

142 FERC ¶ 61,107
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

ISO New England Inc.

Docket No. ER12-953-001

ORDER ON COMPLIANCE FILING

(Issued February 12, 2013)

1. On December 3, 2012, ISO New England Inc. (ISO-NE), joined by the Participating Transmission Owners Administrative Committee,¹ submitted proposed tariff revisions (Compliance Filing) to the rules governing the Forward Capacity Market (FCM) in compliance with prior Commission orders. In this order, the Commission accepts in part and rejects in part ISO-NE's Compliance Filing, with part of the accepted provisions to become effective February 12, 2013, as requested, subject to conditions, and the financial assurance provisions to become effective February 26, 2013, as requested, as discussed in the body of this order.

I. Background

A. Forward Capacity Market

2. ISO-NE administers a forward market for capacity, the FCM, in which resources compete in an annual Forward Capacity Auction (FCA) to provide capacity on a three-year-forward basis. Providers whose capacity is taken in the FCA acquire Capacity Supply Obligations, which they must fulfill approximately three years later.² ISO-NE held the first two FCAs in 2008, the third FCA in October 2009, the fourth in August

¹ The Participating Transmission Owners Administrative Committee, on behalf of the individual Participating Transmission Owners, join this filing solely with respect to the proposed Tariff changes being made to Schedule 22 of ISO-NE's Open Access Transmission Tariff (OATT).

² The Commission accepted a portion of the market rules that implemented the FCM on April 16, 2007 (*ISO New England Inc.*, 119 FERC ¶ 61,045, *order on reh'g*, 120 FERC ¶ 61,087 (2007)), and the remainder on June 5, 2007 (*ISO New England Inc.*, 119 FERC ¶ 61,239 (2007), *reh'g denied*, 122 FERC ¶ 61,171 (2008)).

2010, the fifth in June 2011, the sixth (FCA 6) in April 2012, and the seventh (FCA 7) in February 2013. The eighth FCA (FCA 8) will take place in February 2014 and will procure capacity for the capacity commitment period beginning June 1, 2017 and ending May 31, 2018.

B. Prior Forward Capacity Market Revisions

3. As detailed in prior orders, on February 22, 2010, ISO-NE and the New England Power Pool Participants Committee (NEPOOL) submitted significant revisions to the FCM market rules. By order issued April 23, 2010,³ the Commission found certain of the proposed revisions to be just and reasonable, and accepted them without suspension; however, the Commission accepted, nominally suspended and set for paper hearing revisions related to the mitigation of buyer-side market power (then referred to as the Alternative Price Rule, or APR); the modeling of capacity zones and associated mitigation of seller-side market power; and the proper value of the Cost of New Entry (CONE).

4. The Commission issued an order on the paper hearing on April 13, 2011. As relevant here, the Commission found unjust and unreasonable the APR buyer-side market power mitigation regime then in effect and directed ISO-NE to work with stakeholders to develop and implement an offer floor mitigation regime using asset-class specific benchmarks. The Commission accepted ISO-NE's proposal to "model all zones all the time" and accepted parallel revisions to seller-side market power. The Commission also required ISO-NE to retain only the function of the CONE parameter that determined the price floor, accepted its proposal to eliminate all other uses of the CONE parameter prospectively, and, accordingly, found the proper value of the CONE parameter to be moot. The Commission further accepted ISO-NE's proposed extension of the price floor through at least FCA 6.

5. In the January 19, 2012 Order on rehearing and compliance filing, the Commission accepted ISO-NE's proposal to implement the required revisions in two stages.⁴ Stage one would consist of the implementation of the new buyer-side market power mitigation mechanism, the elimination of the price floor, and the modeling of four capacity zones "all the time." ISO-NE stated that it would be able to implement stage one in time for FCA 7. In stage two, ISO-NE proposed to review the existing eight

³ *ISO New England Inc. and New England Power Pool Participants Committee*, 131 FERC ¶ 61,065 (2010) (April 23, 2010 Order).

⁴ *ISO New England Inc. and New England Power Pool Participants Committee*, 135 FERC ¶ 61,029 (2011) (April 13, 2011 Order), *order on reh'g and clarification*, 138 FERC ¶ 61,027 (2012) (January 19, 2012 Order).

energy zones and identify the appropriate zones for capacity purposes, and to implement the appropriate zonal configuration.⁵

6. However, on, January 31, 2012, ISO-NE and NEPOOL filed jointly to delay the implementation of several of the modifications required by the April 13, 2011 Order. The Commission accepted this proposal in a March 2012 order,⁶ extending the then-effective FCM rules through FCA 7 with two modifications. First, ISO-NE and NEPOOL did not request a delay in the stage one implementation of modeling four capacity zones “all the time,” so the Commission’s order did not delay the implementation of this modification. Second, the Commission approved an extension of the price floor at the reduced level of \$3.15/kW-month for FCA 7. The Commission additionally directed that ISO-NE file rules fulfilling the remainder of its compliance obligations under the April 13, 2011 and January 19, 2012 Orders in time for implementation by FCA 8, that is, by December 3, 2012. It is this Compliance Filing that is now before us.

C. Instant Filing

7. ISO-NE’s proposed revisions institute an asset-class specific minimum offer price rule (MOPR) mechanism that applies to all new resources, including self-supplied and renewable resources. ISO-NE’s proposed MOPR includes the option of unit-specific review for resources wishing to offer below their benchmark price. ISO-NE’s proposed revisions lower the dynamic de-list bid threshold to \$1.00/kW-month, eliminate all remaining uses of the CONE parameter, and remove the administrative price floor in the FCM auctions. With respect to one aspect of zonal modeling, ISO-NE requests that the Commission waive its earlier-imposed compliance obligation. ISO-NE states that, due to significant changes in circumstance, it no longer believes that its proposal to model eight capacity zones in the FCA is appropriate. Instead, it believes that the four capacity zones accepted by the Commission for use in FCA 7 should be retained for FCA 8.

II. Procedural Issues

8. Notice of the Compliance Filing was published in the *Federal Register*, with interventions, comments and protests due on or before December 24, 2012.⁷ The

⁵ January 19, 2012 Order, 138 FERC ¶ 61,027 at P 154.

⁶ *ISO New England Inc. and New England Power Pool Participants Committee*, 138 FERC ¶ 61,238 (March 30, 2012 Order).

⁷ 77 Fed. Reg. 73643 (2012).

deadline was subsequently extended through December 28, 2012.⁸ Calpine Corporation; the Massachusetts Attorney General (Mass AG), Energy Management, Inc., American Wind Energy Association, Renewable Energy New England, Inc., National Grid, and Conservation Law Foundation (collectively, Mass AG); Connecticut Office of Consumer Counsel (CT OCC); GDF Suez Energy North America, Inc.; the NEPOOL Industrial Customer Coalition; the Electric Power Supply Association (EPSA); Massachusetts Department of Energy Resources (Mass DOER); Massachusetts Department of Public Utilities (Mass DPU); H.Q. Energy Services (U.S.) (HQUS); the Connecticut Attorney General (CT AG); PSEG Companies (PSEG); Eastern Massachusetts Consumer-Owned Systems (EMCOS); Massachusetts Municipal Wholesale Electric Company and New Hampshire Electric Cooperative (collectively, Public Systems); PPL EnergyPlus, LLC; Exelon Corporation (Exelon); Connecticut Public Utilities Regulatory Authority (CT PURA); NRG Companies (NRG); Maine Public Utilities Commission; EnerNOC, Inc. (EnerNOC); Northeast Utilities Service Company (NUSCO); the American Public Power Association, the Northeast Public Power Association and the National Rural Electric Cooperative Association (collectively, Joint Movants); New England States Committee on Electricity (NESCOE); TransCanada Power Marketing Ltd. (TransCanada); and the New England Power Generators Association (NEPGA) each filed a timely motion to intervene or notice of intervention. On January 17, 2013, the Danvers Electric Division filed a motion to intervene out-of-time.

9. NEPOOL, the CT AG, PSEG, Mass DPU and Mass DOER, EMCOS, Conservation Law Foundation, Public Systems, Exelon, CT OCC, CT PURA, NRG, EnerNOC, NUSCO, Joint Movants, TransCanada, NESCOE, Capital Power, EPSA, Mass AG and NEPGA filed timely comments or protests.

10. On January 11, 2013, HQUS filed an answer to the comments and protests. On January 14, 2013, ISO-NE, NEPOOL, and NEPGA filed answers to the comments and protests. On January 29, 2013, Mass AG and NRG filed answers to answers.

III. Discussion

A. Procedural Matters

11. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2012), the notices of intervention and timely-filed unopposed motions to intervene serve to make the entities that filed them a party to this proceeding. We will grant the motions to intervene out-of-time by the Danvers Electric Division

⁸ Notice dated December 19, 2012.

given its interest in this proceeding, the early stage of the proceeding, and the absence of any undue prejudice or delay.

12. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2012), prohibits an answer to a protest or an answer unless otherwise ordered by the decisional authority. We will accept the answers filed by HQUS, NEPOOL, ISO-NE and NEPGA, and the answers to answers filed by Mass AG and NRG because they have provided information that assisted us in our decision-making process.

B. Offer-Floor Mitigation

13. In the April 13, 2011 Order, the Commission required ISO-NE to work with its stakeholders to develop offer-floor mitigation in the FCM.⁹ Among other things, the Commission directed that the offer-floor mitigation proposal include a benchmark price for each resource type set at a level that approximates the net cost of entry of a new resource of its type as well as proposed offer floors based on these benchmarks; a process for revising these estimates over time; a process by which an individual resource can request a resource-specific offer floor based on resource specific data; and a proposed set of conditions that must be met before removing the offer floor from a resource.

1. Offer Review Trigger Prices

14. ISO-NE submits proposed tariff revisions establishing resource-type specific benchmark prices, which it refers to as "offer review trigger prices" (referred to here as "trigger prices"), because a new resource may offer capacity in the FCA at prices equal to or above the relevant offer review trigger price with no cost review by the Internal Market Monitor (IMM), while IMM review is "triggered" by offer prices below the offer review trigger price.

15. As directed by the Commission, ISO-NE states that it considered whether the trigger price should be set at the full estimate of the resource-specific cost of new entry or some percentage thereof and that the IMM determined that the trigger price should be equal to (in other words, set to 100 percent of) the relevant cost-of-new-entry estimate, except for rounding.

16. ISO-NE's proposed tariff language includes resource-specific trigger prices to be used in FCA 8. They are, for a combustion turbine: \$10.00 per kW-month; for a combined cycle gas turbine: \$11.00 per kW-month; for biomass: \$24.00 per kW-month; for on-shore wind: \$14.00 per kW-month; for real-time demand response: \$1.00 per kW-

⁹ April 13, 2011 Order, 135 FERC ¶ 61,029 at PP 165-169.

month; for energy efficiency: \$0.00 per kW-month. For all other resource types, the offer review trigger price shall be the FCA starting price.

17. ISO-NE's proposed tariff language also describes the methodologies used to calculate the offer review trigger prices. Offer review trigger prices for new generation resources are developed by including the capital costs; expected non-capacity revenues and operating costs; assumptions regarding depreciation; taxes; and discount rate as input into a capital budgeting model that is used to calculate the break-even contribution required from the FCM to yield a discounted cash flow with a net present value of zero for the resource.¹⁰ The offer review trigger price is set equal to the year-one capacity price output from the model, rounded to the nearest whole dollar value. ISO-NE states that the model looks at 20 years of real-dollar cash flows discounted at a rate (weighted average cost of capital) consistent with that expected of a project whose output is under contract (that is, a contract negotiated at arm's length between two unrelated parties). ISO-NE notes that the assumption that the project's output is sold pursuant to an arm's length contract ensures that the offer review trigger price is set at the low end of the range of competitive offers.

18. ISO-NE states that the trigger price for new Real-Time Demand Response Resources is based on an analysis of the incremental operating costs associated with the demand response business activities of selected industry firms engaged primarily in the demand response business, as reported in their Form 10k filings with the U.S. Securities and Exchange Commission. The IMM will review selected industry firm data for the three preceding years to estimate the incremental revenues required to cover the cost of new Real-Time Demand Response. The trigger price is set to the lowest calculated incremental revenue value for the selected firms during the studied years rounded to the nearest whole number. ISO-NE states that the IMM's analysis shows that the cost of acquiring incremental active demand response has increased year over year, and that there is a fairly wide range in costs. The difference in costs is due in part to differences in targeted markets and the inclusion in the data of business acquisitions and other activity not necessarily directly related to the acquisition of new active demand response. ISO-NE states that, nevertheless, the data do suggest that over the historical period, demand response resources have not, on average, been acquired for less than \$1.00 per kW-month. Hence, the IMM has set the trigger price for real-time demand resources to \$1.00 per kW-month for FCA 8.

¹⁰ ISO-NE states that the IMM retained Shaw Consultants International, Inc. to provide much of the data used in the IMM's capital budgeting model. ISO-NE attaches to its filing the benchmark price model inputs report developed by Shaw Consultants (Shaw Report), as well as the main worksheets from the IMM's capital budgeting model used to develop the offer review trigger prices.

19. ISO-NE proposes to recalculate the trigger prices, according to the methodologies described above, no less than once every three years using updated data. While the trigger prices proposed for FCA 8 could therefore apply through FCA 10, ISO-NE states that because these trigger prices were initially calculated for FCA 7, the IMM will consider recalculating the offer review trigger prices sooner than would be required under the Tariff Changes, possibly for FCA 9. ISO-NE's proposed tariff revisions further provide that, where any offer review trigger price is recalculated, the IMM is required to review the results with stakeholders and the new offer review trigger prices will be filed with the Commission prior to the FCA in which they are to apply. ISO-NE states that it will work with stakeholders to develop tariff provisions, to be effective for FCA 9, that would adjust the offer review trigger prices by an index or combination of indices in years for which no full recalculation is performed.

a. Comments and Protests

20. Capital Power and EPSA support ISO-NE's filing, including the creation of resource specific benchmark prices and setting the offer floor at 100 percent of these benchmarks prices. EPSA notes that the proposed changes to the FCM represent a significant step forward in establishing an effective process to ensure buyer-side mitigation in the ISO-NE market that best meets the requirements of that market.

21. NEPGA states that while ISO-NE's proposed MOPR is just and reasonable and complies with the April 13, 2011 Order, the trigger prices and processes require improvements. NEPGA takes issue with several Shaw Report assumptions underlying the trigger prices and states that ISO-NE did not provide stakeholders with these assumptions prior to submitting its Compliance Filing. NEPGA argues that stakeholders should be afforded an opportunity to review and discuss the Shaw Report and the assumptions underlying trigger prices on an on-going basis. NEPGA states that ISO-NE should allow for changes to trigger prices if stakeholders provide persuasive challenges to the Shaw Report assumptions.

22. NEPGA and NRG argue that the assumptions utilized by ISO-NE result in trigger prices that are below the merchant cost of new entry, which will in turn result in under-mitigation. In particular, NEPGA and NRG object to ISO-NE's assumption that a discount rate equal to a weighted average cost of capital is "consistent with that expected of a project whose output is under contract (*i.e.*, a contract negotiated at arm's length between two unrelated parties)."¹¹ Noting that it is exactly these long term contracts that the mitigation rules attempt to address, NEPGA argues that establishing the competitive threshold of the offer review trigger prices at a level that itself is set by uncompetitive behavior is illogical. NRG argues that ISO-NE's resulting proposed weighted average

¹¹ NEPGA Comments at 8 (citing ISO-NE Transmittal Letter at 13).

cost of capital of 6.3 percent is far below the assumption used in the most recent demand curve re-set in New York (8.43 percent), far below the 9.0574 percent weighted average cost of capital used in NRG's recent reliability-must-run filing at the Commission,¹² and in fact is even below the recent 9.04 percent weighted average cost of capital authorized by the Connecticut Public Utility Regulatory Authority for a contracted (non-merchant) resource.

23. NEPGA suggests that ISO-NE's assumptions for capacity value and capacity factor for wind resources are likewise questionable. NRG takes issue with other assumptions, including those that NRG describes as mandating the use of a 30-year life-of-plant (while PJM Interconnection L.L.C. (PJM) and other markets utilize a 20-year assumption) and forgoing inflation considerations.

24. While NEPGA and NRG allege that ISO-NE's assumptions result in under-mitigation, EMCOS asserts that ISO-NE's offer review trigger price assumptions will result in over-mitigation, asserting that the offer review trigger price mechanism is unduly discriminatory towards public power projects. EMCOS states that ISO-NE's model for calculating trigger prices contains inaccurate pricing assumptions that ignore key features of the public power business model and are in contrast to investor-owned and for-profit business models. EMCOS states that ISO-NE's model fails to take into account the fact that consumer-owned utilities do not require an explicit return on equity, generally do not use equity financing, are not subject to state or federal income taxes, and generally use a life-of-plant depreciation period rather than a tax-driven depreciation period. EMCOS believes that ISO-NE's use of these pricing assumptions will result in IMM review of every offer made by new public-sponsored resources and foster uncertainty concerning the financing of those resources. EMCOS asks the Commission to direct ISO-NE to revise its offer review trigger price mechanism to eliminate unduly discriminatory effects in time for FCA 8.¹³

25. EnerNOC states the methodology for establishing the trigger price for real-time demand response should be rejected. EnerNOC contends that the methodology depends on inputs that have no direct relationship to actual costs, and that the costs being examined for selected industry firms include both business activities unrelated to demand response and business activities outside of ISO-NE. EnerNOC asserts an IMM examination limited to only the publicly traded companies engaged in demand response activities and operating in the ISO-NE wholesale markets will produce a biased and volatile price with little correlation with the actual price for building Real-Time Demand

¹² NRG Protest at 20 (citing filing of Dunkirk Power LLC in Docket No. ER12-2237-000).

¹³ EMCOS Protest at 17.

Response resources in ISO-NE. EnerNOC notes that ISO-NE's trigger price proposal is based on the calculated costs of just two entities, EnerNOC and Comverge, and that Comverge recently ceased to be a publicly traded company. With Comverge no longer operating as a public company, EnerNOC estimates that the offer review trigger price for Real-Time Demand Resources will increase from \$1.00 per kw-month to \$3.00 per kw-month when IMM next recalculates the demand response trigger price.¹⁴ EnerNOC states the trigger price is also heavily influenced by the costs of EnerNOC's demand response business in markets outside of ISO-NE and from activities other than demand response. EnerNOC requests that the Commission either direct ISO-NE not to institute a minimum offer price for Real Time Demand Resources or direct ISO-NE to adopt the New York Independent System Operator, Inc. (NYISO) methodology previously approved by the Commission.

26. NRG states that there is a lack of record evidence justifying the trigger price for demand response capacity resources, and requests that the Commission require additional detail. NRG argues that at a minimum, ISO-NE should be ordered to perform a full update of the offer review trigger prices before FCA 9, as more data on these resources becomes available.

27. TransCanada argues that ISO-NE must provide further transparency with respect to how offer review trigger pricing and unit-specific review (discussed below at section III.B.2) are conducted. TransCanada therefore asks that the Commission require ISO-NE to provide examples of how the mitigation measures will be implemented and to inform market participants about the actions that are taken "as was done in New York."¹⁵ TransCanada also asks that these examples and protocols be filed and accepted by the Commission prior to their use.

28. With regard to updating trigger prices, Exelon generally supports ISO-NE's proposal to require that the offer review trigger price for each resource type be recalculated no less often than once every three years. Exelon believes that the Handy Whitman Index would be an appropriate index to use for the years in which no full calculation is performed.

29. Both Exelon and NEPGA ask that the Commission require the IMM to recalculate the offer review trigger prices for FCA 9 based on the most up-to-date data available. NEPGA cites Commission precedent¹⁶ that states that use of the most current information

¹⁴ EnerNOC Protest at 6.

¹⁵ TransCanada Protest at 2.

¹⁶ See *New York Independent System Operator, Inc.*, 140 FERC ¶ 61,189 (2012).

promotes an appropriate buyer-side mitigation process. NEPGA recommends that ISO-NE apply an indexing mechanism in years that it does not perform a full update, or develop a process by which it will perform a full update to the offer review trigger prices based on a clearly defined triggering event or series of events.

b. Answers

30. In response to NEPGA and NRG, ISO-NE states that, as described in the Joint Montalvo/Naughton Testimony,¹⁷ the offer review trigger prices represent prices at the low end of the range of competitive offers for each resource type. ISO-NE asserts that this strikes a reasonable balance by not subjecting clearly competitive offers to IMM evaluation, but only addressing those offers that plainly appear commercially implausible absent out-of-market (OOM) revenues.¹⁸ ISO-NE states that the offer review trigger prices do in fact use market-based assumptions. ISO-NE argues that the debt and return on equity components of the weighted average cost of capital calculation are based on market rates, and notes that the capital cost assumptions are best estimates, not the low end of the range.¹⁹ ISO-NE asserts that the combination of the return on equity component of 10.7 percent and the cost of debt of 5.5 percent assumes merchant transactions that are fully contracted over a given term with credit-worthy contractors and sponsors.

31. ISO-NE asserts that NRG's comparisons of the IMM-calculated weighted average cost of capital with other weighted average cost of capital figures are improper. For example, ISO-NE argues that NRG has cited the nominal NYISO weighted average cost of capital, while the IMM figure is an after tax, real weighted average cost of capital. According to ISO-NE, the after tax, real weighted average cost of capital used by NYISO is 6.35 percent, nearly identical to the IMM's value for New England of 6.3 percent.²⁰

¹⁷ Joint Testimony of Marc D. Montalvo and David H. Naughton, filed as supporting material to ISO-NE's Transmittal Letter.

¹⁸ The term "out-of-market" capacity is generally used to refer to capacity resources that receive revenue from outside the ISO-NE markets and, thus, are able to offer into the FCM at below-market rates. While this exact term will no longer appear in the tariff under the proposed revisions, the concept generally remains and therefore will be discussed in this order.

¹⁹ ISO-NE Transmittal Letter at 22 (citing Shaw Consultants Benchmark Price Model Inputs Report attachment).

²⁰ ISO-NE Answer at 23 (citing NRG Protest at 19-20 and fn 34).

32. NRG, in its answer to ISO-NE's answer, confirms that ISO-NE is correct that NRG cited the incorrect weighted average cost of capital used by NYISO, but states that the larger point remains: ISO-NE has used a weighted average cost of capital not available to merchant generation resources. Moreover, NRG asserts that to the best of its experience, long-term contracts with creditworthy counterparties are not generally available in today's market outside the context of state-mandated contracts.

33. In response to EnerNOC's concerns regarding the trigger price for demand response resources, ISO-NE notes that because it is difficult to assess the cost of acquiring any particular demand resource, the proposed methodology reasonably captures the lower-end of incremental costs of new entry.²¹ ISO-NE asserts that it is unclear how EnerNOC could be harmed by a trigger price that is too low, and that EnerNOC does not allege any negative market impacts. ISO-NE rejects EnerNOC's suggestion that a methodology similar to that used by NYISO also be used in New England, because there are significant differences between the ISO-NE and NYISO capacity markets. ISO-NE explains that NYISO evaluates the commercial terms, specifically the minimum monthly payments to customers, of individual demand resources through an ex-post audit procedure if the resource causes prices to drop by more than a certain threshold. ISO-NE states that this is not suitable for use in the New England market for two reasons. First, the FCA is conducted three years in advance of the capacity commitment period, so it is unrealistic to think that contractual terms will be in place with a demand resource at the time of the auction, and even if an ex-post audit revealed problems, the remedy is unclear as the auction would already have completed. Second, ISO-NE argues that it would not be appropriate to use an ex-post auditing and penalty structure for demand resources when all other resources are subject to ex-ante mitigation. ISO-NE suggests that if the Commission nonetheless determines that the methodology should be changed, then such a review should be undertaken during the next complete update of the trigger prices, which could occur as early as FCA 9.

34. In response to TransCanada's request for further transparency, ISO-NE states that "given the significant level of detail in the newly-filed rules, it is unclear precisely what else TransCanada believes necessary."²² ISO-NE cites Tariff Section III.A.21.1, pertaining to when the IMM review of resource-specific information is required and Tariff Section III.A.21.2 laying out how the IMM will develop its resource-specific capacity price estimates when it undertakes such a review.²³

²¹ ISO-NE Answer at 24-25.

²² *Id.* 19.

²³ *Id.*

35. Further, ISO-NE states that contrary to NEPGA's assertion, the IMM shared with stakeholders all relevant and detailed input assumptions and calculations underlying the offer review trigger prices in September and October of 2011.

36. ISO-NE also asks that the Commission reject arguments for full recalculation of the offer review trigger prices to be used in FCA 9, noting that it has committed in its Transmittal Letter to either a full recalculation of the trigger prices for FCA 9 or an adjustment by index for FCA 9. It observes that the assumptions underlying the trigger prices can be thoroughly debated at the next full recalculation.

c. Commission Determination

37. In the April 13, 2011 Order, the Commission directed ISO-NE to develop benchmark prices for each resource type set at a level that approximates the net cost of entry of a new resource of its type.²⁴ ISO-NE has developed such a set of benchmarks, which it refers to as "offer review trigger prices," and we will accept them.

38. Trigger prices form a screen: offers at or above the trigger price are accepted into the FCA with no further review; offers below the trigger price may nevertheless be accepted into the FCA if they are justified with the IMM during the unit-specific review process. NEPGA and NRG argue that ISO-NE has wrongly employed a weighted average cost of capital based on the assumption that a project's output is under contract, with the result that generation trigger prices are improperly *below* the merchant cost of new entry. While it should not be assumed that a merchant project will not be financed without a PPA, we are satisfied by ISO-NE's rationalization that, in the case of New England, use of trigger prices at the low end of the spectrum strikes a reasonable balance by not subjecting clearly competitive offers to IMM evaluation, but only addressing those offers that plainly appear commercially implausible absent out-of-market revenues. Because we find the assumptions behind ISO-NE's trigger prices, and the trigger prices themselves, well within the range of reasonableness, we find them in compliance with prior Commission directives.

39. EMCOS asserts that the application of ISO-NE's model to consumer-owned utilities fails to account for the benefits of the public power business model, and results in over-mitigation of new investment by public power entities. EMCOS states that consumer-owned utilities have lower costs than private investors that, for example, rely on equity financing and are subject to state and federal income taxes. As explained above, we find that ISO-NE's proposed use of trigger prices at the low end of the spectrum is reasonably intended to address only those offers that plainly appear commercially implausible absent out-of-market revenues. To the extent that a resource

²⁴ April 13, 2011 Order, 135 FERC ¶ 61,029 at P 169.

owner, including a consumer-owned utility, believes that its costs are lower than the applicable trigger price, it can seek a lower offer floor by submitting its unit-specific costs to the IMM. Accordingly, as discussed below in the section addressing ISO-NE's proposed unit-specific review that we accept, consumer-owned utilities may seek to justify an offer floor below the applicable trigger price based on its lower cost of capital and tax status.

40. ISO-NE explains that, because of the difficulty of assessing the costs of any particular demand resource, the IMM has chosen to assess the costs of the active demand response business in aggregate, by estimating the incremental cost of acquiring active demand response MWs. ISO-NE explains that this is accomplished by looking at the publicly available data: the costs that have been reported to the SEC by industry "pure plays" in recent years. While this method does result in limited data (as EnerNOC alleges and ISO-NE acknowledges), we are satisfied that it arrives at a reasonable estimate of the competitive costs of bringing demand-response resources to market for purposes of the \$1.00 per kW-month trigger price for FCA 8. However, we strongly encourage ISO-NE, during the next complete update of trigger prices, to revise its demand response trigger price methodology so that it does not rely on such limited data.

41. We decline EnerNOC's request that we either direct ISO-NE *not* to institute a MOPR for demand response resources or that we direct it to adopt the NYISO demand response mitigation methodology. Demand response resources can suppress market clearing prices in the same manner as generation resources, and therefore should be subject to buyer-side mitigation. EnerNOC has not demonstrated how it or the market would be harmed by a \$1.00 per kW-month trigger price, and we will not address EnerNOC's purely speculative concern that the demand response trigger price methodology might at some point in the future rise to \$3.00 per kW-month. Moreover, to the extent that EnerNOC believes that demand response trigger prices are too high, ISO-NE's proposal provides EnerNOC the opportunity to seek a different, cost-justified offer floor based on a unit-specific review of its costs. We find compelling ISO-NE's argument that it would be inappropriate to adopt the ex-post NYISO demand response mitigation mechanism. Unlike in NYISO, the FCM is conducted three years in advance of the capacity commitment period, so it would be impractical to expect contractual terms to be in place with a demand resource at the time of the auction, and an ex-post audit would reveal problems only after the auction is completed and could not be undone.

42. With regard to concerns that ISO-NE should provide for on-going stakeholder review of trigger prices and further transparency with respect to how offer review trigger pricing and unit-specific review (discussed below at section III.B.2) are conducted, we note that, as ISO-NE states, stakeholders can debate the assumptions underlying trigger prices at the next full recalculation. Additionally, as ISO-NE notes, the tariff changes specify how the trigger prices for each resource type are developed; when IMM review of resource-specific information is required; and how the IMM will develop its resource-

specific capacity prices when such review is undertaken. Moreover, as provided for by the tariff, each of these steps requires filings and approvals by the Commission.

43. As to the updating of trigger prices, we find that ISO-NE's proposal to recalculate trigger prices no less than every three years satisfies the directive in the April 13, 2011 Order, that ISO-NE file a set of proposed estimates of the costs of new entry for various categories of new resources and "a process for revising these estimates over time."²⁵ While certain parties posit that trigger prices should be recalculated prior to FCA 9, ISO-NE proposes in its Transmittal Letter to develop with stakeholders, in time for FCA 9, a mechanism whereby the offer review trigger prices are adjusted by an index or combination of indices in years for which no full recalculation is performed. Stakeholders can raise their concerns during that process, and we will not prejudge any issues at this time.

2. Unit-Specific Offer Review

44. ISO-NE's proposed offer-floor mitigation mechanism includes a process by which a capacity resource may request a resource-specific offer floor lower than the relevant offer review trigger price. A resource that seeks to offer into the FCM at prices below the applicable resource-specific trigger price must include in its qualification package the lowest price at which the resource seeks to offer capacity in the FCA, along with supporting documentation justifying that price as competitive in light of the resource's costs. The IMM²⁶ will enter all relevant resource costs and non-capacity revenue data, as well as assumptions regarding depreciation, taxes, and discount rate into the capital budgeting model used to develop the relevant trigger price and will calculate the break-even contribution required from the FCM to yield a discounted cash flow with a net present value of zero for the project.²⁷ The IMM will then compare this calculated break-even price with the requested unit offer price to determine whether to grant the request.²⁸

45. The calculation of non-capacity revenues will be based on the assumption that the project's output is sold pursuant to an arm's length contract. These revenues would exclude OOM revenues, which ISO-NE defines as revenues that are (i) not tradable

²⁵ April 13, 2011 Order, 135 FERC ¶ 61,029 at P 169.

²⁶The IMM review process is specified in Tariff Section III.13.1.1.2.2.3 (new generating capacity resources), Section III.13.1.4.2.4 (new demand response resources), and Section III.13.1.3.5 (new import capacity resources).

²⁷ Tariff Section III.A.21.2(b).

²⁸ *Id.*

throughout the New England Control Area or that are restricted to resources within a particular state or other geographic sub-region; or (ii) not available to all resources of the same physical type within the New England Control Area without regard to the resource owner.²⁹ ISO-NE proposes to exclude from OOM revenues the expected revenues associated with economic development incentives broadly offered by state or local governments and that are not expressly intended to reduce prices in the FCM.³⁰ ISO-NE requires that when submitting its requested offer price, the resource project sponsor shall indicate the cash flows supported by a “regulated rate, charge, or other regulated cost recovery mechanism.”³¹ If the project is supported by a regulated rate, charge, or other regulated cost recovery mechanism, then that rate will be “replaced with the [IMM] estimate of energy revenues.”³² The IMM will adjust any forecasts or assumptions relied on to support the project’s request that are clearly inconsistent with prevailing market conditions.³³

a. Comments and Protests

46. TransCanada objects to ISO-NE’s proposal to allow, in its unit-specific review process, “[e]xpected revenues associated with economic development incentives that are offered broadly by state or local government and that are not expressly intended to reduce prices in the FCM”³⁴ TransCanada notes that such a provision can eviscerate the purpose of a floor price, that is, the prevention of artificial and uneconomic price suppression whether intended or unintended. TransCanada requests that, to the extent any OOM payments may be excluded during the unit-specific review process, the Commission order ISO-NE to describe and define what it means by “economic development incentives that are offered broadly,” and to file these descriptions and definitions with the Commission prior to their use.³⁵

²⁹ *Id.*

³⁰ *Id.*

³¹ Tariff Section III.A.2(b)(i).

³² *Id.*

³³ *Id.*

³⁴ TransCanada Comments at 3 (citing ISO-NE Transmittal Letter at 18).

³⁵ *Id.*

47. NRG objects to what it describes as ISO-NE's proposal to allow market participants to develop their own energy and ancillary services offset values without an independent audit.

48. EMCOS argues that because ISO-NE's proposed offer floor trigger prices will always be higher than the costs of resources procured by public power utilities, public power utilities will always need to seek a unit-specific review by the IMM. EMCOS states that the unit-specific review process creates uncertainty about the timing and availability of future revenue streams that will complicate efforts to finance projects, that this burden is imposed uniquely on public power projects, and thus, that ISO-NE's proposal is unduly discriminatory.³⁶

49. Joint Movants state that the exclusion of OOM revenue sources in the proposed unit-specific offer review rules will wipe out "for the purposes of participation in the FCM auction" the unique advantages of the public power/cooperative business model.³⁷ Joint Movants request that the Commission reject the portions of the tariff changes dealing with self-supply and institute settlement discussions.³⁸

50. Public Systems state that the unit-specific review provisions are impermissibly vague and could be construed to require the exclusion of revenues received by a consumer-owned entity from its members in connection with their development of a new self-supplied resource.³⁹ Public Systems argue that such revenues are consistent with the long-standing business models of consumer-owned power, and excluding such revenues would impose undue burden on consumer-owned utilities. If the Commission does not require the adoption of a self-supply exemption for consumer-owned entities, (discussed below in section III.B.5), Public Systems requests that the Commission prohibit ISO-NE from excluding, during the unit-specific review process, revenues paid to a consumer-owned entity by its members in connection with the development of a new self-supplied resource.

b. Answer

51. ISO-NE argues that NRG is incorrect that the IMM's approach will "allow market participants to develop their own energy and ancillary services offset values without

³⁶ EMCOS Comments at 16.

³⁷ Joint Movants Protest at 16.

³⁸ *Id.* at 17.

³⁹ Public Systems Protest at 25.

regard to actual market conditions and without an independent audit.”⁴⁰ ISO-NE states that the bases for offers below the relevant offer review trigger price are subject to independent evaluation by the IMM and those assumptions must be reasonable and market-based.

52. We summarize ISO-NE’s answer regarding requests for exemptions for self-supplied resources at section III.B.5.

c. Commission Determination

53. The April 13, 2011 Order required that ISO-NE’s MOPR include a mechanism by which a capacity resource may request an offer floor that is lower than the applicable default offer floor. We find that ISO-NE’s proposal is in compliance with this requirement, because it allows a resource to cost-justify a new resource offer floor price that is lower than the relevant trigger price.

54. When performing a unit-specific offer review, the IMM evaluates the unit’s costs net of its expected non-capacity revenues. In order to prevent uneconomic new entry, ISO-NE proposes to exclude OOM revenues from this calculation. We agree with ISO-NE that it is reasonable to define OOM revenues as those that are (i) not tradable throughout the New England Control Area or that are restricted to resources within a particular state or other geographic sub-region; or (ii) not available to all resources of the same physical type within the New England Control Area without regard to the resource owner.⁴¹ We also agree that where a project “is supported by a regulated rate, charge, or other regulated cost recovery mechanism,” it is reasonable to replace that rate “with the [IMM] estimate of energy revenues.”⁴² ISO-NE’s proposed methodology appropriately includes in the definition of OOM revenues – and thus, excludes from the calculation of net unit-specific costs – revenues that are available to new resources but not to existing resources, and thus, are not available to all market participants.

55. We disagree with NRG’s characterization that ISO-NE proposes that energy and ancillary services revenues submitted by market participants for use in a unit-specific offer review will be accepted without regard for consistency with market conditions and

⁴⁰ NRG Protest at 20-21.

⁴¹ For example, revenues from a contract available only for new resources and not available for both new and existing resources would be considered out-of-market, because the contract would not be available to all resources of the same physical type within the New England Control Area.

⁴² Tariff Section III.A.21.2(b)(i).

without the IMM performing an independent audit of the estimated revenues. As proposed, revenues deemed OOM will be replaced with an IMM estimate of energy revenues. Where possible, “the [IMM] will use like-unit historical production, revenue and fuel cost data. Where such information is not available, (e.g., there is no resource of that type in service), the [IMM] will use a forecast provided by a credible third party source.”⁴³ ISO-NE’s proposed tariff changes also specify that any assumptions clearly inconsistent with prevailing market conditions will be adjusted.⁴⁴

56. We do not agree with EMCOS that the unit-specific review process creates undue uncertainty or imposes an unduly discriminatory burden on public power projects. Unit-specific review will conclude prior to the FCA, which will occur three years in advance of the applicable capacity commitment period, and thus, in advance of the time when most developers must make significant construction expenditures to build their new projects. Developers, including developers of public power projects, will have the results of their unit specific review prior to the applicable FCA, and thus, prior to the time when financing must be in place for most construction expenditures.

57. We do not agree with TransCanada’s concerns regarding lack of specificity in the proposed tariff change. ISO-NE stated that “[e]xpected revenues associated with economic development incentives that are offered broadly by state or local government and that are not expressly intended to reduce prices in the FCM are not considered” OOM revenues for the purpose of performing the unit specific review.⁴⁵ We note that in the April 23, 2010 Order, the Commission approved nearly identical language: “economic development incentives” was modified to “conventional economic development incentives”⁴⁶ and described as “e.g., property tax reductions to attract industry.”⁴⁷ ISO-NE’s proposal to exclude revenues of this type (conventional economic development incentives) from OOM is appropriate, because they are typically offered to a wide range of industries.

58. We deny Public Systems’ request that we modify the unit-specific review provisions to exclude from OOM revenues any revenues arising from a regulated rate, charge or other cost recovery mechanism. The proposed tariff changes already exclude

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ ISO-NE Transmittal Letter at 18.

⁴⁶ April 23, 2010 Order, 131 FERC ¶ 61,065 at P 156.

⁴⁷ *Id.* P 153.

expected revenues associated with economic development programs offered broadly by state or local governments or which are offered to a wide array of industries. As noted in the unit-specific review provisions, the IMM will replace the identified revenues associated with regulated rate recovery with an estimate of energy revenues. The proposed mechanism appropriately replaces such revenues (as OOM) with an estimate of energy revenues within the unit-specific review mechanism.

3. Duration of Mitigation

59. ISO-NE proposes to subject a resource to offer floor mitigation until the resource clears in one FCA. ISO-NE states that for a new (uncleared) resource that has already achieved commercial operation at the time of an FCA, the IMM will reduce the capital cost used to calculate the resource's new resource offer floor price by the depreciation accumulated during the years which the resource has been in operation. ISO-NE asserts that this approach strikes a reasonable balance between the two extremes of no mitigation at all and full mitigation in perpetuity. ISO-NE states that a new OOM resource will remain subject to the offer-floor mechanism for up to 30 years (unless it clears in the FCA), though the resource's new resource offer floor price will decline over that period.

a. Comments and Protests

60. NRG asserts that ISO-NE's approach to gradually lower, and then ultimately eliminate, the price floor on mitigated units is unjust and unreasonable and would directly contradict Commission precedent.⁴⁸ NRG states that it is uneconomic to allow a new resource that enters commercial operation but fails to clear in an FCA to participate in future FCAs based on its net depreciated book value. NRG argues that ISO-NE's approach would allow market entrants to bypass buyer-side mitigation and to suppress prices below the true cost of new entry for a resource. NRG argues that the ISO-NE External Market Monitor (EMM) David Patton finds "no theoretical basis to support reducing the offer floor below the levelized Net CONE just because time has passed with the unit in operation."⁴⁹ NRG requests that the Commission order ISO-NE to incorporate the three recommendations of the EMM: (1) continue mitigation in subsequent auctions on the portion of a unit that has not cleared the FCM; (2) prohibit

⁴⁸ NRG Protest at 17 (citing *New York Independent System Operator, Inc.*, 133 FERC ¶ 61,178 (2010) (NYISO Order)).

⁴⁹ NRG Protest at 17-18 (citing David Patton, Potomac Economics, letter to New England Power Generators Association, November 23, 2011, http://iso-ne.com/committees/comm_wkgrps/mrks_comm/mrks/mtrls/2011/dec672011/a07f_potomac_economics_memo_11_23_11.pdf).

capacity exports from mitigated units; and (3) apply offer floor mitigation without regard to ownership of the unit.⁵⁰

b. Answers

61. ISO-NE disputes any implication that the proposed offer-floor mitigation mechanism permits uneconomic resources to clear. ISO-NE asserts that NRG does not define what it means by “economic” or explain its assertion that the proposed mechanism will allow uneconomic resources to clear. ISO-NE states that, as described in the Joint Montalvo/Naughton Testimony, the duration of mitigation is based on the principle that a resource’s floor price should always reflect the resource’s economic value. ISO-NE states that the duration provisions appropriately calculate the economic value of a resource, and a resource can only clear if it is economic. ISO-NE asserts that depreciating the capital cost used to calculate the trigger price using straight line depreciation with an assumed asset life of 30 years is fairly conservative and appropriately balances the need to prevent suppression of capacity prices with using the economic value of a resource to set its floor price.

62. NRG answers that any offer below the default mitigation price, that is, below a resource type’s levelized cost, is uneconomic and will result in price suppression. It describes as “noteworthy” that ISO-NE’s answer did not attempt to distinguish the NYISO Order, nor rebut the assertion of the EMM that there is no “theoretical basis” for reducing the offer floor over time.⁵¹

c. Commission Determination

63. In the April 13, 2011 Order, the Commission directed ISO-NE to determine “how long a resource should be subject to an offer floor and/or what conditions should be met before removing the offer floor for the resource.”⁵² We find that ISO-NE’s proposal to subject a resource to offer floor mitigation until the resource clears in one FCA complies with our directive and is just and reasonable. However, we agree with NRG that ISO-NE’s proposed methodology for reducing the offer floor of an uncleared resource that has already achieved commercial operation at the time of an FCA is not just and reasonable, and thus, we reject it and direct ISO-NE to submit a revised proposal.

⁵⁰ *Id.* at 18.

⁵¹ NRG Answer at 6.

⁵² April 13, 2011 Order, 135 FERC ¶ 61,029 at P 169.

64. In calculating trigger prices, it is necessary to spread the resource's total investment costs over its estimated useful life. ISO-NE proposes to do so using the real levelization method,⁵³ and we find that method just and reasonable. The trigger price is set equal to the real leveled costs in the first year of operation.⁵⁴ Under real levelization, the nominal dollar cost of a resource increases with each passing year by the inflation rate. And in a recent case addressing buyer-side mitigation in NYISO's capacity market, we concluded that a resource's offer floor should increase over time by the rate of inflation for as long as the resource continued to be subject to an offer floor, in order for the offer cap to reflect entry costs over time.⁵⁵ By contrast, under ISO-NE's proposal, a resource that has not yet cleared in an FCA would be allowed an offer floor that was lower than its first-year leveled cost, because its total investment cost would be reduced by the amount of accumulated straight-line depreciation. We conclude that this aspect of ISO-NE's filing is not just and reasonable, because it would establish an offer floor that is below the entry cost of the resource. We do not agree with ISO-NE that its proposal provides a reasonable balance between no mitigation and full mitigation in perpetuity. Rather, as we concluded in the NYISO order, a resource should be subject to an offer floor until it has demonstrated that it is needed by the market. Otherwise, it could circumvent effective buyer-side mitigation by entering the market at a time when it is not needed, and then becoming subject to an offer floor below its entry costs.

4. Treatment of Imports under the MOPR

65. In the April 13, 2011 Order, the Commission found that due to the difficulty of determining what resource or set of resources is supporting an import and whether the supporting resource or set of resources is new or existing, "it is reasonable to treat most imports like existing internal resources for mitigation purposes."⁵⁶ The Commission noted that an exception exists in the case of "imports where a specific new external resource is identified as the sole support for the import, and where a significant

⁵³ III.A.21.1.2(b)

⁵⁴ *Id.*

⁵⁵ *Astoria Generating Co., L.P.*, 139 FERC ¶ 61,244, at P 52 (2002). NYISO, like ISO-NE, calculates default offer floors using the real levelization method.

⁵⁶ April 13, 2011 Order, 135 FERC ¶ 61,029 at P 191.

investment . . . is made to provide capacity to New England.”⁵⁷ The Commission reaffirmed this finding on rehearing.⁵⁸

66. Pursuant to that directive, ISO-NE proposes new section III.A.21.1.1, which states that offer review trigger prices shall apply to new import capacity resources backed by a single new external resource and associated with an investment in transmission that increases New England’s import capacity. For any other new import capacity resource, the offer review trigger price shall be \$0.00/kW-month.

a. Comments and Protests

67. PSEG agrees that trigger prices should apply to a new import from a specific asset that also requires new transmission. However, according to PSEG, imports from Canada are not required to designate specific generation assets in support of their capacity commitments. Therefore, according to PSEG, the Commission’s directive that the MOPR apply to “imports where a specific new external resource is identified as the sole support for the import, and where a significant investment . . . is made to provide capacity to New England”⁵⁹ cannot be applied to Canadian imports. This, argues PSEG, allows Canadian imports to escape mitigation. PSEG asserts that is unfair and discriminatory to allow Canadian imports to escape mitigation while subjecting New York-based imports to mitigation, and posits that in either case the market power potential is the same. PSEG requests that the Commission direct ISO-NE to subject imports from Canada to the same requirements as imports from New York – that is, the requirement to designate specific assets supporting capacity imports.

b. Answers

68. ISO-NE disputes PSEG’s position, arguing that import provisions in the offer-floor mitigation mechanism do not distinguish between imports from Canada and imports from elsewhere. ISO-NE asserts that under its proposal, any new import, regardless of origin, will have an offer review trigger price of \$0.00/kW-month unless it is backed by a single new external resource and is associated with an investment in transmission that increases New England’s import capability.

69. HQUS disputes PSEG’s argument that the proposed tariff language discriminates in favor of Canadian imports. HQUS states that ISO-NE’s tariff permits both imports

⁵⁷ *Id.*

⁵⁸ January 19, 2012 Order, 138 FERC ¶ 61,027 at PP 97-98.

⁵⁹ *Id.*

from specific resources and imports backed by an external control area. According to HQUS, under ISO-NE's proposed revisions, any import backed by a single new external resource, Canadian or otherwise, must inform ISO-NE and could be subject to mitigation, while imports backed by existing external resources or by a control area, Canadian or otherwise, are not subject to mitigation. HQUS argues that PSEG's request that the Commission order ISO-NE to require all importers to specify an external resource backing their capacity offers: (1) would fundamentally alter the circumstances under which capacity may be imported into the FCM; (2) unduly discriminates against importers of capacity backed by a control area; and (3) is an improper collateral attack on the FCM Settlement⁶⁰ and prior Commission orders at the compliance phase of this proceeding.

c. Commission Determination

70. We accept, as in compliance with prior Commission orders, ISO-NE's proposal to apply offer review trigger prices to any new import capacity resource backed by a single new external resource and associated with an investment in transmission that increases New England's import capacity. We also accept, as in compliance with prior Commission orders, ISO-NE's proposal to apply to other new import capacity resources an offer review trigger price of \$0.00/kW-month.

71. We decline PSEG's request to direct ISO-NE to require imports from Canada to designate the specific assets supporting their capacity imports. We agree with ISO-NE and HQUS that under ISO-NE's proposal, any new import, regardless of origin, will have an offer review trigger price of \$0.00/kW-month unless it is backed by a single new external resource and is associated with an investment in transmission that increases New England's import capability. Likewise, imports backed by existing external resources or by a control area, Canadian or otherwise, are not subject to mitigation. We therefore find no undue preference or unduly discriminatory treatment in ISO-NE's proposal regarding capacity imports.

5. New Self-Supplied Resources in the FCA

72. The April 13, 2011 Order found that a blanket, across-the-board exemption from offer floor mitigation for self-supplied new resources was not just and reasonable, because it would allow for an unacceptable opportunity to exercise buyer market power. The January 19, 2012 Order on rehearing noted that there are certain advantages associated with long-standing business models that should not be deemed automatically suspect when determining a resource's net costs. The order noted that these advantages

⁶⁰ The settlement leading to the implementation of the FCM was accepted in *Devon Power, LLC*, 115 FERC ¶ 61,340 (2006).

should be taken into consideration in the IMM's unit-specific offer review process. The order then stated:

If stakeholders nevertheless conclude that this existing tariff process is not sufficient to mitigate the concerns that the application of offer floor mitigation to self-supplied resources will be particularly burdensome for municipal, cooperative and traditionally regulated investor-owned utilities, ISO-NE and its stakeholders should work within the stakeholder process to develop a mechanism that further addresses these concerns.⁶¹

73. In its compliance filing, ISO-NE proposes to include self-supplied FCA resources among the new resources to which the MOPR will apply. In addition, the tariff provisions describing how self-supplied resources participate in the FCA have been augmented to specify that each such resource shall be automatically entered into each round of the FCA for its designated self-supplied quantity at prices at or above its resource offer floor price.⁶² This applies only to new self-supplied capacity resources.⁶³

a. Comments and Protests

74. A number of parties support the proposed MOPR's lack of categorical exemptions for any class of resources. NEPGA argues that categorical exemptions fail to protect against undue market price impacts, noting that the Commission has explained that non-competitive offers "undermine the market's ability to attract needed investment over time," which in the long run "will not attract sufficient private investment to maintain reliability" and will shift investment risk to captive customers.⁶⁴ NEPGA argues that buyer-side mitigation does not deter states and public power entities from carrying out their resource procurement objectives and self-supplying capacity resources, and that there is no need to grant blanket exemptions to any resource or class of resources given the unit specific offer review tariff provisions and the ability to request a resource-specific mitigation exemption pursuant to a section 206 filing.

⁶¹ January 19, 2012 Order, 138 FERC ¶ 61,027 at P 70.

⁶² Tariff Section III.13.2.3.2(c).

⁶³ *Id.* The ISO-NE also corrects two inadvertent uses in this section of the term "summer Qualified Capacity," replacing them with the correct "FCA Qualified Capacity."

⁶⁴ NEPGA Comments at 4 (citing *PJM Interconnection, L.L.C.*, 128 FERC ¶ 61,157, at P 90-91 (2009)).

75. Joint Movants criticize ISO-NE for not including a mechanism to engage in stakeholder discussions to address the concerns of self-suppliers regarding the Commission's requirement that self-supplied resources be subject to an offer floor. Joint Movants argue that ISO-NE's proposed treatment of OOM revenue sources will, if approved, wipe out "the unique advantages of the public power/cooperative business model."⁶⁵ Joint Movants recount the history of self-supply in the New England capacity markets, and argue that the cumulative effect of the actions that the Commission and ISO-NE have taken is to substantially undermine "long-standing and well-recognized business models."⁶⁶ Joint Movants argue that the Commission and ISO-NE have done so despite the lack of evidence that those practicing the public power/cooperative business model have done anything but attempt to carry out their mission of providing retail electric service at the lowest reasonable cost consistent with reliable service and environmental stewardship, and to do so in a manner wholly consistent with bargained-for and Commission-approved settlement rights. Joint Movants therefore request that the Commission reject the tariff revisions dealing with self-supply and instead order facilitated settlement discussions, and direct the ISO-NE to make a further compliance filing. Similarly, Public Systems argue that paragraph 70 of the Commission's January 19, 2012 Order (quoted above) directs ISO-NE to develop a mechanism to address the concerns of consumer-owned utilities with respect to self-supply, but that ISO-NE's filing fails to develop such a mechanism.

76. Public Systems concludes that applying the MOPR to the self-supply of consumer-owned resources is not just and reasonable, and thus, that this aspect of ISO-NE's filing should be rejected. Public Systems argues that applying the MOPR to self-supplied consumer-owned utilities exceeds the Commission's jurisdiction. If the Commission declines to reject ISO-NE's compliance filing, Public Systems requests that acceptance be conditioned upon the adoption of a MOPR exemption for self-supply structured along the lines proposed by PJM in Docket No. ER13-535-000. Public Systems proposes that if the Commission does not direct ISO-NE to exempt self-supply or modify the unit-specific exemption process (discussed above), it should suspend the filing and set it for hearing and settlement procedures.⁶⁷

77. NUSCO argues that the omission of an exemption for self-supply undermines a fundamental principle of the FCM Settlement, which counted self-supply toward load serving entity capacity obligations. NUSCO urges the Commission to either grant a self-

⁶⁵ Joint Movants Protest at 16.

⁶⁶ *Id.* at 18-19.

⁶⁷ *See, e.g.*, Public Systems Comments at 4.

supply exemption to all load serving entities, including traditional vertically-integrated utilities, or exempt no sub-class of load serving entities to the exclusion of others.⁶⁸

b. Answers

78. In its answer,⁶⁹ ISO-NE argues that the protests regarding self-supply should be rejected on both procedural and substantive grounds. On procedural grounds, ISO-NE states that the Commission squarely addressed proposals to exempt self-supplied resources in both its April 13, 2011 Order and its January 19, 2012 Order on rehearing. Thus, in ISO-NE's view, the issue cannot be raised again in response to ISO-NE's compliance filing. NEPGA adds that in rejecting the request for a blanket self-supply exemption in ISO-NE, the Commission instead directed the parties to seek a section 206 exemption for any resource-specific exemption requests.⁷⁰

79. On substantive grounds, ISO-NE and NEPGA argue that an exemption for new self-supplied FCA resources would inappropriately suppress capacity prices. NEPGA adds that self-supply resources would not be allowed to harm all other capacity resources in New England by suppressing otherwise competitive outcomes of the FCM.

c. Commission Determination

80. In the April 13, 2011 Order, the Commission expressly found that new self-supply should be subject to offer floor mitigation.⁷¹ Accordingly, ISO-NE's proposal to apply the minimum offer mitigation measures to self-supply complies with that order, and we reject NUSCO's request for a blanket self-supply exemption for all load serving entities. As we discussed in the April 13, 2011 Order, a new self-supplied resource offering into the FCA as a price taker has the same price-depressing effect on the auction price as offering any other new resource into the FCA at a price of zero. Therefore, a blanket self-supply exemption from the MOPR would allow entities with new self-supply to circumvent the MOPR, thereby allowing subsidized uneconomic entry to artificially depress prices. Moreover, the parties' arguments do not persuade us that self-supplied resources, including those of public or consumer-owned power, are unduly discriminated against by the lack of such an exemption. That is because, under the revisions accepted

⁶⁸ NUSCO Comments at 11-12.

⁶⁹ ISO-NE Answer at 3, 16-18.

⁷⁰ NEPGA Answer at 10 (citing January 19, 2012 Order, 138 FERC ¶ 61,027 at P 70).

⁷¹ April 13, 2011 Order, 135 FERC ¶ 61,029 at P 232.

here, resources with entry costs below the default level will have the opportunity, through the unit specific offer review afforded to all ISO-NE participants, to demonstrate that their entry costs are lower than the relevant trigger price. Any new self-supplied resource whose actual full entry costs are below the clearing price will have the opportunity to clear in the FCA.

81. Further, contrary to Public Systems' assertions, the January 19, 2012 Order did not require ISO-NE to develop a mechanism to address the concerns of consumer-owned utilities regarding self-supply. As noted above, the January 19, 2012 Order required ISO-NE to develop such a mechanism if stakeholders conclude that the existing tariff process is not sufficient to mitigate the concerns that mitigating self-supply will be particularly burdensome for municipal, cooperative, and traditionally regulated investor-owned utilities. However, there is no evidence that stakeholders in the New England stakeholder process reached such a conclusion. To the contrary, as noted in NEPOOL's comments,⁷² the NEPOOL stakeholders rejected a proposal to recognize an exemption to the MOPR for new self-supplied FCA resources of publicly owned entities.

82. Finally, because we find that ISO-NE's proposal with respect to self-supply complies with our previous directives, we deny the requests of Public Systems and Joint Movants to set this matter for hearing.

6. New Renewable Resources in the FCA

83. In the April 23, 2010 Order, the Commission directed parties to submit briefs addressing whether a mitigation mechanism might accommodate OOM capacity introduced for resource adequacy or to satisfy public policy goals, such as the integration of renewable and demand response resources.⁷³ In the April 13, 2011 Order on the paper hearing, the Commission stated that it acknowledged the rights of states to pursue policy interests within their jurisdiction. The Commission went on to state:

Our concern, however, is where pursuit of these policy interests allows uneconomic entry of OOM capacity into the capacity market that is subject to our jurisdiction, with the effect of suppressing capacity prices in those markets. We note that our primary concern stems not from the state policies themselves, but from the accompanying price constructs that result in offers into the capacity market from these resources that are not reflective of their actual costs. We agree with arguments contending that OOM capacity suppresses prices regardless of intent and that the

⁷² NEPOOL Comments, December 21, 2012, at p. 10.

⁷³ April 13, 2011 Order, 135 FERC ¶ 61,029 at P 77.

Commission has exclusive jurisdiction on assessing whether wholesale rates are just and reasonable.⁷⁴

84. In the January 19, 2012 Order on Rehearing, the Commission denied rehearing with respect to the treatment of state-sponsored projects and clarified that parties are free to introduce and develop categorical exemptions or other measures in the stakeholder process.⁷⁵

85. Pursuant to the directive in the Commission's April 13, 2011 Order to work with stakeholders to develop and implement an offer floor mitigation regime using asset-class-specific benchmarks, ISO-NE proposes a MOPR that applies to all new resources offering into the FCM, including renewables.

a. Comments and Protests

86. Various parties state that ISO-NE's proposal is not just and reasonable because the rules consider revenues associated with certain renewable resources as OOM or because the rules fail to allow for a renewable-resource exemption. These parties argue that, because renewable resources will not clear the auction and therefore will not count towards the Installed Capacity Requirement (ICR), even though they in fact will be providing capacity, the FCM will procure more capacity than is necessary for resource adequacy, and, ultimately, ratepayers will pay for more capacity than is needed. Accordingly, the Conservation Law Foundation objects that the proposed MOPR contains no mechanism to limit the amount of capacity procured in excess of the ICR. Protestors further assert that ISO-NE's proposal undermines or conflicts with state law and public policy.

87. The Mass AG states that the Commission should reject ISO-NE's proposed MOPR unless it includes the Mass AG's proposed amendment.⁷⁶ The Mass AG amendment does not provide for a blanket exemption, instead treating wind and solar revenues as in-market under the IMM's unit-specific review process.⁷⁷ Therefore, the

⁷⁴ *Id.* P 170, footnotes omitted.

⁷⁵ January 19, 2012 Order, 138 FERC ¶ 61,027 at PP 88-91.

⁷⁶ The Mass AG notes that it also does not support the MOPR construct itself as it creates an administratively-established offer price rather than relying on market forces to establish bids.

⁷⁷ The CT AG and CT OCC also support the comments and protest filed by the Mass AG, and both parties also request that the Commission expand the classes of renewables exempt from the MOPR to include all renewable generation as defined under
(continued...)

Mass AG states that the IMM will be able to determine if an offer is intended to suppress prices. The Mass AG states that, if the Commission declines to adopt the Mass AG's amendment, in the alternative, the Commission should reject ISO-NE's filing unless it adopts NESCOE's amendment, described below.

88. NESCOE⁷⁸ states that the Commission should reject ISO-NE's proposal unless it includes NESCOE's proposed exemption from mitigation for renewable energy resources that are developed pursuant to state policy (Renewables Exemption Proposal).⁷⁹ Under the Renewable Exemption Proposal, to qualify as a renewable resource, a resource must be considered a "renewable technology resource."⁸⁰ NESCOE explains that the Renewables Exemption Proposal has several eligibility requirements: (1) qualifying resources must be supported by an OOM revenue source supported by a state- or federally-regulated rate, charge, or other regulated cost recovery mechanism; (2) such resources must not collectively exceed an annual MW capacity limit of 225 MW;⁸¹ and (3) resources are subject to a multi-fuel provision that ensures that only resources that genuinely produce renewable power are exempt. NESCOE states that its proposal would limit any market impact and price suppression effect because only resources that receive OOM revenue streams are eligible for the exemption, and the aggregate annual cap limits the impact on any given auction.

the laws of the various New England states. The Conservation Law Foundation also supports the Mass AG protest.

⁷⁸ The CT PURA joins NESCOE's protest. The Mass DPU and Mass DOER support NESCOE's proposal, and, in the alternative, support the Mass AG proposal.

⁷⁹ NESCOE has filed an FPA section 206 complaint in Docket No. EL13-34 that raises the same material issues as its protest. The Commission's order on that complaint, *New England States Committee on Electricity v. ISO New England Inc.*, 142 FERC ¶ 61,108 (2013), is being issued concurrently with this order.

⁸⁰ NESCOE explains that there are two categories of renewable technology resource: (1) those resource types eligible for Renewable Portfolio Standards (RPS) credit in five of the six New England states and supported by a comparable program in the sixth and (2) renewable resource types recognized by any one state's law, but with a 10 MW size limitation. NESCOE explains that only facilities 30 MW and under may qualify under the first criterion.

⁸¹ NESCOE states that any excess in a given year would be considered a "new" resource and mitigated in the FCA, and the excess capacity would be applied first to the subsequent auction's 225 MW cap.

89. Capital Power and NEPGA support the fact that ISO-NE's MOPR proposal does not allow for exemptions. Capital Power states that allowing exemptions would exacerbate capacity price suppression issues, and that comparisons to PJM are invalid because New England states' Renewable Portfolio Standards (RPS) goals will have more significance in the much smaller ISO-NE region. Capital Power also asserts that ISO-NE's rules obviate the need for exemptions, since benchmarks are calculated on the lower end of competitive offers for each resource type. Capital Power states that capacity payments are only a small portion of an RPS resource's overall revenue, so that it is unlikely that a mitigation determination will be the decisive factor in determining whether or not such a project is built.

90. NEPGA argues that, contrary to protestors' arguments, the MOPR does not deter states and public power entities from carrying out their resource procurement objectives. NEPGA asserts that the states will likely not condition their policies and associated procurement based on the capacity market value for those resources. NEPGA asserts that there is no need to grant a blanket exemption, since an entity can justify a lower offer price via a section 206 filing to the Commission or through the unit-specific review process proposed by ISO-NE's tariff.

b. Answers

91. In their answers, ISO-NE and NEPGA largely agree that arguments that the MOPR should include a categorical exemption for state-sponsored resources should be rejected for three reasons: (1) the protestors do not allege that ISO-NE's compliance filing fails to comply with Commission orders on this subject, and the only issue on compliance is whether the filing complies with the directives of the Commission's order;⁸² (2) the arguments for the categorical exclusion for state-sponsored projects have already been rejected by the Commission on rehearing; and (3) arguments protesting the omission of a categorical exemption for state-sponsored projects constitute a prohibited collateral attack on the April 13, 2011 Order and the January 19, 2012 Order on rehearing.

92. ISO-NE and NEPGA also reiterate substantive arguments against a categorical exemption for state-sponsored resources. ISO-NE argues that protestors do not explain why it is just and reasonable for OOM resources that are built to meet state policy goals to reduce the capacity price paid to other resources. ISO-NE and NEPGA reject protestors' claims that the exclusion of state-sponsored resources from the FCM will

⁸² *Citing High Point Gas Transmission, LLC*, 140 FERC ¶ 61,259, at P 26 (2012); *Monroe Gas Storage Co., LLC*, 131 FERC ¶ 61,258, at P 24 (2010) (citing *Great Lakes Gas Transmission, L.P.*, 108 FERC ¶ 61,308, at P 11 (2004); *East Tennessee Natural Gas Co.*, 108 FERC ¶ 61,135, at P 9 (2004)).

result in the FCM procuring more capacity than the ICR. They argue that if the states choose to build uneconomic resources outside the FCM pursuant to public policy interests, the states, not the FCM, are responsible for the procurement of redundant capacity. NEPGA argues additionally that protesters' claims that they must "purchase capacity twice" fails to recognize that Renewable Energy Credits (RECs) are products created by the states and, as such, are not capacity products sold in the FCM. NEPGA also argues that contrary to protesters' assertions, it is price suppression itself, not the intent to suppress prices that is the overriding harm the Commission seeks to protect against.

93. ISO-NE states that comparisons to exemptions for renewable resources in PJM are inappropriate because PJM's capacity market includes important features that the FCM does not, such as a downward-sloping demand curve. ISO-NE requests that if, despite its arguments to the contrary, the Commission considers the implementation of a categorical exemption from offer-floor mitigation for any resource type or types, the Commission should send the matter back to ISO-NE for development and stakeholder review. ISO-NE notes that allowing sufficient time to accomplish this would also permit the development of a demand curve.

94. In its answer, the Mass AG emphasizes that it is not proposing a categorical, blanket exemption, but is instead proposing to treat wind and solar revenues as in-market during the unit-specific review process. Because the Commission has not previously addressed this approach, the Mass AG argues that its proposal cannot be a collateral attack. In addition, the Mass AG argues that NEPGA and ISO-NE's assertions that the Commission should not concern itself with excess capacity procurement resulting from state action is irrational and contrary to Commission precedent.⁸³ The Mass AG argues that ignoring the reality that state policies promoting renewables exist is not a luxury that the Commission may engage in given its responsibility to set just and reasonable rates.

95. The Mass AG argues that the Commission has rejected the argument that wind and solar resources inappropriately suppress prices when it noted that "wind and solar resources are a poor choice if a developer's primary purpose is to suppress capacity

⁸³ The Mass AG argues that ISO-NE acknowledges in the context of one type of resource that is going to exist regardless of the FCM (a resource that has already achieved commercial operation prior to the FCA in which it participates), the inefficiency of such a result and in fact proposes steps to eliminate this inefficiency in its duration of mitigation provisions. Conversely, according to the Mass AG, ISO-NE claims that with respect to wind or solar projects that are similarly going to exist regardless of the FCM, procurement of more capacity than is needed is not unjust and unreasonable.

market prices.”⁸⁴ Regarding the stakeholder process, the Mass AG states that the MOPR revisions as amended by its proposal received more stakeholder support than did the MOPR as filed. Finally, the Mass AG states that the Commission should not impose a demand curve on New England.

c. Commission Determination

96. We will not require ISO-NE to include an exemption for renewable resources. We will accept its MOPR proposal that applies mitigation to all new resources offering into the FCM, including renewables that are procured pursuant to state policy initiatives to meet Renewable and Alternative Portfolio Standards. Further, we reject the Mass AG’s and NESCOE’s alternative proposals to exempt renewables by either treating wind and solar revenues as in-market, or via a blanket exemption.

97. In the April 13, 2011 Order, the Commission directed ISO-NE to work with stakeholders to develop and implement an offer floor mitigation regime using asset-class-specific benchmarks.⁸⁵ The Commission did not direct ISO-NE to institute a MOPR exemption for renewables or to specify that contract revenues would not be considered as out-of-market, per the Mass AG proposal. Thus, the only question before us here is whether ISO-NE has complied with prior Commission orders, and, on the renewables issue, neither the Mass AG nor NESCOE argues that ISO-NE’s proposal fails in that regard. Because the Commission did not require ISO-NE to include an exemption for renewable resources and ISO-NE has not proposed one, the Mass AG’s and NESCOE’s arguments on this issue and alternative proposals are beyond the scope of this proceeding.⁸⁶ While we will accept ISO-NE’s proposal as it complies with prior Commission orders, given the large number of stakeholders that supported some form of renewable resource exemption, we encourage ISO-NE to undertake the development of a stakeholder process for such an exemption, which could include the development of a demand curve.

98. In the meantime, we remind parties of an existing alternative stated in the January 19, 2012 Order that “state parties have the statutory right under section 206 to file to prospectively change a rate schedule and we reaffirm that this is the statutory vehicle

⁸⁴ Mass AG Answer at 5, citing *PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,022, at P 153 (2011).

⁸⁵ April 13, 2011 Order, 135 FERC ¶ 61,029 at PP 165-169.

⁸⁶ NESCOE’s complaint is addressed in an order issued concurrently with this one *New England States Committee on Electricity v. ISO New England Inc.*, Docket No. EL13-34-000, 142 FERC ¶ 61,108 (2013).

available to state parties seeking an exemption for any particular state policy project. In such a filing, a state party must demonstrate that ISO-NE's offer floor mitigation tariff rules are unjust and unreasonable as applied to a particular project or projects."⁸⁷

C. Capacity Zones

99. In its compliance filing, ISO-NE asks the Commission to waive its obligation to model eight zones at all times, and instead to permit it to model four zones, on the basis that eight zones are no longer necessary, and could result in significant inefficiency in the FCM. ISO-NE proposes instead to continue to use the four zones it has modeled in FCA 7. ISO-NE asks that, if the Commission does not waive this compliance obligation, it consider the instant filing to be a filing under section 205 of the FPA as to this issue.⁸⁸

100. ISO-NE states that, to determine capacity zones, ISO-NE intended to analyze each relevant transmission constraint and then place resources into groups that either ameliorated or exacerbated that constraint, and then derive zones from that analysis. ISO-NE now states, however, that the New England bulk power system is approaching the point where most of the constraints that defined the eight capacity zones and precluded the shutdown and retirement of generating facilities either no longer exist or are being eliminated. ISO-NE's witness Stephen Rourke testified that New England has added many resources and transmission reinforcements over the past ten years, and will complete a number of additional major projects by the 2017-2018 capacity commitment Period, so that existing zonal limitations will change significantly.⁸⁹ Mr. Rourke states that these upgrades will bolster load serving capabilities in New England's load pockets and will eliminate or reduce many existing reliability concerns.⁹⁰ ISO-NE states that

⁸⁷ January 19, 2012 Order, 138 FERC ¶ 61,027 at P 89.

⁸⁸ Transmittal Letter at 2.

⁸⁹ Transmittal Letter at 37 nn.138 and 139 (citing Testimony of Stephen Rourke, Attachment to Transmittal Letter (Rourke Testimony) at 3).

⁹⁰ Mr. Rourke refers to, among others, projects that will improve transfer limits and load serving capability for Connecticut, Rhode Island, and the Greater Springfield (MA) area; the Maine Power Reliability Program that will address problems in Maine and is also expected to improve transfer capability between Maine and New Hampshire and reduce some of the locked-in capacity in the Maine zone; upgrades that will improve the ability to transfer power into the Greater Boston area, which is currently the most import-constrained zonal area in New England; and projects providing improvements to the ability to move power from New Hampshire and Vermont into Massachusetts. Rourke Testimony at 4-6.

these upgrades “erase” many of the previous zonal boundaries and blur the current lines of distinction between many areas.⁹¹ Similarly, ISO-NE states that, even under analytical scenarios in which a substantial quantity of existing generation retires, those scenarios show that for now, the existing four capacity zones will address “any prominent zonal issues remaining . . . through the FCM zonal market mechanisms.”⁹²

101. ISO-NE states that, given these changed circumstances, implementing capacity zones based on the eight existing energy load zones would introduce significant market inefficiencies and create unnecessary difficulties and costs. ISO-NE explains that development of new capacity zones requires a discrete and measurable electrical transfer limit into and out of such capacity zones, but that, given the new transmission upgrades, ISO-NE would have to use somewhat arbitrary means to express transfer limits that correspond to the boundaries of the eight existing energy load zones, which to some extent no longer exist.⁹³ ISO-NE states that it could develop somewhat “artificial” transfer limitations, but “because they would not be associated with actual transfer limitations across the zonal boundaries, the numbers . . . would arbitrarily create financial winners and losers.”⁹⁴ Further, ISO-NE states that it would need to revise ISO Planning Procedures and make significant changes to ISO business processes and settlement systems to divide the system into eight capacity zones.

102. ISO-NE further states that dividing the system into eight capacity zones that do not reflect actual transmission constraints could adversely affect the efficiency of the capacity market. It would limit parties’ ability to engage in self-supply or bilateral transactions, since those transactions in some cases may not cross capacity zone lines. For similar reasons, it would restrict the ability of participants to engage in composite offers. ISO-NE does not consider it reasonable to implement eight capacity zones for “at

⁹¹ Transmittal Letter at 38; Rourke Testimony at 6-7.

⁹² Rourke Testimony at 7.

⁹³ Rourke Testimony at 6 (“[U]pgrades to the system will bolster load-serving capabilities in major regional load pockets such as Connecticut, greater Boston, southeastern Massachusetts and Rhode Island, and the New Hampshire seacoast area, as well as address a number of more local load-serving issues. In many instances, existing reliability concerns will be eliminated entirely or significantly mitigated for the foreseeable future. These upgrades also serve to electrically tie more closely the eight load zones within New England to each other, blurring the current lines of distinction between many areas of the system”).

⁹⁴ Transmittal Letter at 39.

most one or two auctions,”⁹⁵ and notes that (a) meaningful zonal transfer limits and associated capacity requirements have been and will continue to be established for each of those four zones, and (b) these four zones capture the two areas of primary concern for the capacity commitment Period associated with FCA 8, specifically, locked-in capacity in Maine and impending capacity import limitations in the NEMA (Northeastern Massachusetts)/Boston area.⁹⁶ ISO-NE therefore states that the most reasonable course of action would be to retain the four capacity zones that will be modeled in FCA 7 pending completion of additional design work by ISO-NE, and further discussions with stakeholders. ISO-NE states that, beginning in the second quarter of 2013, it will undertake a stakeholder process to address how capacity zones and the associated zonal requirements are determined, which will be informed by both the ongoing Strategic Planning Initiative and the changes to the transmission system described above, and will allow the development of capacity zones that better reflects the changed system topology. ISO-NE asks the Commission not to set a specific deadline for implementation of further zonal changes, but instead asks that the four capacity zones already approved by the Commission should remain in place until ISO-NE and stakeholders have had the opportunity to develop and file a new approach with the Commission.

103. Thus, ISO-NE requests waiver of the obligation to implement eight capacity zones based on the eight existing energy load zones, which will require no tariff changes, as the four capacity zones are currently identified in the Tariff with no sunset date.⁹⁷ ISO-NE also states that it does not believe that a filing pursuant to Section 205 of the FPA is necessary for the Commission to approve this proposal with respect to capacity zones; however, to the extent that the Commission determines that this change should be made pursuant to section 205, ISO-NE requests that the Commission consider this portion of the filing, and the associated testimony and attachments, to be a filing pursuant to section 205 of the FPA demonstrating that maintaining the four capacity zones already in place is just and reasonable.

1. Comments and Protests

104. Exelon generally supports ISO-NE’s filing, but states that correct identification of zones is fundamental to the success of FCM. It states that it is critical to address the correct number and location of zones, the process for changing zones, zonal purchase requirements that are consistent across both the FCM and the transmission planning process, and rules for bilateral trading across zonal boundaries. Exelon asks the

⁹⁵ Transmittal Letter at 40.

⁹⁶ Transmittal Letter at 40 (citing Rourke Testimony at 7).

⁹⁷ Transmittal Letter at 41 n.152 (citing Tariff Section III.12.4).

Commission to require ISO-NE to commence a stakeholder process as soon as possible to resolve these issues no later than necessary for implementation for FCA 9, and, if possible, to implement individual elements earlier.⁹⁸

105. Capital Power states that the current capacity market was originally designed to address the lack of locational pricing, and that the Commission previously found that appropriate zonal modeling will increase, not decrease, market efficiency. Capital Power states that the combination of the mitigation measures discussed herein and increased zone modeling will lead to more reliable FCM pricing that will reflect locational constraints, which is particularly important in regions such as southeastern Massachusetts (SEMA), which anticipates increased generation retirements and transmission constraints. Capital Power asks the Commission to require ISO-NE to make a compliance filing prior to FCA 8 (on or around December 2013) on zonal changes that it will model for that auction (or in the absence of such changes, a statement of why changes for FCA 8 are not just and reasonable, and what changes ISO-NE will model for FCA 9). It states that this filing should include an examination of the criteria for creating or eliminating a zone, establish zonal purchase requirements consistently with the assumptions used to plan transmission into those zones, and state the assumptions used to review de-list requests, as well as trading requirements and restrictions.⁹⁹

106. NEPGA, PSEG and NRG urge the Commission to reject ISO-NE's request for a waiver of the eight-zone requirement. NEPGA and PSEG note that the Commission has long recognized the absence of, and need for, appropriate locational pricing in the New England capacity market, and that over a decade has passed since the Commission ordered New England to develop a capacity market with proper locational signals. PSEG states that ISO-NE is failing in its obligation to model zones so as to ensure that reliability needs are modeled correctly and send correct investment signals, and that the FCM will continue to be unjust and unreasonable absent this appropriate market design.¹⁰⁰ NEPGA states that absent correct market signals, prices will continue to not separate, de-list bids will continue to be rejected for reliability, transmission and supply will continue to operate on an unlevel playing field, and market participants will continue to pay uplift to satisfy reliability needs. PSEG states that, even given ISO-NE's statements about the difficulties of modeling eight capacity zones based on existing load zones, ISO-NE has not explained how it will address those difficulties going forward. NRG points to the Commission's finding in the April 11 Order that "with proper constraint definition and market power mitigation, an expansion of zonal modeling will

⁹⁸ Exelon Comments at 4-6.

⁹⁹ Capital Power Protest at 7.

¹⁰⁰ PSEG Protest at 7.

increase, not decrease, market efficiency.”¹⁰¹ PSEG further notes that ISO-NE stated in its 2012 Regional System Plan that the mix of resources in New England changes continually, so that a static report cannot capture the most recent information, and thus it is critical to model capacity zones correctly now, so that the auction can find the proper mix of resources and efficient prices, and send the right signal for investment in New England.

107. PSEG further states that ISO-NE has not demonstrated that more capacity zones are not needed, and did not include a transmission study to support its claim that the combination of recent and planned transmission investments has now eliminated the need for eight capacity zones or that the configuration of the capacity zones that mirror the long standing load zones are no longer commercially reasonable. PSEG notes that modeling all zones all the time has been supported by both the ISO Internal Market Monitor and External Market Monitor, and that Mr. Rourke’s testimony, which simply provides a list of scheduled transmission projects that are part of the 2012 Regional System Plan and provides a generalized discussion, is not a substitute for a transmission study. PSEG further asserts that any transmission study must consider the types of generators located within an area that may become constrained, since generators that have higher operating costs or must retrofit to meet environmental regulations may need higher locational prices to stay in operation, and in such cases, it would be necessary for a zone to separate in price so as to incent new generation or demand response in that area. PSEG states that, with regard to ISO-NE’s request that, in the alternative, the Commission consider its request to only model four zones under section 205, ISO-NE has not met its burden of showing that such a change is just and reasonable.¹⁰²

108. NRG points out that in the past, ISO-NE has consistently rejected de-list bids from resources needed for reliability, demonstrating a need for more granular analysis of capacity zones, and that with the elimination of the price floor in FCA 8, more de-list bids are to be expected throughout the region. NRG asserts that the currently-depressed energy and capacity market in New England, combined with new environmental regulations, is likely to drive many resources into retirement during the FCA 8 and FCA 9 time frame, including the very units (oil and coal) that are vital to alleviating operational concerns. NRG asserts that prior ISO-NE studies show that the eight zones that the Commission previously directed ISO-NE to model are valid electrical zones, and supported by a distribution factor analysis; additionally, since the eight load zones are consistent with the existing energy zones, they will be familiar to market participants as distinct locations within regional markets. NRG states that in 2009, ISO-NE had identified major transmission projects, totaling roughly \$9 billion in investment, that

¹⁰¹ NRG Protest at 7 (citing April 13, 2011 Order, 135 FERC ¶ 61,029 at P 71).

¹⁰² PSEG Protest at 12.

would alleviate zonal constraints, at the same time that ISO-NE made its proposal to model eight zones, but in September 2012, ISO-NE presented a virtually identical set of major transmission projects which it now seeks to use as a justification for not modeling eight zones. NRG asserts that nothing has changed since 2009 to suggest that the eight capacity zones that ISO-NE proposed to model at that time are not still appropriate.¹⁰³ NRG further argues that at least some of this \$9 billion in transmission investment might not have been necessary, and customers could have avoided the seven-fold increase in ISO-NE's regional transmission rates over the past several years, if New England had implemented a capacity market that appropriately modeled locational constraints.

109. NEPGA and PSEG further note that ISO-NE recently reported on its review of 28 oil and coal-fired generators representing nearly 8.3 GW of capacity that are at risk of retirement by 2020, and states that if these resources retire, New England will require 6,300 MW of new or repowered resources, or the retention of existing resources, by 2020.¹⁰⁴ They argue that a market design that appropriately signals investment needs in particular areas will require better definition of zones and transmission interfaces that limit the unimpeded delivery of capacity across them will be necessary. PSEG, NEPGA and NRG also state that on December 13, 2012, ISO-NE presented its estimate of generation that may retire in SEMA (which is not one of the four zones that ISO-NE currently proposes to model) and predicted that SEMA would become a natural capacity zone, noting that the repowering of resources in SEMA would be necessary to address import constraints, and that "SEMA import transmission constraints would require continued operation of assumed at-risk resources in SEMA."¹⁰⁵ Thus, NEPGA argues that, at the least, ISO-NE should model SEMA, in addition to the other four load zones, for FCA 8. NRG similarly points to the difference in outcomes with regard to NEMA in FCA 6 and FCA 7: in FCA 6 NEMA was not modeled as a separate capacity zone, and ISO-NE had to make OOM agreements with resources in that zone to prevent them from

¹⁰³ NRG Protest at 10 n. 22 (citing 2012 Regional System Plan, 2012 Regional System Plan Public Meeting, September 13, 2012, at 11 available at http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2012/sep132012/rsp12_public_meeting_slides.pdf).

¹⁰⁴ NEPGA Protest at 12; NRG protest at 8 (citing ISO-NE "Strategic Transmission Analysis: Generation Retirements Study," available at http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2012/dec132012/retirements_redacted.pdf).

¹⁰⁵ NEPGA Protest at 14 n.35 (citing ISO-NE "Strategic Transmission Analysis: Generation Retirements Study," available at http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2012/dec132012/retirements_redacted.pdf; NRG protest at 12).

retiring, whereas in upcoming FCA 7 NEMA was modeled as a separate zone, so that prices between NEMA and the rest of New England may separate, permitting the resources in question to be taken as part of the auction and sending an appropriate price signal.¹⁰⁶ NRG states that, given the elimination of the floor price in ISO-NE, without additional zones the need to retain particular resources for reliability will perpetuate OOM treatment for many resources, thus muting that price signal.

110. NEPGA states that the Commission should not accept ISO-NE's proposal to begin engaging stakeholders at some time between April and June 2013, and to file proposed changes to the FCM zones with the Commission at some undetermined time. NEPGA asserts that the long history of Commission directives to properly price location in the FCM, the likelihood of generator retirements in the coming years, problems with the existing zonal rules, and ISO-NE's Strategic Planning Initiative to evaluate market resource alternatives in comparison to transmission solutions collectively compel a more timely process.¹⁰⁷ NEPGA therefore asks the Commission, to direct ISO-NE to engage with stakeholders immediately and implement zonal reform for FCA 8 if practicable, but no later than FCA 9. NEPGA further states that ISO-NE must model zones consistently with transmission planning, and should engage with stakeholders to determine criteria for identifying zones and the number of zones, the assumptions used to review de-list requests, and to establish zonal purchase requirements (*i.e.*, Local Sourcing Requirements) consistent with the assumptions used to plan transmission. NEPGA points to the fact that, when ISO-NE establishes zonal (resource) purchase needs, it does so by assuming that two large generators are removed from service; however, when it plans transmission, it assumes that three large generators are removed from service. NEPGA asserts that in practice, this results in the need for new transmission always emerging before the need for new generating resources, even though either transmission or supply could meet this need, and this discrepancy eliminates the market signal that a locational capacity market is intended to send.

111. NEPGA, PSEG and NRG further state that, to the extent that a greater number of zones would impede the efficiency of the FCM due to market rules that do not permit bilateral transactions and self-supply outside of zonal boundaries, the solution to this problem would be to change the market rules so that they focus on the interaction between specific transactions and constraints, rather than on whether they take place within a zone. NRG also states that the market rule problems could be addressed through rule revisions, so that, for instance, if necessary, transactions can be arranged in time-stamp order, so that each transaction could take place until a constraint begins to bind.

¹⁰⁶ NRG Protest at 13.

¹⁰⁷ NEPGA Protest at 10.

PSEG asks the Commission to require ISO-NE to remedy the inefficiencies of the current market rules, even under a four-zone model.

112. EMCOS, by contrast, asserts that ISO-NE has not provided enough information to enable the Commission even to determine why four zones are necessary. EMCOS states that, with regard to NEMA, Mr. Rourke's testimony states that the majority of upgrades to the greater Boston area will be completed by 2017, thus eliminating or significantly reducing current reliability concerns in that area, and these improvements will also electrically tie the eight load zones in New England more closely together.¹⁰⁸ EMCOS asks why, if New England appears to be approaching the point when most or all constraints disappear, New England consumers are still being burdened with a locational capacity construction at all. EMCOS adds that it would not be unreasonable to assume that the transmission charges (currently above \$6/kW-month and forecasted to be \$9.60/kW-month by 2016) would be sufficient to provide relief from internal constraints, and asks why it is necessary to "pretend" that capacity should have a different price in NEMA than in SEMA, or why a load-serving entity in NEMA is not permitted to self-supply capacity from a resource located in SEMA.¹⁰⁹ EMCOS therefore asks the Commission to establish an evidentiary hearing to determine whether ISO-NE's section 205 proposal to use four capacity zones as a basis for modeling FCA 8 is just and reasonable.

2. Answers

113. In its answer, ISO-NE states that it agrees that locational pricing is critical to the correct functioning of the FCM, but that maintaining the current four capacity zones is not a failure to provide locational pricing, because the current four zones capture the most prominent locational concerns in New England. ISO-NE states that protesters have cherry-picked data from the information provided to stakeholders in the December 2012 Generation Retirement Study to support their contentions, while ignoring that study's conclusions. In response to PSEG's and NRG's suggestions that 6,300 MW of new capacity could be required to meet ISO-NE's Installed Capacity Requirement by 2020, ISO-NE responds that the Generation Retirement Study indicates that less than 1,000 MW of that amount would be needed to meet capacity requirements in specific locations, and of that 1,000 MW, nearly 500 will have to be located in Connecticut, which is already one of the four zones that ISO-NE will model.¹¹⁰ ISO-NE also states that, of the five de-list bids that it has had to reject in the history of the FCM, four were related to

¹⁰⁸ EMCOS Protest at 20 (citing Rourke Testimony at 6-7).

¹⁰⁹ EMCOS Protest at 20.

¹¹⁰ ISO-NE Answer at 28-29.

resources in Connecticut and NEMA (that is, in zones that are already being modeled under the four-zone model), and the fifth related to a highly localized reliability issue in Vermont that has now been resolved (and the resource involved, the Vermont Yankee nuclear power plant, has now been permitted to de-list). ISO-NE further notes that the resolution of this local problem demonstrates why sometimes more zones are not better: it argues that under some circumstances, rejecting a de-list bid from a resource may be a better and more efficient outcome than paying higher prices to the entire zone if that resource is needed to address a local, not zone-wide, capacity need.¹¹¹

114. ISO-NE also states that the protesters' suggestions as to revisions to the market rules are misplaced, in that the rules against intra-zonal trading are designed to protect against binding constraints and are necessary to perform that function; however, if transactions within zones are not necessarily affected by binding constraints, then the rules simply restrict parties' transactions without serving any purpose.

115. NEPOOL, in its answer, asks the Commission not to order any changes to ISO-NE's intra-zonal trading rules that have not been proposed, debated, and voted on in the NEPOOL stakeholder process.

116. NRG asserts that the ISO-NE answer ignores the evidence adduced by NRG and others that SEMA could potentially bind in FCA 8 and that ISO-NE provides no evidence that system conditions have changed since 2009, when it first proposed to model eight zones. NRG argues that ISO-NE's reliance on the five de-list bids of the past should provide no comfort for the future, as the volume of de-list bids in FCA 8 is likely to be far in excess of previous years, since the floor price will be eliminated at the same time as new environmental rules are likely to provide strong incentive to exit the capacity market. NRG describes as "ironic" ISO-NE's seeming suggestion that the price distortions from a "handful" of de-list bids rejected for reliability is acceptable.¹¹²

3. Commission Determination

117. We deny ISO-NE's request to waive the Commission's prior directive that ISO-NE model eight zones for FCA 8, and we similarly deny ISO-NE's alternative request that we treat its request as a proposal under section 205. ISO-NE has failed to support any type of waiver request or otherwise show that remaining with its four-zone model for FCA 8 would be just and reasonable. We note, however, that this does not preclude ISO-NE from making an additional filing providing adequate support for the modeling of fewer than eight zones in FCA 8. In such a filing, ISO-NE would have to explain in

¹¹¹ ISO-NE Answer at 30.

¹¹² NRG Answer at 5 (citing ISO-NE Answer at 29-30).

detail how the various projects predicted to come on-line prior to 2017 will alleviate existing or forecasted constraints such that fewer than eight zones would be appropriate.

118. One of the goals of the FCM is to reveal those locations where capacity is required, and to allow prices to rise to the levels necessary to induce resources to locate and to remain in those locations. To that end, zones are intended to make known the areas where binding constraints are preventing the unhindered movement of energy, and, to the extent that binding constraints prevent such unhindered movement, prices within those zones will reflect that reality. Thus, if prices within a particular zone separate and rise higher than would be the case absent that separation, the capacity market is operating as intended. The division of ISO-NE into zones that reflect binding constraints (and, therefore, should serve as incentives or disincentives to resources to locate and/or remain in those zones) seeks to meet that goal. The Commission previously stated that “ISO-NE’s proposal to model all zones all the time is appropriate, since it reduces the likelihood of rejecting de-list bids and relying on [OOM] solutions,”¹¹³ and thus preventing the process of price discovery that FCM is intended to facilitate.

119. ISO-NE asserts that, subsequent to the Commission’s acceptance of ISO-NE’s proposal to model eight zones, ISO-NE’s system has changed due to the addition of new transmission and generation. ISO-NE states that its system is now largely free of binding constraints, and will be entirely free of constraints within a few years, and thus a strict application of the obligation to model the eight capacity zones whose boundaries are the same as the eight energy zones is no longer just and reasonable.

120. To support its proposal, ISO-NE submits the testimony of its vice-president of system planning, Stephen Rourke, who states that ISO-NE has built significant transmission resources over the past 10 years with many more to be completed by 2017, and provides details as to those transmission developments.¹¹⁴ Mr. Rourke concludes from these developments that “existing reliability concerns will be eliminated entirely or significantly mitigated for the foreseeable future,”¹¹⁵ and that modeling the current four zones within ISO-NE (Northeastern Massachusetts (NEMA), Connecticut, Maine and Rest-of-Pool) will capture the majority of significant constraints and reliability issues that could be addressed by the zonal price separation that is a part of FCM.

121. However, Mr. Rourke’s statements lack any evidentiary support and ISO-NE submits no additional documentation in support of its request to continue with four zones,

¹¹³ January 19, 2012 Order, 138 FERC ¶ 61,027 at P 107.

¹¹⁴ Rourke Testimony at 3-6.

¹¹⁵ Rourke Testimony at 6.

such as transmission studies, detailed descriptions of constraints that arose in prior auctions and will no longer arise due to enhancement to the transmission system, and specific evidence of a similar nature. Therefore, given that the Commission previously ruled that modeling eight zones would be just and reasonable, and ISO-NE has not met its burden of showing that continuing to model only four zones would be just and reasonable, we will reject ISO-NE's request for relief in this regard. As previously directed, for FCA 8, ISO-NE must submit revised tariff sections to model eight zones.

122. We recognize that the reduction in constraints to which Mr. Rourke refers may justify future zonal modeling with fewer than eight zones. Alternatively, binding constraints and local reliability problems that prove intractable, or that are not present now but arise in the future, may dictate an even larger number of zones. ISO-NE states that it will begin a stakeholder process to address how capacity zones and the associated zonal requirements are determined.

D. Revised Seller Mitigation Rules

123. In the April 13, 2011 Order, the Commission accepted ISO-NE's proposal to establish a threshold of \$1.00/kW-month to trigger IMM review of dynamic de-list bids. The Commission noted that "the IMM has expressed concerns that a threshold higher than \$1.00/ kW-month could provide an opportunity to exercise market power," and that parties could continue to submit static de-list bids at or above this level; the \$1.00/kW-month threshold is "simply a boundary below which the IMM believes that market power is not a concern."¹¹⁶ ISO-NE made this change by replacing the term "0.8 times CONE" with "\$1.00/kW-month" in the tariff sections that discuss the Dynamic De-List Bid threshold.¹¹⁷

1. Comments and Protests

124. NRG, PSEG and Public Systems protest this issue. NRG and PSEG state that, if the Commission grants ISO-NE's request for waiver of the eight-zone requirement, it must also revisit the \$1.00/kW-month dynamic de-list bid threshold. They argue that the purpose of this threshold is to mitigate the market power concerns associated with modeling eight zones, and if only four zones are modeled in FCA 8, the justification for this level of market power mitigation disappears. NRG and PSEG request that the Commission suspend implementation of the \$1.00/kW-month dynamic de-list bid

¹¹⁶ April 13, 2011 Order, 135 FERC ¶ 61,029 at P 313.

¹¹⁷ Transmittal Letter at 30, citing Tariff Sections I.2.2 (definition of "Dynamic De-List Bid"), III.13.1.2.3.1.1, III.13.1.2.3.1.2, III.13.1.2.3.1.3, III.13.1.2.3.2.1, III.13.1.2.3.2.1.1, III.13.1.2.3.2.1.2, III.13.1.2.3.2.1.3, III.13.1.8(e), and III.13.2.3.2(d).

threshold and order that the existing dynamic de-list bid threshold should continue at least until such time, if any, that ISO-NE comprehensively models all zones.¹¹⁸

2. Answer

125. In response, ISO-NE states that the market power concerns that the \$1.00/kW-month threshold was intended to address remain regardless of how many zones are modeled in the FCA. ISO-NE states that, because constraints are modeled in the auction, existing resources can exit the market during the auction and, if they do so in large enough quantities, can cause the zonal constraints to bind and create price separation; thus, the higher the dynamic de-list bid threshold, the greater the incentive for resources within a zone to leave the market and cause price separation. ISO-NE notes that this exercise of market power (particularly when a single resource owner owns a large share of the resources within a zone) is just as possible with four capacity zones as with eight. Thus, ISO-NE supports retention of the \$1.00/kW-month threshold.¹¹⁹

3. Commission Determination

126. In the April 13, 2011 Order, market power concerns prompted the Commission to accept ISO-NE's proposal to establish a threshold of \$1.00/kW-month to trigger IMM review of dynamic de-list bids. Because the Commission has denied ISO-NE's request to model four zones in FCA 8, PSEG's and NRG's argument that the Commission must revisit the \$1.00/kW-month if fewer zones are modeled is moot. Because market power considerations continue to be a concern, we accept the \$1.00/kW-month threshold as in compliance with prior Commission orders.

E. Additional Issues

127. In addition to the provisions discussed above, ISO-NE has also submitted revisions that address the treatment of long lead time resources, the capacity carry forward rule, IMM-review of low-price offers, references to "out-of-market" capacity, "interim out-of-market" capacity, the elimination of the price floor, the elimination of the CONE parameter; inadequate supply and insufficient competition, and the financial assurance policy. ISO-NE requests an effective date of February 26, 2013 for its financial assurance policy revisions because, it explains, the financial assurance requirements for non-commercial capacity for FCA 7 will be calculated pursuant to the currently effective rules.

¹¹⁸ NRG Protest at 16; PSEG Protest at 16-17.

¹¹⁹ ISO-NE Answer at 36-37.

128. We find these revisions compliant with prior Commission orders, and therefore accept them.¹²⁰

129. Finally, NEPGA argues, as it has in the past, that ISO-NE's buyer-side mitigation regime should apply to all existing OOM resources that entered the FCM prior to FCA 8. We reject this argument as beyond the scope of this proceeding.

The Commission orders:

(A) The Commission hereby accepts in part and rejects in part ISO-NE's Compliance Filing, with part of the accepted provisions to become effective February 12, 2013, as requested, subject to conditions, and the financial assurance provisions to become effective February 26, 2013, as requested, as discussed in the body of this order.

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

By the Commission. Chairman Wellinghoff and Commissioner Norris are dissenting in part with a joint separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

¹²⁰ In accepting these provisions, we also note that no party has objected to them or otherwise questioned their compliance with prior Commission orders.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England, Inc.

Docket No. ER12-953-001

(Issued February 12, 2013)

NORRIS, Commissioner, and WELLINGHOFF, Chairman, *dissenting in part*:

For the reasons discussed in our dissent in *New England States Committee on Electricity v. ISO New England, Inc.*¹, we respectfully dissent from the portion of this order addressing the concerns raised by NESCOE and other parties regarding the impact of ISO New England, Inc.'s proposed minimum offer price rule on the ability of states to pursue legitimate public policy objectives.²

John R. Norris, Commissioner

Jon Wellinghoff, Chairman

¹ 142 FERC ¶ 61,108 (Norris and Wellinghoff, *dissenting*).

² See *ISO New England, Inc.* 142 FERC ¶ 61,107 at P 96-98 (2013).