to the LMP associated with demand response resources.[50]

3. Protests and Comments

38. Constellation opposes ISO-NE's proposed allocation of costs during the Transition Period, stating that the proposal does not meet the two conditions under which demand response resources are eligible for LMP compensation. Constellation argues that because demand response resources are cleared after the day-ahead market is cleared,[51] these resources provide no balancing benefit to the system and any net benefit created to the system is small at best. Therefore, Constellation notes, demand response resources do

---

ISO-NE Tariff, section III.3.2.1(b)(i).

[48] *See* Compliance Filing, Attachment 3, Appendix E, section III.E.9.3.

[49] Yoshimura Testimony at 65-66.

[50] *Id.*

[51] Constellation refers to "sequential clearing," where day-ahead demand response offers are not integrated into the day-ahead market clearing process; the process for clearing these offers occurs after an approved solution to the day-ahead energy market has been determined.

not and cannot affect the day-ahead LMP. Constellation states that, in developing the proposed revisions, ISO-NE and NEPOOL had argued in favor of allocating costs to Network Load because (1) the demand response market participations were not cleared in the day-ahead markets and (2) it is more appropriate to allocate the costs to transmission customers operating with regulated rates who may be able to recover these costs from retail customers.[52] Constellation states that load serving entities that hedge in the day-ahead market will experience no benefit in terms of lower day-ahead LMPs from cleared demand response, even though demand response resources may provide benefits in terms of improved system reliability. However, Constellation states that it will be impossible for load serving entities to hedge these costs and that it is likely that the risk premiums load serving entities will have to assign to these "new unpredictable and unhedgeable charges" during the Transition Period will be greater than the pass-through of the actual charges to retail customers through Network Load charges.[53] Constellation argues that load serving entities will have a better understanding of the market impacts of implementing Order No. 745 after the Transition Period concludes.

39. Finally, Constellation states that those load serving entities with long-term contracts will have substantial dollars at risk through the additional unexpected allocation of demand response-related charges if ISO-NE's proposed cost allocation methodology goes into effect in June 2012 when the Transition Period begins.

40. RESA supports Constellation's comments, adding that the costs of demand response programs should remain with Network Load through the Transition Period.

4. Answer

41. ISO-NE responds that currently, charges to purchasers from the energy market are made on the basis of Real-Time Load Obligation; in contrast, allocating demand response charges to Regional Network Load places cost responsibility on transmission customers, instead of energy market purchasers. ISO-NE states that allocating costs to Network Load during the Transition Period, as advocated by protestors, would place the obligation on transmission customers, rather than energy market purchasers. In response to the argument that, during the Transition Period, demand response resources clearing sequentially after the close of the day-ahead energy market do not have the ability to balance supply and demand and thus are not cost effective, ISO-NE asserts that the

[52] Constellation Comments at 7 (citing New England Power Pool, Revisions to NEPOOL Market Rule 1 Appendix E Concerning Load Response Program, Docket No. ER03-354-000, at p. 3 (December 26, 2002)).

[53] Constellation Comments at 8.

Commission previously found that "all loads, not just those that participate in the real-time market, will benefit" under the ISO's existing Day-Ahead Load Response Program, which utilizes sequential clearing.[54]

5. Commission Determination

42. The Commission accepts ISO-NE's proposed cost allocation methodology as in compliance with Order No. 745, because it results in an appropriate allocation of costs to those that benefit from demand response resource participation, as required by Order No. 745. Specifically, we agree with ISO-NE that, within ISO-NE, price impacts in one area tend to affect all other areas. Therefore, we expect that demand reductions in one zone of ISO-NE will affect the LMPs in all other zones in the New England footprint. Although the sequential clearing methodology ISO-NE will utilize during the Transition Period is not optimal, we agree with ISO-NE that lowered real-time demand tends to reduce real-time LMPs, and real-time LMPs and day-ahead LMPs tend to converge; thereby benefitting the system. As ISO-NE notes, because demand response resources are located throughout the New England region, simultaneous demand reductions in multiple zones are relatively common, so that LMPs from dispatched demand response resources are likely to affect LMPs across the region even where binding transmission constraints do arise. We agree with ISO-NE that, since Order No. 745 requires RTOs and ISOs to allocate costs to the relevant energy market purchasing entities, it is reasonable for ISO-NE to allocate costs based on Real-Time Load Obligation.

43. We disagree with Constellation and RESA that ISO-NE should continue with its existing cost allocation methodology by allocating costs to Network Load during the Transition Period. ISO-NE explains that dispatch of demand response resources will be subject to its proposed net benefits test, during both the Transition Period and the Fully

[54] ISO-NE Comprehensive Answer at 43-45, quoting *New England Power Pool and ISO New England Inc.*, 111 FERC ¶ 61,064, at P 23 (2005). In that order, the Commission stated that, "[w]e also find that all loads, not just those who participate in the real-time market, will benefit from the sequential DALRP. Contrary to MMWEC's argument that Network Load will not benefit from sequential clearing, we agree with ISO-NE and the analysis in the Neenan Report that load that participates in day-ahead markets will be positively affected by the proposed DALRP. Once the DALRP is implemented, prices and bids in day-ahead markets should begin to reflect altered (lowered) bidding strategies of market participants in response to and in anticipation of DALRP bids."

Integrated solution;[55] therefore, allocation of costs associated with demand response compensation should begin in the Transition Period.

44. While protestors argue that demand response cannot balance supply and demand in ISO-NE because the day-ahead market is cleared prior to the consideration of demand response resources, we find this argument unpersuasive. As ISO-NE explains, demand response resources balance supply and demand as long as they are cleared, even if after the accomplishment of the initial market clearing.[56] Also, during the Transition Period, we expect that as cost-effective demand response resources are cleared in the day-ahead market after the initial market clearing, the lowered real-time demand will reduce real-time LMPs.

45. We reject as beyond the scope of this proceeding the argument that, during the Transition Period, load serving entities that hedge day-ahead will receive no benefit from lower day-ahead LMPs from cleared demand response resources, despite potential reliability benefits from such lower LMPs. The cost allocation methodology required in Order No. 745 is based upon the benefits of demand response to wholesale load, not the overall position of any particular market participant. As explained in Order No. 745, and under the principle of cost causation, purchasers are allocated the costs of demand response because they receive a benefit through the lower LMP.[57] In Order No. 745-A, the Commission continued to find its cost allocation method just and reasonable as it will reasonably allocate the costs of demand response to those who benefit from the lower prices produced by dispatching demand response.[58] In addition, as discussed *infra*, the Commission conditionally accepts ISO-NE's proposed Transition Period rules, effective June 1, 2012, recognizing that ISO-NE will be in full compliance with Order No. 745 when the Fully Integrated solution rules become effective June 1, 2016. We further find as beyond the scope protesters' speculations as to how load serving entities might pass on potential risk premiums to retail customers.

---

[55] *Id.* at 72.

[56] Yoshimura Testimony at 73.

[57] Order No. 745, FERC Stats. & Regs. ¶ 31,322, at P 100.

[58] Order No. 745-A, 137 FERC ¶ 61,215, at P 111.

E. Retail Delivery Point and Behind-the-Meter Generation

1. ISO-NE's Proposal

46. ISO-NE proposes to measure demand response at the demand response resource's retail delivery point.[59] As ISO-NE points out, this would allow customers to be compensated as demand response resources, even if they use behind-the-meter generation to provide their own energy that would otherwise be served by ISO-NE.[60] Further, if customers use behind-the-meter generation to supply energy to the grid, they may still be compensated for providing demand response as long as their net contribution to the grid is a reduction in load. ISO-NE explains that the demand served by the electricity network in the New England Control Area (that is, "the grid") is a function of the electrical demands at all points of interconnection between the grid and each consumer of electrical energy. According to ISO-NE, it is the electrical demand at each retail delivery point that defines the customer's demand served by the grid, and therefore also defines the amount of demand response that each customer can provide to the grid to help balance supply and demand. ISO-NE contends that measuring demand response at the retail delivery point will help avoid double-counting the amount used to balance supply and demand in real time.

47. In the Transition Period, ISO-NE states that its proposed rules stipulate that if a demand response asset's metered demand represents a net supply of energy to the electrical system, then the amount of net energy supplied shall be subtracted from the real-time demand reduction amount in the same interval of each real-time demand response asset and/or real-time emergency generation asset behind that retail delivery point on a *pro rata* basis. ISO-NE states that the adjustment for net energy supply shall not result in a negative real-time demand reduction amount.[61]

48. In the Fully Integrated solution, ISO-NE states that its proposed rules stipulate that if a demand response asset's metered demand represents a net supply of energy to the electrical system, the demand response asset's metered demand in the interval will be set

[59] The "retail delivery point" is the point of interconnection between the grid and a consumer of electrical energy.

[60] Yoshimura Testimony at 46.

[61] *See* Compliance Filing, Attachment 1, Appendix E at § III.8.3.

equal to zero and that zero demand value will be used in the Demand Response Baseline calculations for that interval.[62]

49. ISO-NE's proposed rules, for both the Transition Period and the Fully Integrated solution, require each generator located behind an individual end-use customer's retail delivery point to be separately measured using an interval meter and output must be reported to ISO-NE on a five-minute interval. While ISO-NE states that it will not use this data for settlement purposes, ISO-NE contends that customers with behind-the-meter generators are uniquely positioned to manipulate their adjusted Demand Response Baseline. ISO-NE states that its market monitors need the data to determine whether such "gaming" is occurring.

50. In support of its proposal to pay demand response resources with behind-the-meter generation for only their net reductions, ISO-NE points out that Order No. 745 requires payment for customers who participate in the energy market *by reducing consumption of electric energy* from their expected levels.[63] ISO-NE states that a resource providing a net supply to the electric system is not reducing consumption of electric energy from the grid but rather is generating energy in excess of its consumption, i.e., providing generation; in that situation, therefore, the resource should be compensated as a generator, not a demand response resource.[64]

2. Protests and Comments

51. Protestors raise two primary issues regarding ISO-NE's proposed treatment of behind-the-meter generation. These issues include: (1) whether, from the outset, customers who use behind-the-meter generation to facilitate demand reductions on the grid are eligible under Order No. 745 for compensation as a demand response resource, and, if so, (2) whether ISO-NE's proposal to treat demand response customers with behind-the-meter generation properly compensates such resources under Order No. 745.

---

[62] *See* Compliance Filing, Attachment 3, at § III.8.1 and Appendix E at § 7.3.

[63] *See* Yoshimura Testimony at 45 n. 52 ("The amount of energy injected into the grid would be treated as generation resource output, which is compensated at the full LMP like any other generation resource.") and at 47 ("To receive compensation for the [energy] injected into the grid, the asset would need to be registered with the ISO as a generation resource that could provide energy to the grid.").

[64] *See* Compliance Filing, Attachment 3, Appendix E at § 7.3.

52. Several protestors argue that, from the outset, customers who rely on behind-the-meter generation to facilitate reductions in load from the grid should be ineligible to receive compensation under Order No. 745 as a demand response resource. NEPGA and EPSA argue that ISO-NE's compliance filing would allow customers with behind-the-meter generation to receive demand response compensation without any true, corresponding reduction in consumption, because these customers will rely on their own generators for energy normally supplied by the grid.[65] EPSA argues that behind-the-meter generation is not a real reduction in load and creates a perverse economic incentive for generation to move behind the meter when possible, even when it is less efficient to do so.

53. EPSA asserts that behind-the-meter generation should be required to participate in wholesale markets as generation and not be compensated as demand response. EPSA alleges that allowing behind-the-meter generation to participate as a demand response resource in wholesale energy markets could create gaming opportunities and market power and mitigation problems. EPSA points to comments from the IMM, finding that behind-the-meter generation is outside the scope of demand reduction payment and ripe for gaming.[66]

54. NEPGA and Constellation argue that treating behind-the-meter generation as demand response will result in an overpayment and subsidy[67] to behind-the-meter generation, reflected as LMP plus the energy supply component of the retail rate, or LMP + G.

55. On the other hand, Joint Parties and Joint Commenters argue that customers with behind-the-meter generation should be compensated for demand reductions, stating that Order No. 745 clearly requires full LMP compensation for any cost-effective reduction in load that helps to balance demand and supply.

---

[65] NEPGA Comments at 4-5 (citing Order No. 745 at n.2 ("Demand response means a reduction in the consumption of electric energy by customers from their expected consumption…")); EPSA Comments at 5-6.

[66] EPSA Answer at 17-18 (citing May 26, 2011 Memo from Dave LaPlante and Hung-po Chao, ISO-NE Internal Market Monitor at 2 ("Opinion on behind-the-meter generation in the proposed Order 745 Transition Rules") (LaPlante Memo)).

[67] Constellation also asserts that Order No. 745 will subsidize uneconomic demand response and distort market signals. Constellation is concerned that the subsidization of uneconomic demand response unduly discriminates in favor of demand response with regard to other energy supply resources, forcing customers to pay more overall.

56. Moreover, they and other protestors assert that, not only are customers with behind-the-meter-generation eligible for compensation under Order No. 745 but that ISO-NE's proposal improperly pays them less than other demand response resources. They posit that this alleged underpayment is beyond the scope of or inconsistent with Order No. 745; constitutes a barrier to demand response, contrary to the spirit of Order No. 745; [68] and is unduly discriminatory, in violation of the FPA.[69]

57. Numerous protestors assail ISO-NE's proposal to measure demand response at the retail delivery point as discriminating against customers with behind-the-meter generation, even though, according to these parties, actions taken behind the meter have exactly the same effect on LMP as actions in front of the meter. These protestors assert that ISO-NE's requirement of a net reduction would deny customers with behind-the-meter generation the benefit of full LMP by subtracting the generation component from the demand response payment (LMP-G).[70] NEPOOL Customers argue that, when a customer with behind-the-meter generator is generating more energy than is being consumed and takes steps to curtail its actual consumption, the customer should receive full LMP compensation regardless of whether it owns behind-the-meter generation. CDRI states that Order No. 745 requires that, when a load reduction displaces a generation resource in a manner that serves the ISO in balancing supply and demand, that load reduction is required to be paid the LMP. CDRI argues that Order No. 745 does not require loads to be full-requirements customers (as opposed to stand-by, back-up, or supplemental service customers) of utilities before they may be compensated for load reductions that balance supply and demand.

---

[68] *See, e.g.*, Maine AG, NECHPI, and CDRI. CLF argues that ISO-NE's proposal effectively prohibits demand response resources with behind-the-meter generation from participating in the energy markets, because the proposal creates unwarranted obstacles to participation in the market. CLF states that, "[a]s long as the amounts of load reduction and generation behind the meter are transparent and verifiable, there is no legitimate justification for the disparate treatment proposed by ISO-NE."[68]

[69] *See generally,* ABATE, Evergreen, Maine Public Parties, MVW, IECA, Verso Paper, NEPOOL Customers, CDRI, Joint Parties, Maine AG, NECHPI, EPSA, and NEPGA.

[70] *See e.g.* Joint Parties Protest at 40; CDRI Protest at 3, 16; Maine Public Parties Protest at 31-32; NECHPI Protest at 6-7.

58. Invoking the Public Utility Regulatory Policies Act of 1978 (PURPA),[71] Joint Parties state that the market barriers and utility-created obstacles to non-utility access to the grid in 1978 were remarkably similar to the obstacles now faced by demand response resources. Joint Parties state that, under PURPA, electric utilities may not discriminate against qualifying facilities in utility rates for purchase or their rates for provision of service, and therefore, "ISO-NE may not refuse to pay LMP to qualifying facilities, and may not discriminate against qualifying facilities as customers."[72] Joint Parties state that an overwhelming proportion of the self-supplied customers affected by ISO-NE's proposed rules are served by qualifying facilities, the majority of which are certified as "qualifying cogeneration facilities." According to Joint Parties, ISO-NE's proposal will exclude these resources from its markets. Joint Parties argue that it is clear that, according to national policy and Order No. 745, utilities may not discriminate against qualifying facilities in demand response either as customers or as generators.[73]

59. Verso Paper and Maine Public Parties argue that, from an economic standpoint, ISO-NE's proposal to pay only for net reductions fails to consider the economics of demand response and supply. They posit that, when customers reduce demand by physically shutting down equipment, generation that is behind-the-meter and normally serving the industrial load is made available to ISO-NE. According to these protestors, providing this generation to the grid involves costs to the customer, primarily due to fuel and, therefore, the use of behind-the-meter generation should not offset payments for demand response. These protestors assert that ISO-NE's proposal effectively rolls behind-the-meter generation and load reductions into one bid, forcing customers with behind-the-meter generation to recover, through a single LMP, the sum of the marginal cost of generation and the revenues foregone from lost production.[74] Indeed, NEPOOL

---

[71] Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (1978) (codified as amended in scattered sections of 16 U.S.C.); *see, e.g.*, 16 U.S.C. 824a-3, 824i, 824j.

[72] Joint Parties Protest at 48.

[73] *Id.* at 53.

[74] Joint Parties assert netting out reductions and supply imposes considerable economic hurdles to investment in (or migration of) generation behind the meter unless that generation serves an economically beneficial purpose in its normal operating state. Joint Parties argue that, under ISO-NE's proposal, customers with behind-the-meter generation would have to choose between (a) losing money by running a generator most of the time or (b) leaving a major investment idle for most of the time.

Customers and Environmental Organizations contend that ISO-NE's proposal inappropriately renders valueless behind-the-meter enabled demand response, because it would not compensate such customers at LMP to the extent their load reductions resulted in the export of generation previously used to serve such load.[75] As a result, according to these parties, ISO-NE's proposal constitutes a barrier to demand response, because it will discourage customers with behind-the-meter generation from participating as demand response resources.[76]

60. Contending that generation provided to other customers is a completely separate transaction from a load reduction that frees-up generation for other customers' use, CDRI disputes ISO-NE's assertion that netting is required to avoid a double-payment.[77] CDRI argues that the exported generation either displaces higher cost generation already running or defers dispatch of generation that would otherwise be needed, and the price of all generation purchased decreases from what it otherwise would have been. Further, CDRI states that a generator, either in front of or behind a retail delivery point, will make any excess power available whenever the market clearing price is sufficient to cover its incremental operating costs. Thus, if such an export were cheaper than the demand response option also available from this resource, it would have already been dispatched and serving load. CDRI states that a reduction from a customer with behind-the-meter generation and a reduction from a customer serving the grid both result in identical drops in the clearing price and identical results on a delivered cost basis to the load paying for the service.

61. CDRI offers an alternative metering proposal, arguing that, once the output of any onsite generation and the amount of service taken or exported at the retail delivery point

---

[75] Maine Public Parties Protest at 2, 11.

[76] USW asserts that the changes would have a chilling effect on investment in new generating assets dedicated to achieving energy independence, which would result in future loss of employment and would stifle job growth for USW-represented facilities. USW argues that private generating assets should be encouraged to participate in demand response programs, because, according to USW, they free up public utilities and thus delay the need to build additional public utility assets for generation.

[77] CDRI argues that behind-the-meter generation customers do not receive power from an on-site generator for free – such customers must pay for a portion of the supply through bilateral arrangements outside the ISO-NE settlement process, either by paying directly for the operational costs of the units in question or under contractual arrangements with third party owners of the combined assets.

are known, the net of the two unavoidably measures the load. Therefore, CDRI proposes to measure changes at the retail delivery point simultaneously with changes in generation output, arguing that doing so is sufficient to determine whether there is any change in load. CDRI states that, under its proposal, in every case that a self-supplied customer load reduction is paid LMP, the resulting cost to ratepayers paying for the demand response service is exactly equivalent to paying LMP for a load reduction from customers who take full requirements service under the ISO-NE settlement system; the load reduction results in the displacement of the higher cost resource.[78]

62. CDRI and Joint Parties argue that, in addition to conflating generation and demand response, ISO-NE also erroneously conflates the market settlement system with operation of the grid. CDRI asserts that the settlement system deals with payment for market services and is a series of contractual and tariff-based protocols for translating measurements of flow at particular points on the system into an allocation of charges for services, while operation of the grid entails the actual electricity reality of lines, wires, loads, and generation sources that must be balanced in real-time regardless of how particular services provided by parties are eventually settled financially. Further, CDRI and Joint Parties argue that demand at the retail delivery point does not define the customer's demand served by the grid, as ISO-NE states, because the portion of demand on the grid that is not settled through the ISO settlement process has nothing to do with whether such demands, when reduced, balance supply and demand on the grid. In other words, Joint Parties assert, customers with behind-the-meter generation are part of the grid and variations in load and generation are immediately apparent on the system and ISO-NE does not recognize this "functional reality."[79]

63. Maine Public Parties argue that ISO-NE's proposal to limit payment to the net increase or reduction in flows as measured at the retail delivery point is a stark contrast to ISO-NE's current Day-Ahead Load Response Program, which, according to the them, allows demand response resources with behind-the-meter generation to be compensated for *both* the load reduction and the energy supplied to the system. Maine Public Parties argue that ISO-NE's Compliance Filing would introduce the type of inadequate compensation structure Order No. 745 sought to remedy: specifically, discontinuing payments to demand response providers with behind-the-meter generation that both reduce load and maintain and export generation formerly used to serve load.[80] Maine

[78] CDRI Protest at 21.

[79] Joint Parties Protest at 17.

[80] ABATE, Evergreen, MWV, and IECA also argue this point, contending that ISO-NE's compliance filing will reduce the existing compensation, subject all customers

(continued...)

Public Parties assert that, given ISO-NE's measurement and verification proposal, which Maine Public Parties endorse, baseline concerns will be addressed regardless of where the meter is located. Maine Public Parties state that the measurement and verification proposal from the IMM during the stakeholder process[81] accounts for gaming concerns related to behind-the-meter generation, because the approach would (1) require baselines to reflect the normal operation of the behind-the-meter generator and (2) prohibit generators currently operating in the wholesale energy market from operating as behind-the-meter resources.[82]

64. Verso Paper argues that ISO-NE's proposal limits payment to demand response resources and restricts their ability to recover the costs of reducing demand in a manner that will raise electricity prices.[83] Similarly, Maine AG argues that, besides being discriminatory, ISO-NE's proposal will drive up costs for electricity, harm the economy, and deter innovation in the energy field risking job loss during a time of high unemployment.[84]

3. Answers

65. As an initial matter, ISO-NE disputes EPSA and NEPGA's argument that customers with behind-the-meter generation should be excluded altogether from compensation under Order No. 745. ISO-NE argues that operation of behind-the-meter generation can reduce the demand served by the wholesale energy market and states the Commission should reaffirm ISO-NE's longstanding practice of defining distributed generation (i.e., behind-the-meter generation) as an eligible demand response resource.[85]

---

to higher peak electricity pricing and higher grid charges imposed due to construction of unnecessary transmission infrastructure. ABATE Comments at 6, Evergreen Comments at 5-6, MWV Comments at 5-6, IECA Comments at 5-6.

[81] LaPlante Memo.

[82] Maine Public Parties Protest at 30-31.

[83] Verso Paper Comments at 10.

[84] Maine AG Comments at 3, 5.

[85] ISO-NE Comprehensive Answer at 4 and n. 17. ISO-NE notes that its Compliance Filing defines "Distributed Generation" as "generation resources directly connected to end-use customer load and located behind the end-use customer's billing meter, which reduce the amount of energy that would otherwise have been produced by

(continued...)

66. ISO-NE further clarifies that its proposed rules indeed allow a demand response provider with behind-the-meter generation to receive compensation as demand response. ISO-NE also argues that its proposal treats behind-the-meter generation in the same manner as any other demand response resource that, in response to price signals, reduces expected demand served by the New England electric system, provided the resource uses its generator to reduce demand that normally is met by the region's power grid. In addition, ISO-NE states that, if the customer's behind-the-meter generation sends electricity onto the regional grid, the market rules provide compensation for that output equal to that of any other generator – at the LMP. ISO-NE states that nothing in the ISO-NE compliance filing changes the rules by which market participants with behind-the-meter generation receive payment for electricity injected into the regional grid.[86]

67. ISO-NE argues that its proposed approach correctly measures the impact of behind-the-meter generation on the wholesale electric grid. ISO-NE contends that competing proposals would allow customers to measure demand response performance based on a more complicated formula that discriminates against other market participants, including generators and customers that do not serve their demand with behind-the-meter generation.

68. ISO-NE notes that the parties challenging ISO-NE's proposed treatment of behind-the-meter generation object to the proposed market rules' designation of the retail delivery point as the point at which ISO-NE measures demand reduction and generation for purposes of compensation. ISO-NE argues that the proposed behind-the-meter generator-related provisions are responsive to Order No. 745's measurement and verification related compliance directives,[87] which, according to ISO-NE, fully allow it to choose a point that represents a customer's interface with the wholesale markets so that ISO-NE can accurately and consistently measure the cumulative impact of the customer's actions, including demand-related activities, on the wholesale market. ISO-NE maintains

---

other capacity resources on the electricity network in the New England Control Area."

[86] *Id*. at n.10.

[87] Order No. 745 requires an RTO's compliance filing to include "an explanation of how its measurement and verification protocols will continue to ensure that appropriate baselines are set, and that demand response will continue to be adequately measured and verified as necessary to ensure the performance of each demand response resource," and notes in that context that "demand reductions that are not genuine may be violations of the Commission's anti-manipulation rules." Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 94-95.

that its proposal to net out demand reductions will compensate at full LMP the demand response encompassed by Order No. 745, i.e. demand response that helps to balance supply and demand on the grid, and, in this case, the New England electric system.

69. By way of example, ISO-NE states that a customer with a 50 MW demand served by the wholesale grid would be captured in the load serving entity's demand forecast, while a customer that normally is served by behind-the-meter generation would be invisible to the load serving entity and would not be considered in the wholesale market clearing process. The first customer could offer 50 MW of demand response that could serve as an alternative to a generation resource, potentially lowering the LMP. On the other hand, the second customer cannot dispatch any demand relief to the wholesale market because this customer's demand is not included in the load serving entity's demand forecast or bid and, thus, cannot serve to balance supply and demand, lower the load serving entity's demand forecast, potentially displace a more expensive resource, or lower the LMP. Thus, ISO-NE argues, the second customer's demand response could not satisfy the net benefits test established as a pre-requisite for receiving LMP compensation.

70. ISO-NE acknowledges that the second customer's demand response would free up its behind-the-meter generation, which it could offer into the wholesale market, potentially displacing a more expensive resource. In that circumstance, ISO-NE states that, per its existing Tariff, it would pay the resource the LMP for the generation dispatched; nothing in its compliance filing here changes that result. According to ISO-NE, the second customer is not equivalent to a customer with 50 MW of demand that normally is served by the grid and a separately connected 50 MW generator in terms of resources it can make available to the wholesale market. ISO-NE states that, if the separately-connected demand response and generator both are dispatched, together these resources could supply and potentially displace 100 MW of more expensive resources in the wholesale market and therefore should be eligible to receive payment for 100 MW; in contrast, according to ISO-NE, a customer with 50 MW of demand that normally is served by 50 MW of behind-the-meter generation can dispatch only 50 MW to potentially displace a more expensive resource.

71. ISO-NE states that a customer that serves only part of its demand with behind-the-meter generation may offer demand response into the wholesale market to the extent that its demand is included in the load serving entity's demand forecast and bid into the wholesale market. For example, a customer that serves 20 MW of its demand with behind-the-meter generation and 30 MW from the wholesale grid would be able to bid 30 MW of demand response and receive LMP if dispatched.[88]

[88] ISO-NE Comprehensive Answer at 16-17. In its answer, the IMM agrees,

(continued...)

72. ISO-NE states that CDRI's suggested approach would result in under-procurement of capacity resources, which would jeopardize reliability, because ISO-NE's demand forecast does not account for demand that normally is served by behind-the-meter generation. Thus, the Installed Capacity Requirement (ICR) for the region would not include that customer's consumption. ISO-NE offers an example of a customer with a demand of 50 MW that meets its entire demand using behind-the-meter generation. According to ISO-NE, the customer can contribute the energy from its behind-the-meter generation towards meeting the ICR but cannot contribute both demand response and generation, because the ICR did not include the customer's consumption in the first instance. ISO-NE states that allowing the customer to provide both 50 MW of demand response and 50 MW of generation as capacity resources would result in an under-procurement of capacity resources by 50 MW.[89]

73. In its answer, the IMM argues that it is unnecessary to provide incentives to reduce consumption to entities that are not in wholesale markets. The IMM states that existing wholesale market price signals were sufficient to induce these customers to invest in behind-the-meter generation and leave the wholesale market, which indicates that there is no permanent barrier to their reducing their consumption of electricity from the wholesale market.[90]

74. EPSA responds to arguments that RTO- and ISO-proposed enhancements to demand response measurement and verification standards, such as ISO-NE's proposal to measure demand response at the retail meter, constitute veiled attempts to erect barriers to demand response participation in RTO and ISO markets.[91] EPSA views verifiable reductions from expected use relative to an established and viable baseline as an essential component of ensuring the comparability of generation and demand response resources.

---

stating that, as a practical matter, resources that rely totally on behind-the-meter generation to meet their demand do not have demand reductions to offer to the wholesale market because their demand is not served by the wholesale markets. IMM Answer at 7-9. The IMM states that resources with behind-the-meter generation have effectively left the wholesale markets by self-supplying their demand and not using energy produced in the wholesale markets.

[89] ISO-NE Comprehensive Answer at 18-19.

[90] IMM Answer at 9.

[91] EPSA Answer at 14.

Accordingly, EPSA argues, any compliance filing that lacks such enhancements would not comply with Order No. 745.[92]

75. EPSA also states that industrial customers' reliance on PURPA as supporting the argument that customers with behind-the-meter generation should not be discriminated against, is confusing and contradictory. Pointing out that Order No. 745 does not mention PURPA, EPSA states it is unclear which provisions of PURPA are relevant to developing and implementing Order No. 745. EPSA posits that PURPA does not treat all generators equally, and indeed, explicitly distinguishes among generators based on size, fuel used, generation technology, ownership and date of certification of construction. Additionally, according to EPSA, commenters invoking PURPA ignore the fact that Congress amended the statute extensively in EPAct 2005 largely in response to claims that compensation under PURPA's one-size-fits-all mandatory compensation formula had become exorbitant and excessive in certain cases.

4. Commission Determination

76. As an initial matter, we reject arguments that demand response facilitated by the use of behind-the-meter generation is wholly ineligible for demand response compensation under Order No. 745. In Order No. 745, the Commission did not require an RTO or ISO to differentiate between demand response resources for which demand response is facilitated by behind-the-meter generation and other demand response resources. Moreover, in Order No. 745-A, the Commission clarified that demand response resources for which demand response is facilitated by behind-the-meter generation may be eligible for compensation at LMP. The Commission stated that, from the perspective of the grid, the manner in which a customer is able to produce a load reduction in the wholesale market from its validly established baseline (whether by shifting production, using internal generation, consuming less electricity, or other means) does not change the effect or value of the reduction to the wholesale grid.[93]

77. Consistent with these Commission statements, we accept ISO-NE's proposed Tariff revisions that allow a demand response provider for which demand response is facilitated by behind-the-meter generation to receive full LMP compensation as a demand response resource. Additionally, we reiterate ISO-NE's assurance that the compliance filing does not change the rules by which market participants with behind-the-meter generation receive payment for electricity injected into the regional grid.

---

[92] EPSA Answer at 13-15.

[93] Order No. 745-A, 137 FERC ¶ 61,215 at P 66.

78. We further accept ISO-NE's proposal to measure demand reductions at the retail delivery point, which delineates the customer's demand normally served by the grid from demand served by the customer's behind-the-meter generator.[94] We understand this aspect of ISO-NE's proposal and the associated Tariff revisions as establishing a focus on demand response that is reflected as a load reduction on the New England transmission system. As noted above, that focus and ISO-NE's corresponding compensation are consistent with Order No. 745; in Order No. 745-A, the Commission made specific reference to viewing from the perspective of the grid a load reduction in the wholesale market relative to a validly established baseline. We further note that this focus is one

[94] We note that CDRI argues that the terminology "behind-the-meter" is operationally meaningless. We do not agree; there are distinct differences between generators that are connected directly to the RTO/ISO-administered grid, and thus participate in the wholesale market, and those that are not.

characteristic necessary for demand reductions that help ISO-NE balance supply and demand on the ISO-administered grid.[95]

79. To illustrate our understanding of ISO-NE's proposal, we provide an example of a theoretical customer with 10 MW of load; the customer uses 5 MW produced by its behind-the-meter generator (the maximum amount that generator can produce) to supply part of its load and purchases 5 MW from the wholesale grid to supply the rest. Under ISO-NE's proposal, during a demand response event, the customer can respond with and be paid full LMP for 5 MW of demand response (the amount that was originally purchased from the grid); in addition, if the customer chooses to continue running its behind-the-meter generator at its maximum capacity but not to use that production to serve part of the customer's load, then the customer can inject 5 MW onto the wholesale grid and, thus, be paid for 5 MW of generation consistent with the relevant market rules. In total, the customer would be paid for 10 MW: 5 MW of demand response and 5 MW of generation.[96]

80. We reject arguments that ISO-NE's proposal either over-compensates (and provides a double-payment to) demand response resources for which demand response is facilitated by behind-the-meter generation or under-compensates these resources by failing to pay for two different but linked services – load reductions and energy supplied to the system. As stated above, we find that ISO-NE's proposal to focus on demand response from the perspective of the grid and to provide corresponding compensation at

---

[95] Moreover, measuring demand reductions at the retail delivery point will better enable ISO-NE to anticipate the customer's impact on the grid, so it can dispatch the necessary resources according to the least-cost economic dispatch process.

[96] Extending this example, some protestors appear to argue that this customer should be compensated for 15 MW. These commenters argue that the customer should be allowed to submit and be paid for 10 MW of demand response, reflecting both the 5 MW of its load that is normally served by its behind-the-meter generator and the 5 MW of its load that is normally served from the wholesale grid. These commenters further argue that the customer also should be paid for the 5 MW of generation it injects to the grid. *See, e.g.*, Joint Parties Protest at 38-42, CDRI Protest at 19-29, and Maine Public Parties Protest at 16-19. We reject these arguments because, as explained above, we find that ISO-NE's proposed focus on net load reduction from the perspective of the grid is consistent with Order No. 745. The customer's decision to reduce the 5 MW of its load that is normally served by its behind-the-meter generation allows the customer to inject that 5 MW onto the grid for compensation as a generation resource. However, because that load would not normally have been served from the grid, the reduction of that load does not constitute demand response from the perspective of the grid.

the LMP for that demand response is consistent with Order No. 745. We also find that ISO-NE's proposal reasonably accounts for the benefits of both demand response facilitated by behind-the-meter generation and energy injected onto the grid by behind-the-meter generation.

81. Similarly, we disagree with protestors who argue that ISO-NE's proposal underpays demand response resources for which demand response is facilitated by behind-the-meter generation and is therefore unduly discriminatory and inhibits or prohibits participation by those resources. As explained above, we find that ISO-NE's proposal does not underpay these resources; instead, it pays LMP as required by Order No. 745.

82. NEPOOL Customers argue that a customer should receive full LMP compensation regardless of whether or not it owns the behind-the-meter generator that is facilitating its demand response. We find this issue to be beyond the scope of this proceeding. The issue of whether a demand response resource for which demand response is facilitated by behind-the-meter generation owns that behind-the-meter generation is irrelevant in ISO-NE's proposal. Again, ISO-NE's proposal reasonably focuses on demand response that is reflected as a load reduction on the New England transmission system, not on the arrangement between the customer and the behind-the-meter generation resource.

83. Some parties argue that ISO-NE conflates the settlement system and the operational side of the system and that the retail delivery point does not define the customer's demand served by the grid. We disagree. Because the settlement system is based on the operation of the grid, both aspects are appropriate for ISO-NE to consider when dispatching in order to balance supply and demand. Under ISO-NE's proposal, the impact a customer has on the grid is what determines both how the ISO will operate the grid and how it will determine the settlement.

84. Because we find ISO-NE's proposal to measure demand response at the retail meter to be consistent with Order No. 745 and otherwise just and reasonable, we need not discuss competing proposals.[97] Similarly, we make no finding with respect to ISO-NE's

[97] Faced with competing proposals, the Commission may approve the applicant's proposal as just and reasonable; it need not be the only reasonable proposal or even the most accurate. *Oxy USA, Inc. v. FERC*, 64 F.3d 679, 691 (D.C. Cir. 1995); *City of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984).

comment that CDRI's alternative proposal would result in under-procurement of capacity resources.[98]

85. As to arguments concerning PURPA, we agree with EPSA that it is unclear which provisions of PURPA the protestors believe are relevant to implementing Order No. 745. Order No. 745 does not discuss PURPA. In addition, protestors have not adequately explained what aspects of ISO-NE's proposal they see as treating entities that host qualifying facilities differently from other demand response resources.

86. Certain parties also argue that Order No. 745 does not require loads to be a full requirements customer to participate in the demand response program. As previously discussed, we agree with ISO-NE and other parties that Order No. 745 does not require loads to be full requirements customers in order to participate as demand response in ISO-NE's energy markets.

F. Environmental Concerns

1. Protests and Comments

87. IECG states that ISO-NE's compliance filing is actually an amendment to Order No. 745, proposing a major federal action with policy implications that would increase air pollution substantially and cause substantial impact on the human environment.[99] IECG states that the Commission should require ISO-NE to conduct an Environmental Assessment to allow review of the possible environmental impacts of ISO-NE's proposal under the National Environmental Policy Act prior to final action on the proposal because the proposal has significant policy implications and environmental consequences that are unlike an ordinary rate proceeding before the Commission.

88. Maine AG argues that ISO-NE's proposal will create higher emissions of pollutants by relying to a greater extent on traditional sources of generation. Furthermore, Maine AG argues that facilities that provide their excess energy to the grid during demand response events are most often cogeneration or renewable energy plants

[98] Moreover, we do not consider ISO-NE's statements in its Comprehensive Answer with respect to the ICR to be part of its proposal for compliance with Order No. 745 but rather only a response to CDRI.

[99] IECG Protest at 2.

with low carbon emissions that are highly regulated by Maine's air quality laws and regulations and by federal law.[100]

89. Environmental Organizations contend that behind-the-meter generation facilities tend to be highly efficient and environmentally friendly. Evergreen suggests that encouraging customers who utilize renewable or cogeneration systems behind-the-meter to participate in demand response programs has a direct net environmental benefit to a region's air quality, resulting in a solution that is both economically and environmentally preferable.

90. On the other hand, NEPGA states that Order No. 745 placed special emphasis on arguments regarding environmental benefits from reduction in electric consumption, in particular where "dirty" peaker plants were concerned. NEPGA agrees with EPSA's comments, as noted in Order No. 745, that moving the most "dirty" peakers behind-the-meter would more than reverse the environmental goals discussed in Order No. 745 and effectively subsidize pollution.[101]

91. EPSA proposes that RTOs and ISOs study behind-the-meter generation within their footprints, and determine and inform the Commission regarding, among other things, the range of environmental emissions associated with behind-the-meter generation.[102]

92. CLF strongly supports the policy set forth in Order No. 745, which it describes as promoting national security and reducing adverse environmental impacts from generating electricity, including emissions of greenhouse gases and other air pollutants. CLF supports using demand response to meet load because of the economic, reliability, and environmental benefits.

2. Commission Determination

93. In Order No. 745, we concluded that neither an Environmental Assessment nor an Environmental Impact Statement was required because, under section 380.4(a)(15) of the Commission's regulations, electric rate filings containing all rates and charges for the transmission or sale subject to the Commission's jurisdiction, plus the classification,

---

[100] Maine AG Comments at 4.

[101] NEPGA Comments at 12 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 34).

[102] EPSA Answer at 24-30.

practices, contracts, and regulations that affect rates, charges, classifications, and services under FPA sections 205 and 206, are categorically exempted from such analysis.[103] We disagree with IECG that ISO-NE's compliance filing amends Order No. 745, and we will not require ISO-NE to conduct an Environmental Assessment. As discussed herein, ISO-NE's compliance filing is largely consistent with Order No. 745 for purposes of implementing the compensation approach required in that order. To the extent protestors associate what they view as environmental externalities with Order No. 745's directives (which, again, ISO-NE's filing here simply implements), those arguments are beyond the scope of this proceeding.

G. Self-Scheduling

1. Order No. 745

94. In Order No. 745, the Commission determined that when a demand response resource has the capability to balance supply and demand as an alternative to a generation resource, and when dispatch of a demand response resource is cost-effective as determined by a net benefits test, that demand response resource must be compensated at LMP for the service it provides to the energy market.[104] The Commission emphasized that demand response resources must be able to displace a generation resource in a manner that serves the RTO or ISO in balancing supply and demand, highlighting the role of the RTO or ISO in maintaining a real-time balance of generation and load, supply and demand.

2. ISO-NE's Proposal

95. ISO-NE's proposed Tariff revisions stipulate that market participants may not self-schedule demand reductions in the day-ahead or real-time energy markets.[105] ISO-NE states that self-scheduling refers to actions of a market participant in committing and/or scheduling its resource whether or not, in the absence of that action, the resource would have been scheduled or dispatched by ISO-NE.[106] ISO-NE argues that allowing self-

---

[103] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 121.

[104] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 2.

[105] Compliance Filing, Attachment 3 Fully Integrated Solution Rules, at § 3 ("Market Participants may not Self-Schedule interruptions in the Day-Ahead Energy Market").

[106] ISO-NE Comprehensive Answer at 31.

scheduling would not comply with Order No. 745's requirements relating to (1) the net benefits test; (2) balancing supply and demand; and (3) measurement and verification.[107]

96. First, ISO-NE clarifies that a self-scheduled resource essentially is offered at a $0/MWh price in the real-time energy market. ISO-NE states that, because the threshold price will always be greater than $0/MWh, a $0/MWh offer price would violate the Commission's net benefits test requiring that only cost-effective demand response receive LMP compensation.[108]

97. Second, ISO-NE argues that self-scheduling would not facilitate balancing supply and demand, because balancing, as required by Order No. 745, is achieved when each energy resource follows dispatch instructions based on the bids/offers submitted to ISO-NE.[109] ISO-NE argues that, by definition, self-scheduling occurs outside ISO-NE's resource commitment and dispatch, and therefore does not contribute to the balancing of supply and demand. Rather, according to ISO-NE, self-scheduling requires it to readjust the dispatch of other resources to rebalance the system.[110]

98. ISO-NE argues that, in order to effectively commit and dispatch demand response resources as an alternative to committing and dispatching generation resources in balancing supply and demand, supply offers from demand response resources should be considered at the same time as supply offers from generation resources.[111] Thus, in order to meet Order No. 745's requirement, which conditions payment of LMP to demand response resources on their ability to balance supply and demand, ISO-NE argues that each energy resource must follow dispatch instructions.

99. Finally, ISO-NE argues that, "most importantly," self-scheduling would allow a market participant to more easily game its demand response baseline. According to ISO-NE, whenever a demand response resource's real-time demand happens to be lower than

---

[107] Yoshimura Testimony at 41-42.

[108] *Id*. at 41.

[109] With the exception of Dispatchable Asset Related Demand (DARD) (i.e., pumped storage hydro units), demand response resources in ISO-NE currently are not dispatchable. DARDs are postured by ISO-NE and are not paid the LMP. *See* ISO New England Operating Procedure No. 14.

[110] Yoshimura Testimony at 41-42.

[111] *Id*. at 8.

its calculated baseline, the market participant could self-schedule and be paid for normal, business-related lower consumption for any reason that the facility happens to be running lower than its baseline, such as an unplanned equipment outage, that is not in response to higher real-time LMPs.[112] In support of its position, ISO-NE cites the Commission's definition of demand response in Order No. 745, which states that "demand response means a reduction in the consumption of electric energy by customers from their expected consumption *in response to an increase in the price of electric energy* or to incentive payments designed to induce lower consumption of electric energy."[113] Therefore, ISO-NE argues that reduced consumption that would have happened anyway and/or that was not in response to higher prices is not demand response and should not qualify for demand reduction payments. ISO-NE explains that its experience to date with self-scheduled resources indicates that such assets do not reduce consumption in real time in response to market conditions, but rather in a random pattern unrelated to real-time LMPs.[114]

3. Protests and Comments

100. Constellation and RESA support ISO-NE's decision not to allow market participants to self-schedule demand reductions in the day-ahead or real-time energy markets. Constellation strongly supports ISO-NE's proposal to preclude self-scheduled demand response resources from participation in the compensation structure mandated by Order No. 745 because it claims that these resources exacerbate the supply/demand imbalance and are not dispatched. Constellation argues that allowing demand response resources to self-schedule would contribute to less efficient system balancing, and potentially cause additional uplift costs that customers must pay to compensate generators that backed down as a result of self-scheduled demand response.

---

[112] Yoshimura Testimony at 42. ISO-NE states that those participating in the current day-ahead program almost always offer 100 kW of demand reduction on a day-ahead basis but then interrupt demand in real time in what appears to be a random pattern that bears no resemblance to the amount cleared day-ahead and does not appear to be in response to real-time LMP levels. ISO-NE argues that this behavior does not facilitate balancing supply and demand as an alternative to generation. *Id.* at 75.

[113] Yoshimura Testimony at 43 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322, at n.2 (emphasis added by ISO-NE)).

[114] Yoshimura Testimony at 43.

Constellation contends that self-scheduled resources do not balance supply and demand and therefore do not meet the requirements of Order No. 745.[115]

101. EPSA also supports ISO-NE's proposal to preclude self-scheduled demand response resources from receiving compensation because they do not meet the conditions specified in Order No. 745. EPSA believes that the proposal not to permit self-scheduling for demand response resources provides flexibility for demand response resources while ensuring that ISO-NE has essential knowledge and information regarding demand response participants. EPSA states that prohibiting demand response resources from self-scheduling is necessary to ensure that RTOs and ISOs adequately supervise demand response resources' participation and that those resources comply with Order No. 745's requirement that, in addition to being cost-effective, they have the ability to balance supply and demand, and thus are comparable to generation, in order to receive LMP compensation.[116]

102. NEPOOL Customers argue that the Commission should direct ISO-NE to permit self-scheduling of demand response resources participating in New England's energy markets in order to ensure resource parity, tempered prices, and competition with generation. NEPOOL Customers contend that Order No. 745 permits self-scheduling and provides demand response resources with both day-ahead and real-time opportunities to "balance supply and demand" comparable to generation resources. NEPOOL Customers state that in order for demand response resources to be comparable, they need scheduling and dispatch opportunities similar to those available to generators. NEPOOL Customers argue that self-scheduled demand response resources "have the capability to balance supply and demand," since they reduce load and, therefore, LMP compensation is warranted if the resource is activated when LMP is at or above the threshold price.

103. Joint Parties argue that the opportunity for demand response resources to self-schedule in real-time would put demand response resources in a comparable position to generation and would greatly expand the opportunities for real-time participation of these assets. Joint Parties argue that allowing self-scheduling is necessary to bring ISO-NE's filing into compliance with Order No. 745. Without a real-time scheduling opportunity, Joint Parties argue, a potential load reduction is unlikely to be participating when the resource has a clear idea of opportunity costs as it nears a potential demand response event. Joint Parties assert that this load reduction would lower LMPs for all ratepayers

[115] Constellation Comments at 5.

[116] EPSA Comments at 6-9.

when the LMP is above the net benefits threshold price. Therefore, Joint Parties argue, self-scheduling opportunities for resources in real-time would benefit all ratepayers.

104. Joint Parties request that the Commission require ISO-NE to add a new section 5.2 to its Fully Integrated solution Tariff to create a self-scheduling opportunity for demand response designed to be comparable to that for generation and to revise other sections of the Tariff as necessary to conform to such a change. Joint Parties propose that demand response assets notify ISO-NE one hour before the asset will be dispatched, and self-scheduling customers would need to provide load data in a form that allows ISO-NE and the IMM to verify consumption levels. Joint Parties' proposal would limit participation to assets or aggregations of assets with a maximum interruptible capability of 1 MW or greater, with a demand reduction offer quantity of 100 kW or greater. Finally, Joint Parties' proposal would permit ISO-NE to dispatch the resource based on its day-ahead demand reduction offer price or re-offer price, if the resource has offered into the day-ahead market for any hours that are coincident with the self-scheduled hours, up to the maximum reduction quantity of that resource in the applicable hour or hours. Joint Parties state that these limitations on the quantity and form of dispatch should reduce the number of self-scheduled resources to a manageable number and allow verification by the IMM as necessary.

105. Joint Parties state that self-scheduled demand response assets would become part of the supply stack just like generation, and, as such, would be able to replace more expensive resources and reduce real-time LMPs. Joint Parties propose that, for hours when the LMPs are lower than the net benefits threshold price, demand response assets that self-schedule would not be compensated for any reductions in load, thus placing the risk of price change on the self-scheduling customer and not the ratepayers.

4. ISO-NE Answer

106. ISO-NE states that while its Compliance Filing proposal does not allow demand response resources to self-schedule, it provides considerable flexibility for market participants to update real-time energy market offers and to "re-declare" the available quantities of demand response for each hour during the operating day. ISO-NE notes that several parties protested this aspect of its Compliance Filing and proposed an alternative tariff provision. ISO-NE states that the alternate proposal would have unacceptable impacts. According to ISO-NE, allowing self-scheduling would permit a relatively unpredictable demand response resource that bypasses integration into the least-cost algorithm used to commit and dispatch energy resource to receive revenues comparable to resources that can be integrated into the least-cost dispatch through day-ahead offers. Thus, ISO-NE argues, if energy resources with inter-temporal parameters and costs (for example, minimum run times and start-up costs) are committed under the least-cost dispatch, but self-scheduled resources subsequently cause these resources to be de-committed or dispatched off, overall system costs increase.

107. In response to the protestors' assertion that demand response resources must be able to self-schedule because the opportunity costs for demand response resources change constantly, ISO-NE states that this raises the question of whether allowing self-scheduling for demand response would produce "a reduction in the consumption of electric energy by customers *from their expected consumption in response to an increase in the price of energy*."[117] According to ISO-NE, the protestors' examples suggest that self-scheduling would allow demand response providers to claim demand response payments for lower energy consumption that was not in response to higher LMPs, but rather from changes in expected baseline consumption due to production schedule changes. ISO-NE contends that the challenges demand response providers encounter due to variations in expected energy consumption can be met using the flexibility offered by the proposed market rules to re-declare the amount of demand reduction available in real time.[118]

108. ISO-NE argues that self-scheduling would be inconsistent with Order No. 745 for several reasons that were not addressed in the protests. First, because a self-scheduled resource would be offered at $0/MWh, and the Demand Reduction Threshold Price will always be greater than $0/MWh, that offer price would not satisfy Order No. 745's net benefits test. Second, self-scheduling occurs *outside* the resource commitment and dispatch process, and therefore does not contribute to the "balancing of supply and demand"–through action in response to price signals–that Order No. 745 envisioned as the essential role of demand response and a condition for full LMP payment.[119] Finally, ISO-NE asserts that self-scheduling can foster baseline abuse, because a market participant could self-schedule demand response whenever its normal demand is running lower than average, which could lead to demand reduction payments for normal consumption on about half the days in a year.[120]

109. ISO-NE states that it has significant concerns regarding Joint Parties' proposed self-scheduling tariff language, which has not been reviewed by stakeholders. ISO-NE requests that, should the Commission agree with the protesters regarding self-scheduling,

---

[117] ISO-NE Comprehensive Answer at 24, quoting Order No. 745 FERC Stats. & Regs. ¶ 31,322 at n.2 (emphasis added by ISO-NE).

[118] *Id*. at 21-27.

[119] *Id*. at 28 (citing Order No. 745 FERC Stats. & Regs. ¶ 31,322 at P 9).

[120] *Id*. at 27-28.

it direct ISO-NE and its stakeholders to conduct further work to develop appropriate rules rather than requiring ISO-NE to adopt Joint Parties' proposed tariff language.[121]

110. ISO-NE states that it believes that providing some form of self-scheduling functionality is worthy of further consideration in the long-run. However, self-scheduling of demand response resources raises different issues from self-scheduling generation, and thus comparability is not a simple matter of applying the same rules to demand response resources as apply to generation. ISO-NE notes that it plans to initiate stakeholder discussions in 2012 regarding potentially allowing market participants with dispatchable resources, including demand response providers, to submit hourly energy offers (which could offer functionality similar to self-scheduling), and to modify the commitment cost components and incremental energy offer component during the operating day.[122]

111. The IMM supports ISO-NE's positions and arguments relating to self-scheduling, emphasizing that permitting self-scheduling will significantly increase the risk of undeserved and unnecessary payments to non-genuine demand response. Since the methodology for calculating a customer's baseline is specified in the Tariff, a demand response resource can calculate its own baseline in real-time. If self-scheduling is permitted, an owner could do so any time its normal consumption is below the baseline, resulting in payments for non-genuine demand response. The IMM notes that it would be very difficult to design market incentives to assure that self-scheduled demand response is genuine, and urges the Commission to reject self-scheduling of demand response resources, consistent with ISO-NE's compliance filing.[123]

5. Commission Determination

112. The Commission agrees with ISO-NE and commenters who argue that, in order for a demand response resource to receive compensation pursuant to the requirements of Order No. 745, ISO-NE must be able to commit or dispatch that demand response resource.[124] For this reason, we accept ISO-NE's proposal to prohibit self-scheduling of demand reductions in its day-ahead or real-time energy markets.

---

[121] *Id*. at 28-32.

[122] *Id*. at 32-33.

[123] IMM Answer at 5-7.

[124] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 2 (determining that when a demand response resource has the capability to balance supply and demand as an

(continued...)

113. ISO-NE explains that, in the proposed Fully Integrated solution, offers from demand response resources are considered in the security-constrained, economic dispatch algorithm along with other energy resources to determine which resources clear and are dispatched, and the marginal resource that sets the price could be a demand response resource; according to ISO-NE, this ensures that demand response resources balance supply and demand. ISO-NE states that its market design approach, with respect to fully integrating demand response resources into the energy market, is to treat a Demand Reduction Offer from a demand response resource in the same manner as a supply offer from a generator. However, ISO-NE notes that, in contrast to other demand response resources in the Fully Integrated solution, self-scheduled resources will not be dispatchable. ISO-NE explains that self-scheduling occurs whether or not ISO-NE schedules and dispatches a resource and that, in contrast to other demand response resources in the Fully Integrated solution, self-scheduled resources would bypass integration into the least-cost algorithm used to commit and dispatch energy resources and therefore would not contribute to the balancing of supply and demand. We find this distinction explained by ISO-NE to be compelling.

114. We deny Joint Parties' request that we adopt their proposed Tariff language, included as part of their comments, suggesting new self-scheduling rules. ISO-NE's stakeholder process is the appropriate venue for Joint Parties to propose and develop appropriate rules to provide demand response resources more flexibility to self-schedule, recognizing that, for purposes of Order No. 745, ISO-NE also must be able to dispatch any self-scheduled demand response in order to balance supply and demand. We note ISO-NE's proposed market rules afford market participants flexibility by providing opportunities for demand response providers to update their real-time energy market offers after the close of the day-ahead energy market and to re-declare the available quantities of demand response for each hour during the Operating Day. Furthermore, ISO-NE states that it is planning to initiate a stakeholder process in 2012 regarding potentially allowing market participants with dispatchable resources to submit hourly energy offers and to modify the commitment cost components and incremental energy offer component during the operating day. We support such an endeavor to provide more flexibility and opportunity to integrate dispatchable resources into the energy market and encourage all interested parties, including Joint Parties, to participate in the stakeholder process.

---

alternative to a generation resource, and when dispatch of a demand response resource is cost-effective as determined by a net benefits test, that demand response resource must be compensated at LMP for the service it provides to the energy market).

H. Transition Period

1. ISO-NE's Proposal

115. As indicated above, ISO-NE proposes a two-stage implementation process that would put in place an initial set of demand response compensation rules on June 1, 2012, the Transition Period, which will be replaced by a second set of rules (the Fully Integrated solution) that would fully integrate demand response resources into the energy market effective June 1, 2016. ISO-NE states that fully integrating demand response resources into the energy market and system dispatch requires a multi-year effort. ISO-NE states that both the stakeholders and the Commission should consider its two-stage approach to complying with the requirements of Order No. 745 as a comprehensive package.

116. ISO-NE notes that the ISO-NE Tariff currently includes provisions governing demand response resource participation in the energy market. However, these provisions are effective only through May 31, 2012.[125] The compliance package ISO-NE submitted in response to Order No. 745 is based on the demand response programs already in place,[126] with modifications to account for the specific requirements of Order No. 745 and knowledge gained from experience with the demand response programs currently in place.

117. During the Transition Period, ISO-NE will (1) calculate a threshold price using its proposed net benefits test; (2) require a demand response offer to meet or exceed the threshold price; (3) limit demand response to participation between the hours of 8:00 a.m.

---

[125] Compliance Filing, Transmittal Letter at 3.

[126] The current ISO-NE Tariff provides for a day-ahead and real-time demand response program that compensates cleared assets at LMP (the applicable day-ahead zonal price for the day-ahead program and the applicable real-time zonal price or a minimum payment of $100/MWh for the real-time program), maintains a minimum offer level ($/MWh) requirement, allows aggregation of assets in compliance with Order No. 719, allows self-scheduling by demand response resources, and pays for demand reductions resulting from behind-the-meter generation. Cleared demand response assets in the day-ahead program receive the applicable day-ahead zonal price, adjusted for any credits or changes, and assets in the real-time program receive the higher of the applicable real-time zonal price or a minimum payment of $100/MWh. The current Tariff provisions allocate costs to Network Load on a system-wide basis. *See generally* Appendix E of Market Rule 1 and the ISO New England Inc. Manual for the Real-Time Price Response and Day-Ahead Load Response Programs.

and 6:00 p.m.;[127] (4) not allow self-scheduling for demand response resources; (5) pay LMP compensation to those demand response resources that clear under ISO-NE's sequential-clearing method; and, (6) allocate costs hourly, proportional to the Real-Time Load Obligation, on a system-wide basis.[128] ISO-NE states that it will not be able to accept offers associated with demand response resources consisting of an aggregation of assets during the Transition Period.[129] ISO-NE's proposed Tariff provisions require ISO-NE to establish a Demand Reduction Threshold Price for each month using a regression-based approximation method on a sampled portion of supply offer data for the historical reference month.[130]

118. The Transition Period rules include many components of the Fully Integrated rules, including the following provisions: (1) requiring that Demand Reduction Offers exceed the Demand Reduction Threshold Price; (2) applying an improved baseline methodology; (3) compensating demand reductions delivered in real-time that are consistent with the amounts offered and scheduled in response to LMPs; and (4) allocating costs associated with payments for demand reduction proportionally to entities purchasing from the relevant energy market in the area where the demand reduction reduces the market price for energy.[131]

---

[127] As Southern New England States note, the Transition Period originally proposed to make a demand reduction offer apply to all 24-hours in the operating day. They note that, while technically a limitation on participation, the risk of being dispatched outside of normal business hours, when resource performance capability is diminished due to low demand levels, presents a risk for some demand response resources. In response, ISO-NE amended its proposal for the Transition Period to be the same as the existing day-ahead program, given the technical limitations of the transition program, which Southern New England States view as an equitable compromise. *See* Southern New England States Comments at 9-10 and n. 28.

[128] Yoshimura Testimony at 69-79.

[129] Compliance Filing, Transmittal Letter at 7; Yoshimura Testimony at 69.

[130] Yoshimura Testimony at 39. Additionally, ISO-NE states that section III.E.6 of the Fully Integrated rules specifies how it will calculate and use a monthly Demand Reduction Threshold Price, as required by Order No. 745. ISO-NE plans to post on its website, on a monthly basis, the supply curve analysis used to determine Demand Reduction Threshold Prices.

[131] Yoshimura Testimony at 67-69.

119. However, as the name implies, the Transition Period rules are an interim step towards the Fully Integrated rules and thus certain aspects of the Transition Period rules vary from the Fully Integrated rules. Specifically, the Transition Period rules deviate from the Fully Integrated rules in six respects: (1) demand response resources will not be allowed to aggregate during the Transition Period; (2) each demand response resource will be obligated to provide demand response in accordance with the schedule it receives through participation in the day-ahead energy market; there will be no real-time dispatch of real-time demand response assets; (3) Demand Reduction Offers will only be accepted on a day-ahead basis, with narrower bid parameters (i.e., one price/demand-reduction quantity pair for each asset); (4) ISO-NE will derive the day-ahead energy market solution before it considers Demand Reduction Offers, with the resulting day-ahead LMPs used to determine whether those demand offers clear in the day-ahead energy market;[132] (5) the Real-Time Demand Reduction Obligation of a real-time demand response asset will be capped at 200 percent of the associated Demand Reduction Offer amount adjusted for avoided distribution losses; and (6) the rules do not incorporate Net Commitment Period Compensation (NCPC).[133] Additionally, the Transition Period rules include changes to Appendix A of Market Rule 1, and corresponding modifications to the Information Policy, giving the IMM the ability to obtain market participant data, which will assist in monitoring resource performance and demand response provider behavior.[134]

[132] This process is referred to as "sequential clearing." ISO-NE states that the Commission has previously approved this "sequential clearing" method in the day-ahead program as support for its proposal to continue with this methodology during the Transition Period. The Fully Integrated rules will discontinue the use of sequential clearing. *See ISO New England, Inc.*, 111 FERC ¶ 61,064.

[133] Net Commitment Period Compensation (NCPC) is "make whole" payments made to resources whose hourly commitment and dispatch by ISO-NE resulted in a shortfall between the resource's offered value in the energy and regulation markets and the revenue earned from output over the course of the day.

[134] ISO-NE states that the corresponding changes to the ISO-NE Information Policy ensure that information provided in response to an IMM data request will be considered Confidential Information under the Information Policy.

2. Protests and Comments

a. Two-Phase Compliance Approach

120. Southern New England States support ISO-NE's proposed two-phase compliance approach, stating that it enables synchronicity with the capacity market and moderates the nascent demand response industry's integration into the energy market. Southern New England States believe that the transition phase will provide demand response resources the ability to utilize existing infrastructure in order to participate in the market while development, testing, and delivery of the software and telemetry enhancements proceeds. Southern New England States argue that the viability of the nascent demand response industry needs time to transform, further supporting the implementation of a Transition Period.[135] Finally, Southern New England States support ISO-NE's proposed compliance package, because the proposed two-phase approach balances the multiple objectives of comparable treatment to generation resources, technical implementation and feasibility limitations, and the schedule for the upcoming Forward Capacity Market auction and commitment period.

b. Real-Time and Day-Ahead Opportunities

121. Joint Parties assert that Order No. 745 clearly intended for demand response assets to have the opportunity to participate in both the day-ahead and real-time markets on the same basis as generation resources. Joint Parties state that they understand that there are technical and design considerations to work through prior to fully integrating demand response into the energy market in New England, but they assert that the day-ahead and re-offer period, while good opportunities, are not reasonable proxies for a real-time market opportunity for demand response.

122. Joint Parties state that day-ahead resource commitment is an important component of reliability, however these financial and operational commitments are subject to adjustment in real-time based on availability of less expensive resources, changes in load, or other unforeseen circumstances. They claim that the ability to self-schedule resources in real-time creates value for all consumers through market efficiencies. Joint Parties support the 200 percent cap on real-time obligations that ISO-NE has proposed for the Transition Period, which provides much needed protection from daily load variability during the Transition Period. However, they argue that it does not provide protection from the shifts in opportunity costs businesses face. Joint Parties state that the same issue exists with the added bidding flexibility included in the Fully Integrated solution.[136]

---

[135] Southern New England States Comments at 12.

[136] Joint Parties Protest at 21-22.

3. Commission Determination

123. The Commission conditionally accepts ISO-NE's proposed Transition Period rules. We find that ISO-NE's transition proposal represents a step toward full compliance and will maintain a demand response program in New England while ISO-NE makes necessary software and other changes required to implement a demand response program that fully complies with Order No. 745's requirements. During the Transition Period, ISO-NE will pay LMP for load reductions; improve its current baseline methodology to conform with Order No. 745; institute a cost allocation methodology in accordance with Order No. 745; and generally encourage resources to follow their day-ahead schedules through capped real-time reductions and self-scheduling changes. The Commission agrees with ISO-NE that the proposal to accept Demand Reduction Offers in the day-ahead, but not real-time, energy market during the Transition Period is not an ideal, end-state solution. We acknowledge commenters' concerns in this regard; however, we find that it is an adequate interim solution. Moreover, the Fully Integrated rules remedy the Transition Period rules to the extent they are not in full compliance with Order No. 745. We also note that, while full and immediate Order No. 745-compliant Tariff provisions would be optimal, Order No. 745 does not prohibit sequential implementation as proposed here. Thus, given the circumstances in ISO-NE, including the near-imminent expiration of its demand response program, we find the Transition Period rules to be acceptable as part of a larger effort to compensate demand response in accordance with the Commission's directives. However, as discussed in the next section of this order, the Commission conditions its acceptance on ISO-NE addressing further in a compliance filing issues related to aggregation during the Transition Period.

124. The Commission finds ISO-NE's proposal to use only generation offers to calculate the day-ahead energy market solution under the Transition Period rules to be just and reasonable, when considered in conjunction with the comprehensive compliance package submitted by ISO-NE and given the time required to implement the changes. In a previous proceeding,[137] the Commission supported ISO-NE's use of the sequential clearing method as part of a phased implementation.[138] In accepting the sequential

[137] *See ISO New England Inc.*, 111 FERC ¶ 61,064.

[138] ISO-NE stated in its transmittal letter accompanying the filing in that proceeding that it would take 12-15 months to develop the proper software to implement integrated clearing. We note that ISO-NE has not completed the phased implementation approved in that proceeding. We expect ISO-NE to complete the transition to integrated clearing as proposed in this proceeding concurrently with implementing the Fully Integrated Rules, which will be effective as of June 1, 2016.

clearing proposal included in the Transition Period rules, the Commission recognizes that sequential clearing is not in full compliance with the requirements of Order No. 745. However, we agree with ISO-NE that sequential clearing is necessary at this time to allow ISO-NE to transition to full compliance through integrated clearing when the Fully Integrated solution becomes effective June 1, 2016.

I. Aggregation

1. Order No. 745

125. Order No. 745 does not specifically address aggregation of retail customers for the purpose of facilitating demand response resource participation in organized wholesale energy markets. However, Order No. 745 does not contradict or grant a waiver of Order No. 719's requirements with respect to aggregators of retail customers (ARC).

126. In Order No. 719,[139] the Commission established reforms to improve the operation of organized wholesale electric power markets, including with respect to demand response, and amended its regulations under the FPA accordingly. One of these reforms requires RTOs and ISOs to permit, under certain circumstances, an ARC to bid demand response on behalf of retail customers directly into the energy market.[140]

2. ISO-NE's Proposal

127. ISO-NE's Fully Integrated solution permits ARCs to make Demand Reduction Offers in the day-ahead and real-time energy markets.[141] However, the Transition Period rules do not appear to allow aggregated participation. ISO-NE states that, when the Fully Integrated solution is implemented, a Demand Reduction Offer from a Demand Response Resource[142] will be treated in the same manner as a supply offer from a generator.[143]

---

[139] *Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, FERC Stats. & Regs. ¶ 31,281 (2008), *order on reh'g*, Order No. 719-A, 74 Fed. Reg. 37,776 (Jul. 29, 2009), FERC Stats. & Regs. ¶ 31,292 (2009), *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009).

[140] Order No. 719, FERC Stats. & Regs. ¶ 31,281 at P 154.

[141] Yoshimura Testimony at 69. For Demand Reduction Offers in the day-ahead energy market see Compliance Filing, Attachment 3, I.3, at 111, and for the real-time energy market see Compliance Filing, Attachment 3, I.4, at 113.

[142] ISO-NE's proposed Tariff defines Demand Response Resource as "an individual Demand Response Asset or aggregation of Demand Response Assets within a

(continued...)

ISO-NE's proposed Tariff section III.E.1 would require Demand Response Resources to, in aggregate, "produce at least 100 kW of demand reduction,"[144] and the demand reduction of each retail delivery point in the aggregation be less than 10 kW.[145]

3. Protests and Comments

128. Marathon and Energy Spectrum oppose ISO-NE's proposal to disallow aggregation of demand response resources during the Transition Period. Marathon and Energy Spectrum state that allowing aggregation encourages mobilization of mass demand response resources, including at the residential and small commercial level. Marathon and Energy Spectrum conclude that ISO-NE's proposal not to allow aggregation would cut off future opportunities for emerging technologies and therefore the Commission should reject it.

129. Joint Parties argue that ISO-NE places unnecessary restrictions on demand response assets that may be aggregated in the Fully Integrated solution. Joint Parties assert that the proposal to place a 10 kW limit on the demand reduction of each individual end-use customer making up the aggregated group is unnecessary, that no reason was given for the limit, and it increases the cost of building the aggregated group. Joint Parties further assert that the term "homogenous population," used in the proposed Tariff, is ambiguous.[146] Joint Parties argue that this term is undefined and may lead to discrimination against different classes of customer groups, for example, residential and commercial rate classes. Joint Parties also allege that the proposed metering and communications requirements are unmanageable and uneconomic, arguing that the proposal would require putting a meter on every individual customer facility comprising

---

Dispatch Zone that meets the registration requirements in Section III.E.1." Compliance Filing, Attachment 3, I.2.2, at 21. ISO-NE's proposed Tariff defines Demand Response Asset as "the electricity consumption of an individual end-use customer at a retail delivery point or the aggregated electricity consumption of multiple end use customers from multiple delivery points that meets the registration requirements in Section III.E.2." Compliance Filing, Attachment 3, I.2.2, at 20. Section III.E.2 addresses metering and communication requirements. Compliance Filing, Attachment 3, III.E.2, at 109.

[143] Yoshimura Testimony at 9.

[144] Compliance Filing, Attachment 3, III.E.1.1(b), at 107.

[145] Compliance Filing, Attachment 3, III.E.1.2(b), at 108.

[146] Joint Parties Protest at 30.

a demand response asset which, in Joint Parties' view, is impossible and inconsistent with other aggregation provisions.[147] Therefore, Joint Parties request that the Commission require ISO-NE to state explicitly that residential and small commercial customers participating in direct load control programs do not need any incremental metering or communications devices other than those required to manage the curtailment process.

130. According to Joint Parties, there is nothing in the plain text of the regulation, or any portion of Order No. 745, that requires, suggests, or even contemplates that, in order to provide load reductions that balance supply and demand, assets which provide such services must be aggregated to the "resource" level in order to qualify. Joint Parties request that the Commission make clear that ISO-NE must continue to allow individual assets to participate as demand response resources. Joint Parties allege that ISO-NE has implied that "it may seek in the future to require participation in both the energy and capacity markets to be on a unified 'resource' basis (i.e., assets aggregated for purposes of one market would have to be aggregated for purposes of participation in the other)."[148] Joint Parties argue that the Commission must not allow ISO-NE to implement such a requirement because it is impractical for certain demand response resources to be included in an aggregation due to the timing and economic consequences associated with a load curtailment.

4. Answer

131. ISO-NE's Comprehensive Answer responds to the concerns raised in Joint Parties' protest. ISO-NE states that demand response resources of 10 kW or larger have a larger impact on the individual nodes to which they are connected. ISO-NE contrasts that with the impact of demand response resources less than 10 kW, which, ISO-NE explains, have a minimal impact on associated nodes, and thus a distributed model as proposed by ISO-NE in section III.E.1.2(b) is appropriate. ISO-NE states that it interprets the term "homogenous population" to mean that demand response assets that comprise an aggregation are of similar demand shapes, availabilities, and opportunity costs.[149] ISO-NE states that this is important because a homogeneous aggregation of demand response resources may be modeled non-nodally, affording administrative simplicity and flexibility to the aggregated group, while still resulting in reliable and efficient system

[147] *Id*. at 30-31.

[148] *Id*. at 28. Joint Parties concede that ISO-NE did not expressly include this request in its compliance filing

[149] ISO-NE Comprehensive Answer at 40.

operations. ISO-NE disagrees with Joint Parties' assertion that metering all demand response assets that comprise the aggregation is unmanageable and uneconomic. ISO-NE explains that it is reasonable to meter individual demand response assets, because it allows ISO-NE to verify whether offered demand response resources act in accordance with ISO-NE's dispatch instructions.

132. ISO-NE addresses Joint Parties' further assertions by stating that nothing in its compliance filing forces market participants to aggregate assets and that any potential future changes to aggregation provisions in the capacity market will be subject to the stakeholder process, affording interested parties the opportunity to comment on the changes.

133. With respect to Energy Spectrum's protest that ISO-NE opposes aggregating assets during the Transition Period, ISO-NE states that it does not oppose aggregating assets during the Transition Period as a matter of policy, however, as indicated in the Yoshimura Testimony included as part of its compliance filing, doing so is infeasible due to the complexities involved and the constraints of the existing software and systems infrastructure.[150]

5. Commission Determination

134. The Commission rejects ISO-NE's proposal to disallow aggregation of demand response resources under the Transition Period rules. ISO-NE's Tariff currently allows aggregation, and ISO-NE has failed to adequately explain why aggregation cannot continue under the Transition Period rules. We direct ISO-NE to make a compliance filing, within 90 days of the date of this order, to amend its proposed Tariff for the Transition Period to allow for ARCs to bid into the energy markets on behalf of smaller individual assets.

135. We further note that disallowing aggregation would violate Order No. 719, which specifically requires that RTOs and ISOs permit ARCs to bid demand response on behalf of retail customers directly into the organized energy market in certain circumstances.[151] Although ISO-NE's existing Tariff provisions relevant to aggregation appear to be Order

[150] *Id*. at 35.

[151] Order No. 719, FERC Stats. & Regs. ¶ 31,281 at P 15. Specifically, Order No. 719 required RTOs to amend their market rules as necessary to permit ARCs to bid demand response on behalf of retail customers directly into the RTO's organized markets, unless the laws or regulations of the relevant electric retail regulatory authority do not permit a retail customer to participate.

No. 719 compliant,[152] the Commission is concerned about witness testimony submitted with ISO-NE's filing here. Specifically, in Mr. Yoshimura's testimony, he states that "[t]he ISO's current price-responsive program infrastructure, upon which the transitional solution will be based, is not able to accommodate aggregation of assets."[153] ISO-NE should respond to this concern as part of the compliance filing required above.

136. With respect to the Fully Integrated solution, the Commission finds that ISO-NE's proposed provisions permitting the aggregation of Demand Response Assets are just and reasonable. We are persuaded by ISO-NE's explanation in the Comprehensive Answer that each of the proposed 10 kW threshold, the use and meaning of the term "homogeneous population," and the metering and communication requirements found in the Fully Integrated solution contribute to an aggregation methodology that is administratively simple, flexible, and ensures reliable, efficient, and verifiable system operations.

137. We decline to address Joint Parties' allegation that ISO-NE potentially may require aggregated assets in the capacity market to maintain that same aggregation in the energy market, as this issue is outside the scope of this proceeding because this proceeding, as dictated by Order No. 745, is limited to the rules and regulations associated with organized wholesale energy markets and does not address potential requirements (which we interpret to be speculative at best) concerning capacity markets.

J. IMM and Opportunity Costs

1. ISO-NE Proposal

138. ISO-NE proposes changes to Appendix A to Market Rule 1[154] designed to help satisfy Order No. 745's requirements related to measuring and verifying the performance of demand response resources and establishing accurate baselines to assure that demand

[152] Appendix E of Market Rule 1, which contains the rules for the current load response programs, states at section III.E.2.1 that, "Load Response Program Assets may be aggregated to reach the 100 kW [offer] minimum."

[153] Yoshimura Testimony at 69.

[154] Appendix A to Market Rule 1 of the ISO New England Inc. Transmission, Markets, and Services Tariff is entitled, *Market Monitoring, Report and Market Power Mitigation*.

reductions are genuine.[155] Specifically, ISO-NE proposes a new subsection to Appendix A, section III.A.12, which adds provisions giving the IMM authority to obtain information from demand response providers necessary for the IMM to determine: (1) the opportunity costs associated with Demand Reduction Offers; (2) the accuracy of demand response baselines; (3) the method used to achieve a demand reduction; and (4) the accuracy of reported demand levels. ISO-NE explains that it has not proposed any specific mitigation measures for demand response resources because, unlike with supply resources, it would be very difficult to develop a competitive offer or reference price to which to mitigate each demand response resource. Instead, the IMM will monitor the performance of demand response resources to identify behavior that needs further investigation to ensure accurate baselines and genuine demand reductions. Additionally, ISO-NE proposes changes to the ISO-NE Information Policy; ISO-NE states that these changes clarify that demand response information provided at the request of the IMM pursuant to section III.A.12 is confidential information and subject to the protections afforded to confidential information.

2. Protest and Comments

139. Joint Parties argue that, when investigating opportunity costs, the IMM cannot expect a one-size-fits-all allocation among customers of the same industry type; therefore, the IMM would need to develop a FERC Form 1 standard set of cost allocations for potentially thousands of customers. According to Joint Parties, to perform any kind of rational opportunity cost analysis, it would be necessary to investigate all aspects of a business's costs and determine which of them are avoidable and which are fixed. Joint Parties state that, on the revenue side, the IMM would need to evaluate whether lost production resulted in lost sales opportunities. Joint Parties assert that determining opportunity costs accurately would "likely require an academically rigorous analysis worthy of a doctoral dissertation or academic journal to be reliable."[156] Joint Parties allege that ISO-NE lacks sufficient resources and expertise to conduct such analyses with respect to hundreds of different industries; an investigation likely would be inconclusive.

3. Answers

140. The IMM filed an answer in response to arguments regarding inclusion in the proposed Transition Period rules of authority for the IMM to investigate the opportunity

[155] Compliance Filing, LaPlante Testimony at 2-3 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 94-95).

[156] Joint Parties Protest at 34.

costs of demand response resources. The IMM states that, in Order No. 745, the Commission explicitly agreed that demand reductions that are not genuine may violate the Commission's anti-manipulation rules. The IMM indicates that the first line of Commission investigation and enforcement is the monitoring and investigation activities the ISO/RTO market monitors perform, and such activity cannot occur without access to the necessary data from market participants. The IMM notes that the proposed market rules do not include any proposed mitigation measures. Instead, the IMM intends to rely on monitoring to assure competitive behavior by demand response resources, which is less intrusive than the mitigation measures that generation resources are subject to each day. The IMM argues that not allowing it access to the demand response resources' cost data would result in non-comparable treatment between demand and generation resources and could put competitive outcomes at risk. The IMM notes that it will only seek opportunity cost data by exception, not from all demand response resources at all times, stating that when an unusual bidding pattern is detected, it must be able to look below the surface to understand the pattern.[157]

141. ISO-NE notes that it supports the IMM's response to protests regarding inclusion in the proposed rules of authority for the IMM to investigate demand response providers' opportunity costs.[158]

4. Commission Determination

142. The Commission accepts ISO-NE's proposed Tariff revisions to Appendix A of Market Rule 1 and the ISO-NE Information Policy. We find that the IMM's proposal to observe demand response resource behavior, then request additional information when anomalies are identified, is appropriate. We do not find persuasive Joint Parties' arguments that the IMM would need or expect "one-size-fits-all" information in order to observe market participant behavior. ISO-NE's proposed approach is flexible enough to consider variations between customers. We also do not agree with Joint Parties that the IMM has insufficient resources or expertise to observe market participant behavior, considering that one of the IMM's primary responsibilities is to review and assess the markets, observe, and, when applicable, apply mitigation measures. Finally, ISO-NE's proposed Tariff provisions do not require the IMM to seek information at all times but, rather, only when an unusual bidding pattern is detected. We find this to be a reasonable approach.

---

[157] IMM Answer at 3-5.

[158] ISO-NE Comprehensive Answer at 43.

K. Forward Capacity Market

1. ISO-NE Proposal

143. ISO-NE states that, with the help of stakeholders, it has identified a number of additional demand response-related market design issues that, while not required for compliance, are expected to be reviewed and addressed in the near future. ISO-NE included a list of some of the issues expected to be discussed in the stakeholder process.[159]

2. Comments

144. Joint Parties state that ISO-NE's proposed alterations to the Forward Capacity Market represent significant changes to the function of the market and ISO-NE should not assume that they represent a desired end state without further investigation and analysis. Therefore, Joint Parties request that the Commission make clear that any order issued in this case is not an endorsement or approval of any future change to the Forward Capacity Market rules.

3. Answer

145. In its answer, ISO-NE states that, to the extent the protestors' concern relates to potential future changes to the rules addressing the respective aggregation provisions of the Forward Capacity Market and energy market, the protestors will have the opportunity to participate and advocate their views in the stakeholder process relating to these matters. ISO-NE states that protestors can bring any objections to the Commission once ISO-NE files any rule changes developed in that process.

4. Commission Determination

146. We agree that any future changes to the Forward Capacity Market rules are beyond the scope of this proceeding. Therefore, this order takes no position with respect to that issue. We view ISO-NE's statements referenced in this section as a list of issues that ISO-NE anticipates will be discussed in its stakeholder process. We encourage all parties to address any such issues initially in the stakeholder process, and the Commission will address any such proposals resulting from that stakeholder process after they are submitted for filing.

---

[159] Compliance Filing, Transmittal Letter at 11.

L. Timing of Commission Action on Order No. 745 Requests for Rehearing

147. In its comments, EPSA requests that the Commission act on rehearing before the ISOs and RTOs are required to implement the requirements of Order No. 745 so that resources do not expend time on complying with a rule that may fundamentally change based on the multiple requests for rehearing submitted to the Commission. Similarly, in its answer, EPSA also states that it requested rehearing of Order No. 745.[160] EPSA argues that the Commission should hold all Order No. 745 compliance proceedings in abeyance until the Commission addresses issues raised on rehearing of Order No. 745.[161]

148. Constellation also requests that the Commission act on the multiple rehearing requests prior to ISO-NE (or any other RTO) implementing Order No. 745 changes so that the Commission can fully understand and digest Constellation's and other parties' concerns detailed in the rehearing requests.

149. As an initial matter, the Commission notes that, in addition to the foregoing arguments, EPSA reiterates numerous arguments set forth in its rehearing request. These arguments, which assail the substantive determinations in Order No. 745, are beyond the scope of this compliance filing proceeding, and, therefore, we will not address them here. In this proceeding, the only issue is whether ISO-NE's proposed Tariff revisions comply with Order No. 745's directives. Additionally, the Commission issued its order on rehearing on December 15, 2011, thus EPSA's and Constellation's argument that the compliance proceeding should be held in abeyance pending the rehearing order is moot.[162]

The Commission orders:

(A) ISO-NE's filing is hereby accepted, with conditions, with the Transition Period rules to become effective June 1, 2012 and the Fully Integrated rules to become effective June 1, 2016, as discussed in the body of this order.

---

[160] *See* Joint Request for Rehearing of the Electric Power Supply Association, *et al.*, Docket No. RM10-17-000, filed April 14, 2011; Request for Rehearing of the Competitive Supplier Associations, Docket No. RM10-17-000, filed April 14, 2011.

[161] EPSA Answer at 4.

[162] Order No. 745-A, 137 FERC ¶ 61,215.

(B) ISO-NE is hereby directed to make an additional compliance filing within 90 days of the date of this order, as discussed in the body of this order.

By the Commission. Commissioner Moeller is dissenting in part with a separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Appendix

Intervention and Protest and/or Comment	Abbreviation
Association of Businesses Advocating Tariff Equity	ABATE
Conservation Law Foundation	CLF
Consolidated Edison Energy, Inc.*	
Constellation Energy Commodities Group, Inc. and Constellation NewEnergy, Inc.	Constellation
Consumer Demand Response Initiative	CDRI
Electric Power Supply Association	EPSA
Evergreen Packaging Inc.	Evergreen
Exelon Corporation*	
GDF Suez Energy Marketing NA, Inc.*	
GenOn Parties*	
Industrial Energy Consumers of America	IECA
Industrial Energy Consumer Group, EnerNOC, Inc., Comverge, Inc., Viridity Energy, Inc., Maine Pulp & Paper Association, Wisconsin Paper Council, Wisconsin Industrial Energy Group and Minnesota Large Industrial Group	Joint Parties[163]
Maine Attorney General	Maine AG
Macquarie Energy LLC*	
Maine Public Advocate*	
Maine Public Utilities Commission and Maine Office of Public Advocate	Maine Public Parties
Massachusetts Attorney General*	
Massachusetts Department of Public Utilities, Connecticut Public Utilities Regulatory Authority and Rhode Island Public Utilities Commission	Southern New England States
MeadWestvaco Corporation	MWV
NEPOOL Industrial Customer Coalition	NEPOOL Customers
NEPOOL Participants Committee	NEPOOL
New England Power Generators Association	NEPGA
New Hampshire Public Utilities Commission	NH PUC

[163] EnerNOC, Inc., Comverge, Inc., Maine Pulp & Paper Association, Wisconsin Paper Council, Wisconsin Industrial Energy Group, and Minnesota Large Industrial Group filed separate motions to intervene. Industrial Energy Consumer Group and Viridity Energy, Inc. did not request intervention.

New York City*	
Northeast Clean Heat and Power Initiative, Joint Supporters Voluntary Association, United States Clean Heat and Power Association, WADE USA, the U.S. Affiliate of the World Alliance of Distributed Resources and Maine Solar Energy Association	NECHPI
Retail Energy Supply Association	RESA
United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union	USW
Vermont Department of Public Service and Vermont Public Service Board	Vermont Public Parties
Verso Paper Corp.	Verso Paper
Wal-Mart Stores, Inc.*	
Out-of-Time Intervention	
Dominion Resources Services, Inc.	Dominion
Protest/Comment Only	
American Council for an Energy Efficient Economy, American Forest & Paper Association, Industrial Consumers of America and U.S. Clean Heat & Power Association	Joint Commenters
Energy Spectrum	
Environment Northeast (ENE), the Natural Resources Council of Maine, and Maine Audubon	Environmental Organizations
Industrial Energy Consumer Group	IECG
Marathon Engine Systems	Marathon

* Intervention Only

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England, Inc. Docket No. ER11-4336-000

(Issued January 19, 2012)

MOELLER, Commissioner, *dissenting in part*:

Demand response plays a very important role in markets by providing significant economic, reliability, and other market-related benefits when properly deployed.

For the reasons set forth in my dissents on Orders No. 745 and 745-A, I respectfully dissent.[1] While consumers may pay lower rates if some consumers voluntarily agree to use less electricity, the Federal Power Act requires this Commission to establish just and reasonable rates that are not discriminatory.[2] If the Commission requires the RTOs and ISOs to overcompensate for providing demand response, the resulting rates are both discriminatory and not just and reasonable.

In addition, rather than impose a nationwide approach to demand response compensation, the Commission's objective of promoting demand response would have been better served if the regions were free to propose compensation methods that recognize the very real differences in the structures of the regional markets.

_____
Philip D. Moeller
Commissioner

[1] *Demand Response Compensation in Organized Wholesale Energy Markets*, 134 FERC ¶ 61,187 (2011) (*Moeller Dissenting*) ("Order No. 745") and *Demand Response Compensation in Organized Wholesale Energy Markets*, 137 FERC ¶ 61,215 (2011) (*Moeller Dissenting*) ("Order No. 745-A"), respectively.

[2] 16 U.S.C. § 824d (2006).