115 FERC 61,175
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Nora Mead Brownell, and Suedeen G. Kelly.

New England Power Pool
and
ISO New England Inc.

Docket No. ER06-613-000

ORDER ACCEPTING ANCILLARY SERVICES MARKET PROPOSAL

(Issued May 12, 2006)

1. On February 6, 2006, pursuant to section 205 of the Federal Power Act (FPA),[1] ISO New England Inc. (ISO-New England) and the New England Power Pool (NEPOOL) Participants Committee (collectively Applicants) jointly submitted revisions to Sections II and III of ISO-New England's FERC Electric Tariff No. 3. Section II is the Open Access Transmission Tariff, and Section III is Market Rule 1. Together, these proposed revisions are referred to as Phase II of the Ancillary Services Market project (ASM Phase II). The most significant changes are the addition of a locational component to the existing Forward Reserve Market and the coordination and optimization ("co-optimization" in the Applicants' words) of pricing of energy and reserves in real time. In this order, the Commission will accept the proposed tariff revisions and make them effective October 1, 2006, or later, as requested, subject to ISO-New England's written notice to the Commission and NEPOOL not less than two weeks prior to implementation. ISO-New England will also be required to report semi-annually on the performance of the new market, as described herein.

I. **Background**

2. On March 1, 2003, Applicants implemented New England's Standard Market Design (SMD). This implementation included market enhancements such as Locational

[1] 16 U.S.C. § 824d (2000).

Marginal Pricing[2] of energy and congestion hedging tools based on Financial Transmission Rights.[3] The implementation did not contain a separate market for Operating Reserves because the software package that New England adopted to implement multi-settlement, locational energy markets did not support real-time reserve markets.

3. ISO-New England implemented an interim Forward Reserve Market in 2004 while work continued to develop a more refined Forward Reserve Market design.[4] The interim Forward Reserve Market provides for the advance purchase of the reserve capability needed to satisfy the expected Ten-Minute Non-Spinning Reserve (TMNSR) and Thirty-Minute Operating Reserve (TMOR) requirements for the New England Control Area. The interim Forward Reserve Market was designed to provide appropriate economic incentives to resources that provide Operating Reserves during peak periods, particularly off-line peaking resources that operate infrequently. Although the New England region has a far smaller number of fast-starting resources available to respond to contingencies than do the other Northeastern markets, New England's contingency requirements are large due to the system's unique characteristics.

4. Prior to the implementation of the interim Forward Reserve Market, resources providing Operating Reserves relied on a combination of revenues from energy payments, Net Commitment Period Compensation Credits and Installed Capacity (ICAP) payments. However, this combination of revenues did not provide sufficient incentives for off-line generating units that are able to start quickly and are needed to provide reliable and efficient service in New England during peak periods. In the absence of a Forward Reserve Market, quick start resources rarely receive energy payments and receive no payments for their primary product, off-line reserves. Suppliers of Operating Reserves also may receive ICAP payments, but as ISO-New England notes, the ICAP mechanism is not specifically designed to provide incentives for the additional flexibility

[2] Locational Marginal Pricing (LMP) is a pricing method based on actual grid conditions. LMP prices energy purchases and sales in the energy market and prices transmission congestion costs to move energy within the markets. This is a physical flow-based pricing system.

[3] Financial Transmission Rights (FTRs) are the rights embodied in a financial, not physical, contract that entitles the holder to a stream of revenues (or charges) based on the hourly energy price differences across the path. FTRs facilitate a forward energy market by providing a mechanism to manage basis risk caused by LMP differences during periods of transmission congestion.

[4] The current interim Forward Reserve Market was approved by the Commission in *New England Power Pool and ISO New England Inc.*, 105 FERC ¶ 61,204 (2003).

required of resources that are able to respond quickly to system contingencies. The Forward Reserve Market is designed to address the shortcomings of the other wholesale markets in terms of ensuring the availability of flexible, peaking resources that are critical to ensuring reliability.

5. ASM Phase II includes a number of improvements, including: (1) a mechanism for addressing the reliability requirement that a portion of Operating Reserves be located within specific areas of the system; (2) allowing suppliers to manage their Forward Reserve Resources on a portfolio basis and allowing for bilateral trade of obligations; and (3) providing the software systems and business processes necessary to integrate demand resources into the forward and real-time Operating Reserve markets. The intent of the locational aspect of ASM Phase II is to encourage the addition of fast-start resources in load pockets through the use of more efficient economic signals.

6. Also, as part of ASM Phase II, Applicants propose to implement a Real-Time Reserve Market that co-optimizes the dispatch of energy and reserves. The new Real-Time Reserve Market will use revised dispatch software that will automatically re-dispatch resources as necessary to maintain reserves in real-time. The real-time reserve markets also include a locational aspect to reflect that reserve resources need to be located in specific areas to ensure reliability. The prices in the new Real-Time Reserve Market usually will be determined by re-dispatch costs. However, when reserves cannot be maintained despite re-dispatch (*i.e.*, there is a reserve shortage), the clearing prices will be derived from maximum price levels known as Reserve Constraint Penalty Factors.

7. Finally, ASM Phase II will include measures allowing Demand Resources to bid their resources (called Asset-Related Demand) directly into the energy and reserve markets on comparable footing with generating resources. This change will establish the market infrastructure needed to fully develop the potential for demand participation in the wholesale markets.

8. Applicants request waiver of the Commission’s 120-day prior notice requirement, 18 C.F.R. § 35.3 (2005), to allow an effective date of October 1, 2006 or later, subject to ISO-New England’s written notice to the Commission and NEPOOL not less than two weeks prior to implementation.

9. Applicants filed a Motion Requesting Expedited Action on March 13, 2006, requesting that the Commission act on the ASM Phase II filing no later than May 12, 2006. In support of this request, Applicants state that early action will assist them in preparing for next winter by reducing the need for the non-market approach required in the 2005-2006 Winter Action Plan, and in planning to implement the Forward Capacity Market settlement in Docket No. ER03-563.

10. Applicants request an effective date of October 1, 2006 (the start of the Winter Capability Period) with the stipulation that ISO-New England will provide written notice

to the Commission and NEPOOL no later than two weeks prior to the implementation of ASM Phase II.

II. <u>Notice of Filings and Responsive Pleadings</u>

11. Notice of Applicant's filing was published in the *Federal Register,* 71 Fed. Reg. 8,850 (2006), with interventions and protests due on or before February 27, 2006. Timely motions to intervene were filed by Edison Mission Energy and Edison Mission Marketing & Trading, Inc. (collectively, EME), the Connecticut Department of Public Utility Control (CT DPUC), Milford Power Company (Milford Power), the New England Conference of Public Utilities Commissioners (NECPUC), and Dominion Energy Marketing, Inc., Dominion Energy New England, Inc., Dominion Nuclear Connecticut, Inc. and Dominion Retail, Inc. (collectively Dominion Companies).

12. Timely motions to intervene and protests or comments were filed by Massachusetts Municipal Wholesale Electric Company and Reading Municipal Light Department (collectively Municipals), NRG Power Marketing, Inc., Connecticut Jet Power LLC, Devon Power LLC, Middletown Power LLC, Montville Power LLC, Norwalk Power LLC, and Somerset Power LLC (collectively NRG), the NEPOOL Industrial Customer Coalition (NICC), Boston Generating, LLC, Mirant Energy Trading, LLC, Mirant Canal, LLC and Mirant Kendall LLC (collectively Mirant Parties), Exelon Corporation (Exelon), Northeast Utilities Service Company (NUSCO) on behalf of The Northeast Utilities Companies (NU) and Select Energy, Inc. (Select Energy), Pinpoint Power, LLC (Pinpoint), NSTAR Electric & Gas Corporation (NSTAR), EnerNOC, Inc. (EnerNOC), and Coral Power, LLC (Coral).

13. The Connecticut Office of Consumer Counsel (CT OCC) and the Maine Public Utilities Commission (MPUC) filed motions to intervene out of time.

14. On March 13, 2006, ISO-New England filed a motion requesting expedited action. In addition, on March 14, 2006, ISO-New England filed an answer to the motions to intervene, motion for leave to answer, and an answer to select comments and protests.

15. The Municipals and Pinpoint and EnerNOC filed joint answers to ISO-New England's motion requesting expedited action and to ISO-New England's motion for leave to answer to select comments and protests. NRG filed an answer to ISO-New England's motion for leave to answer to select comments and protests. NEPOOL filed an answer addressing ISO-New England's motion requesting expedited action, NRG's answer to ISO-New England, and CT OCC's motion to intervene out of time. NEPOOL filed a supplemental response to CT OCC's motion to intervene out of time. Finally, NSTAR filed a response to the joint answer of Pinpoint and EnerNOC.

III. Discussion

A. Procedural Matters

16. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2005), the notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Given the early stage of the proceeding, the lack of undue prejudice or delay and the party's interest, we find good cause to grant, under Rule 214, CT OCC's[5] and MPUC's unopposed, untimely motions to intervene in this proceeding.

17. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2005), prohibits an answer to a protest or another answer unless otherwise ordered by the decisional authority. We will accept the answers of ISO-New England and responses to answers of Municipals, Pinpoint and EnerNOC, NRG, NSTAR and NEPOOL because they have provided information that assisted us in our decision-making process.

B. Forward Ten-Minute Spinning Reserve Market

1. Introduction

18. As noted by ISO-New England, three types of reserves are required by reliability organizations: Ten Minute Spinning Reserves (TMSR), Ten Minute Non-Spinning Reserves (TMNSR), and Thirty Minute Operating Reserves (TMOR). TMSR is the unloaded capability of synchronous generators that can be converted into energy within 10 minutes. TMNSR is the capability of non-synchronous generators that can be converted into energy within 10 minutes or the capability of a dispatchable Asset Related Demand that can reduce consumption within 10 minutes. TMOR is the capability of non-synchronous generators that can be converted into energy within 30 minutes or the capability of a dispatchable Asset Related Demand that can reduce consumption within 30 minutes. TMSR can substitute for TMNSR, which may substitute for TMOR. Collectively the three types of reserves are referred to as operating reserves.

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[5] On March 28, 2006, NEPOOL filed a response to CT OCC's motion to intervene out of time. That response noted that NEPOOL opposed CT OCC's motion to intervene out of time to the extent that it would delay Commission action supporting meeting the requested effective date. Based on a commitment from CT OCC that it only seeks to monitor this proceeding as a party (and does not wish to delay Commission action), NEPOOL filed a supplemental response on April 3, 2006 to indicate that it does not oppose CT OCC's motion.

19. As ISO-New England states, all control areas are required to maintain operating reserves. In New England, operating reserves are maintained to protect against losses of the largest (and part of the second largest) supply, *i.e.* first and second contingencies. In addition, in New England, specified amounts of TMOR are maintained within import-constrained areas to protect against large second contingencies. The interim Forward Reserve Market clears sufficient resources to satisfy the system and TMNSR and TMOR requirements for the New England Control area, but does not acquire resources for local reserve requirements or to fulfill the New England Control Area TMSR requirement.

2. Comments

20. Mirant and NRG object to the proposed Locational Forward Reserve Market because it fails to include a forward market for TMSR. Of the three categories of operating reserves – TMSR, TMNSR, and TMOR – only TMSR resources can meet all of the system operator's reserve requirements; *i.e.*, only TMSR can be substituted for TMNSR and TMOR resources. Further, Mirant notes that because the TMSR units are already running, synchronized, and connected to the bulk power system, there is no risk that the unit will not start or be able to interconnect to the system if called on to respond to the loss of the first contingency element.

21. Mirant argues that because TMSR is the most valuable form of operating reserves, market prices for operating reserves should reflect the higher value of spinning reserves as compared to non-spinning reserves. Mirant states that this is not the case in the existing markets managed by ISO-New England or those proposed for implementation under ASM Phase II.[6] Mirant states that while ASM Phase II clearly reflects the high value of TMSR reserve services in a relatively small number of real-time scarcity hours, the lack of a TMSR market in the forward market proposal virtually ensures that TMSR services will be under-valued in the vast majority of hours, *i.e.*, they will have no explicit market value, rather than being valued at least as highly as the non-spinning reserves procured in the forward market.

22. Mirant argues that the inclusion of a forward TMSR market would increase demand in the forward reserve market to the level of reserves required by ISO-New England operations, thereby correcting a supply-demand imbalance which threatens to

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[6] Mirant notes that currently ISO-New England administers a non-locational forward reserves market that only allows for the forward procurement of TMNSR and TMOR.

undermine the proposed forward reserve markets.[7] Mirant states that without a forward TMSR market, the system TMSR requirement specified in ISO-New England Operating Procedure OP-8 will not be included as part of market demand, and this will artificially depress the prices for system TMNSR and TMOR by the appearance of “excess” supply.[8]

23. NRG claims that the “perverse” result of ASM Phase II is that providers of TMNSR and TMOR, products that are inferior in quality to TMSR, will be compensated in all on-peak hours at the marginal cost of the reserves they provide, while providers of TMSR will be compensated only during the very few hours in which reserve shortage conditions arise. NRG states that providers of TMSR will continue to be compelled to provide reserves services through the energy market, with their only compensation being recovery of marginal costs through a Net Commitment Period Compensation calculation if committed out-of-merit to provide reserves. NRG claims that the reliance by ISO-New England on a Net Commitment Period Compensation-based scheme for one which is market-based underscores the unjust and unreasonable nature of ISO-New England’s proposal. NRG asserts that Net Commitment Period Compensation is not a market-like product because its costs are not readily apparent and, as such, cannot be predicted, managed or hedged.

24. Mirant states that the most prominent concern raised during NEPOOL discussions about the introduction of a forward TMSR market was that spinning reserves do not lend themselves to long-term commitments.[9] However, Mirant notes that because operating reserves may be supplied out of a portfolio under the Locational Forward Reserve Market proposed as part of ASM Phase II, a participant could meet its obligation with any of its appropriate synchronized or unsynchronized resources. Mirant notes that participants

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[7] Mirant asserts that while the supply available to the forward reserve market will reflect TMSR, TMNSR, and TMOR-capable resources, under ASM Phase II, the demand in the markets will be calculated based only the system requirements for TMNSR and TMOR capacity.

[8] ISO-New England OP-8 sets forth the criteria for the establishment and administration of Operating Reserve and Regulation in the New England Control Area, including ten and thirty minute reserve requirements.

[9] Mirant notes that the rules of the interim Forward Reserve Market require the bidding of specific assets at the time of the auction which will provide operating reserves throughout the obligation period for the auction (*i.e.*, for several months). Mirant notes that it would be very difficult, and economically inefficient, for a generator to reserve a particular unit to be on-line to provide spinning reserves during some time several months in the future where energy pricing may be significantly different than it is today or even could reasonably be forecast.

may also trade forward reserve obligations, allowing them to cover an obligation even when no appropriate resource is available in their portfolio. Mirant claims that most importantly, the assignment of resources used to meet the supply obligation may be made as late as at the time of the re-offer period for the operating day in which the operating reserves would need to be supplied.[10] Mirant states that these changes, already included to be part of ASM Phase II, make it fully appropriate to include TMSR in the locational forward reserves markets.

25. Mirant also claims that the market design challenges required to add a forward TMSR market to the ASM Phase II design would be minimal; ISO-New England is already familiar with the correct method of cascading and clearing the forward reserves markets and has planned to implement cascading in the real-time reserve markets (which includes system TMSR). Mirant asserts that the addition of a forward TMSR market with price cascading would not complicate the locational aspects of the proposed forward reserves markets as ISO-New England has no formal locational TMSR requirements. According to Mirant, the vast majority of design elements would mirror the forward TMOR and forward TMNSR markets.

26. Mirant also notes that the NEPOOL Participants Committee's failure to include a forward TMSR market in ASM Phase II was appealed to the NEPOOL Board of Review[11] (NEPOOL Board). Mirant and NRG note that the NEPOOL Board concluded that a forward reserve TMSR market should be included in ASM Phase II since it will enhance system security, provide economic incentives to generation and load, and provide more choices within the market. NRG states that ISO-New England failed to give due deference to the evidentiary record of the stakeholder process and to the unequivocal recommendation of the NEPOOL Board.

27. Mirant and Coral assert that the Commission should require ISO-New England to develop such a market design and file a proposal as soon as possible, but not later than October 2006. Mirant states that if the Commission declines to direct ISO-New England to make a filing establishing a forward TMSR market at this time, the Commission should, at a minimum, direct ISO-New England to file a report updating the Commission

[10] Mirant states that as this re-offer period occurs after day-ahead market schedules are published, participants would be able to meet their obligations in an efficient manner, with resources already scheduled to be on line and most often scheduled with unloaded reserve capacity.

[11] The NEPOOL Board of Review is an independent panel of experts that reviews Participants Committee actions brought before it on appeal by aggrieved Participants. The Review Board is responsible for ruling on such appeals and for advising the Participants Committee as to the issues raised on appeals.

on the status of the project no later than October 1, 2006. Mirant asserts that this status report should include descriptions of proposals that have been considered to date, impediments to implementation that still need to be resolved, and a proposed schedule to resolve such impediments. NRG argues that if the Commission determines that it will not require ISO-New England to add TMSR to the Locational Forward Reserve Market, then the Commission should include the following directives in its order: 1) ISO-New England's working group must be tasked with designing a mechanism to compensate TMSR providers for forward reserves rather than exploring the pros and cons of doing so; and 2) ISO-New England must complete this process and make a filing to implement such a mechanism by October 1, 2006.

3. Answers

28. ISO-New England argues that the Commission should not delay implementation of ASM Phase II by requiring the incorporation of a forward TMSR market which has yet to be designed. Further, ISO-New England states that, as a procedural matter, the status of a forward TMSR market is not part of the instant FPA section 205 proceeding, which is limited to assessing the justness and reasonableness of the proposal that was filed. ISO-New England notes that at this time, neither the interim nor the proposed Forward Reserve Market is designed to incorporate a forward market for the acquisition of resources to satisfy TMSR requirements. Thus, ISO-New England asserts, the question of whether a forward TMSR requirement is desirable is not an issue in the instant section 205 proceeding. Rather, ISO-New England argues, modification of the ASM Phase II proposal is barred absent proof by the moving parties that the instant proposal is not just and reasonable without such modifications. ISO-New England claims that movants have failed to meet this burden, and ISO-New England requests that the Commission reject on procedural grounds the proposal to incorporate a forward TMSR market into ASM Phase II.

29. ISO-New England notes that, along with NEPOOL, it has formed a working group to identify and study issues related to a potential forward TMSR mechanism. Further, ISO-New England explains that the NEPOOL Board's decision which NRG and Mirant cite is a recommendation, not a mandatory directive. In addition, ISO-New England notes that there was not broad stakeholder support for the design and incorporation of a forward TMSR market into ASM Phase II, as nearly 60 percent of NEPOOL Participants voted in opposition to the establishment of a forward TMSR market at the October 11, 2005, NEPOOL Markets Committee meeting. ISO-New England also claims that it has previously reported to the NEPOOL Participants that it is not possible to incorporate a forward TMSR market into ASM Phase II without substantially delaying implementation. ISO-New England notes that many parties, including the NEPOOL Board, have stated their desire not to incorporate a forward TMSR market at this time if it would delay implementation of ASM Phase II.

30. Regarding some parties' request that the Commission require ISO-New England to submit status reports detailing the progress of the Forward TMSR market development, ISO-New England claims it previously committed to submit a status report detailing the progress of the Forward TMSR Working Group. ISO-New England notes that it is working to assess issues related to the potential development of a forward TMSR market and reiterates its willingness to submit periodic status reports to the Commission.[12]

31. In its answer, NRG reiterates its assertion that ISO-New England's decision to not include TMSR in ASM Phase II is unduly discriminatory toward current and potential real-time TMSR providers, and fails to compensate TMSR providers for their reserve commitments while compensating all other reserve providers through the forward reserve market.

4. Commission Determination

32. We will deny the requests of Mirant, NRG, and Coral to require that ISO-New England implement a forward reserve market for TMSR at the same time it implements the other ASM Phase II features. We note that a forward reserve market for TMSR is neither part of the current interim Forward Reserve Market nor in the currently filed ASM Phase II proposal. As such, we agree with ISO-New England that in our evaluation of the justness and reasonableness of the proposed ASM Phase II market under section 205, the Commission will not consider items that are beyond the scope of the filed proposal. We do not find that the current proposal is unjust or unreasonable because it lacks a forward market for TMSR. In addition, any implementation of a forward reserve market for TMSR would result in a delay of the implementation of ASM Phase II; according to ISO-New England, any major changes (including those contemplated by protesters) to the instant version of ASM Phase II would require a renewed market design and stakeholder process that would take at least six to twelve months to complete.[13] While there may be benefits to the inclusion of a forward reserve market for TMSR, we (along with most parties, including the NEPOOL Board) find that the benefits associated with timely implementation of the instant version of ASM Phase II outweigh the

[12] ISO-New England proposes to submit a status report to the Commission six months from the date of issuance of a Commission order on the ASM Phase II proposal, and every six months thereafter until the completion of the mission of the Forward TMSR Working Group.

[13] Applicants' Transmittal Letter at 21.

immediate need for a forward reserve market for TMSR. We also note that the proposed version of ASM Phase II carries broad stakeholder approval.[14]

33. Further, ISO-New England has formed a Forward TMSR Working Group to identify and study issues related to a potential forward TMSR mechanism, offering to submit status reports to the Commission regarding the group's progress. As part of an overall assessment of the performance of the new market, we will require ISO-New England to submit semi-annual reports on the status of a forward reserve market for TMSR, with the first report due six months after the issuance of this order.[15] As requested by Mirant, these reports should include descriptions of proposals that have been considered to date, impediments to implementation that need to be resolved, and a proposed schedule to resolve such impediments.

34. Finally, we disagree with Mirant and NRG that the lack of a forward reserve market for TMSR has resulted, or will result, in undervaluing TMSR resources relative to TMNSR or TMOR resources. Resources that can provide TMSR are eligible to provide TMNSR and TMOR in the forward reserve markets. Thus, to the extent that owners of TMSR resources expect that forward reserve prices will be higher than TMSR spot prices (and until a forward TMSR market is established), the owners may offer their TMSR resources into the forward reserve market.

C. Involuntary Load Shedding

1. Background

35. It is a long-standing practice in Northeast Massachusetts/Boston (NEMA/Boston) for ISO-New England to consider involuntary load shedding in establishing operating reserve requirements. All parties agree that this involuntary load shedding is not caused by the instant ASM Phase II proposal.

2. Comments

36. EnerNOC and Pinpoint argue that by "backing out" 400 MW of the locational reserve requirement in NEMA/Boston, ISO-New England procures less reserves than it actually needs and will have to resort to load shedding, not in response to unforeseen emergencies, but simply because it fails to procure adequate reserves. EnerNOC and Pinpoint oppose ISO-New England's use of uncompensated involuntary load interruption

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[14] ISO-New England notes that the Design Basis Document for ASM Phase II was approved by the NEPOOL Participant's Committee at its October 14, 2005, meeting with a vote of 72.12 percent in favor.

[15] As noted elsewhere in this order, we will establish additional requirements for this semi-annual report.

as a mechanism to address reserve requirements in the constrained area of NEMA/Boston. They note that ISO-New England's current method of establishing forward locational reserve requirements involves a calculation that generally reflects the resources needed to provide 30-minute or higher quality reserve products to establish second contingency coverage in import-constrained areas. They state, however, that in the NEMA/Boston constrained area, the current calculation utilized to establish the locational reserve requirement backs out 400 MW through reliance on involuntary load shedding for the second transmission contingency. These parties claim that by effectively classifying load shedding as a reserve asset, ISO-New England is distorting market signals and delaying potential investments in new quick-start and Demand Resources in the NEMA/Boston area. Both parties argue that load shedding should be an integral component of the forward reserve market in New England, but that participation should be voluntary and assets should be appropriately compensated. Accordingly, EnerNOC and Pinpoint request that the Commission direct ISO-New England to terminate its reliance on involuntary load shedding in NEMA/Boston.

3. <u>Answers</u>

37. ISO-New England answers that the Commission should reject the arguments raised by EnerNOC and Pinpoint. ISO-New England states that as part of the ASM Phase II filing, it has not proposed to change the long-standing methodology under which post-contingency load shedding is utilized and is considered in establishing reserve requirements. ISO-New England claims that the reserve requirements have been set to reflect operational requirements. ISO-New England also states that pursuant to long-standing operational practices, it is authorized to rely on post-secondary contingency load shedding in its operations planning. ISO-New England claims it has worked with transmission owners to develop protocols for post-contingency load shedding which ensure that equipment and personnel remain safe after a contingency.

38. In their answer to ISO-New England's answer, Pinpoint and EnerNOC argue that, in practice, ISO-New England does not treat involuntary load shedding in NEMA/Boston as a last resort but rather as a reserve product. They argue that by "backing out" 400 MW, ISO-New England procures less reserves than it actually needs and will have to resort to load shedding, not in response to unforeseen emergencies, but simply because it fails to procure adequate reserves. In response to ISO-New England's argument that ASM Phase II does not seek to modify this "longstanding" practice of relying on load shedding to meet reserve requirements, Pinpoint and EnerNOC note that ASM Phase II provides the appropriate forum for broad review of the market design for ancillary services and reserves. They also note that the Commission has not approved of this practice nor was this issue discussed with all market participants and stakeholders until the development of a locational reserve requirement under ASM Phase II. Finally, Pinpoint and EnerNOC argue that ISO-New England's own Operating Procedures (OP) preclude the use of involuntary load shedding over reserves. They note that ISO-New

England OP 7, “Action in an Emergency”, and ISO-New England OP 19, “Transmission Operations”, which govern the use of involuntary load shedding, are normally preceded by ISO-New England OP 4, “Action During a Capacity Deficiency.” OP 4 provides for several actions involving voluntary load shedding and depletion of 30 minute reserves. They argue that only after all of the actions available under OP 4 are taken would ISO-New England normally move to the procedures outlined in OP 7 (including involuntary load shedding).

39. NSTAR also opposes EnerNOC and Pinpoint’s demand, noting that the actions EnerNOC and Pinpoint request are not required by applicable reliability standards, are not practicable, and will impose unnecessary expense on consumers. NSTAR notes that those with direct responsibility in the region, ISO-New England, NSTAR, and National Grid, all agree that load shedding should be undertaken only if a second contingency occurs within 30 minutes of the first contingency (a highly remote circumstance). NSTAR points out that this position is wholly consistent with Northeast Power Coordination Council guidelines. Finally, NSTAR disputes the position of EnerNOC and Pinpoint concerning ISO-New England’s Operating Procedures, arguing that OP 4 neither precedes nor drives OP 19.

4. Commission Determination

40. The Commission does not believe that the instant 205 filing is the proper forum for resolving the issue of load shedding. The protesters acknowledge that their grievance in this area is not caused by ASM Phase II. Furthermore, ISO-New England states in its filing that “[t]he market improvement process does not end with ASM Phase II” and “[f]urther enhancements may include . . . further integration of demand resources into the wholesale market structure” and “incremental changes to the reserves markets.”[16] Thus, it is clear that ASM Phase II as formulated is not the final model for an ancillary services market in New England. We will not require a change to ISO-New England’s longstanding methodology in NEMA/Boston at this time.

41. However, we will require ISO-New England to include discussion of this issue in the aforementioned semi-annual report on the performance of the ASM Phase II market. This discussion should include ISO-New England’s operational and economic rationale for considering involuntary load shedding in determining reserve requirements in NEMA/Boston and the effect on reliability of considering including involuntary load shedding.

[16] Applicants’ Transmittal Letter at 2.

D. Pool-Planned Units Self-Supply Option and Zero Bids

1. Background

42. A primary feature of ISO-New England's ASM Phase II proposal is the locational reserve requirement. The ASM Phase II proposal contains no specific language enabling Municipals to use their Entitlements for Pool-Planned Units located outside of the relevant reserve zone to satisfy Locational Forward Reserve Market obligations.[17]

2. Comments

43. Municipals state that the proposed Locational Forward Reserve Market is flawed. They argue that the proposal does not properly recognize pre-existing, life-of-unit investments by NEMA municipally-owned utilities in Pool-Planned Units, nor does the proposal account for the need to minimize the impact of a new regulatory paradigm upon long-term investments. Municipals state that even though the Pool-Planned Unit resources are not located near the import-constrained region in which the loads are located, the NEMA municipals should be able to use their Pool-Planned Unit entitlements to meet their Locational Forward Reserve Market obligations where the Pool-Planned Unit is capable of supplying the requisite type of reserve service. Municipals note that the Commission twice resolved the issue of how to treat Pool-Planned Unit investments in the context of substantial market design modifications. According to Municipals, the Commission approved a proposed increase in the allocation of Auction Revenue Rights to certain NEMA municipally-owned utilities "in recognition of pre-existing contracts with municipals to acquire energy outside NEMA."[18] Municipals note that the Commission also addressed the issue of how to treat Pool-Planned Unit investments with respect to ISO-New England's locational installed capacity (LICAP) proposal. Municipals state that in a hearing concerning the LICAP proposal, the presiding Administrative Law Judge ruled that Pool-Planned Unit Entitlement holders should be allocated sufficient capacity transfer rights to enable them to use their Pool-Planned Unit Entitlements to meet LICAP obligations, irrespective of location.[19]

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[17] Municipals explain that "[u]nder the original NEPOOL Agreement, [Pool-Planned Units] were sited, planned and constructed on a 'full integration' basis, under which the construction of each [Pool-Planned Unit] included unit-supported transmission additions . . . ." Municipals' Protest at 7.

[18] *ISO New England, Inc.*, 91 FERC ¶ 61,311 (2000).

[19] *See Devon Power LLC*, 111 FERC ¶ 63,063 at P 703 (2005), *exceptions pending*.

44. Currently, the ISO-New England Tariff requires transmission customers to provide ancillary services, but allows for the option to self-supply those services. A load-serving entity has the option of self-supplying ancillary services by offering reserve resources into the market at a zero bid; those resources are paid the auction-determined clearing price, and the load serving entity is obligated to make equivalent payments. Specifically, Municipals object to the proposed Locational Forward Reserve Market because it lacks a guarantee that market participants who decide to self-supply ancillary services will enjoy a guarantee of cost neutrality through self-supply.

3. Answers

45. ISO-New England asserts that the Commission should reject the argument urging modification of ASM Phase II to provide special treatment of Pool-Planned Unit Entitlements with respect to reserve obligations. ISO-New England argues that Municipals' protest must be rejected because the parties: (1) fail to comment on any specific element of the ASM Phase II proposal that they claim is not just and reasonable;[20] and (2) fail to demonstrate the existence of an entitlement to special treatment with respect to locational reserve requirements. ISO-New England also states that Municipals' protest should be rejected on substantive grounds. ISO-New England argues that Municipals have failed to demonstrate that their Pool-Planned Unit Entitlements include a right to special treatment with respect to locational reserve requirements under any relevant contracts. ISO-New England further claims that Municipals have failed to show that their Pool-Planned Unit Entitlements provide for anything other than capacity and energy.

46. ISO-New England states that even assuming *arguendo* that Pool-Planned Unit Entitlements include a right to special treatment *vis-à-vis* locational reserve requirements, Municipals fail to explain why these Pool-Planned Unit Entitlements merit special treatment that has not been afforded historically and is not afforded under the current rules. ISO-New England explains that, currently, system reserves are acquired through the Interim Forward Reserve Market to protect against first and second contingencies while, in real-time, local Operating Reserve costs are paid through uplift payments. ISO-New England states that while Pool-Planned Units may participate in the provision of

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[20] As support, ISO-New England cites *Cabrillo Power I LLC,* 114 FERC ¶ 61,160 (2006) where ISO-New England states that the Commission (in agreement with CAISO) found that the argument put forth by MMC Energy North America, LLC (MMC) in its protest was outside the scope of the proceedings and was summarily rejected. ISO-New England states that the basis for the Commission's decision was the fact that MMC did not question or comment on Cabrillo's proposed rates and thus MMC's protest had no bearing on the FPA section 205 proceeding at hand.

system or local reserves in the same manner as other generating resources, they are accorded no special treatment for their participation.[21] ISO-New England points out that, as Municipals noted in their protest, the Pool-Planned Units in which they have Entitlements are located outside of the relevant reserve zone. ISO-New England claims that no special treatment or credits are afforded to Pool-Planned Units under the existing rules for allocating the costs of Local Second Contingency Protection Resources. ISO-New England argues that Municipals have failed to prove why special treatment is now warranted.

47. ISO-New England also notes that the changes it proposes to the existing Forward Reserve Market design will continue to offer entities such as Municipals a reasonable opportunity to self-supply reserves. ISO-New England claims that Market Participants in the revised market may effectively self-supply by offering reserve resources in the appropriate locations at low or zero bids such that their resources are sure to clear, with the result that the Participant's costs and revenues are approximately equal and offsetting. Similarly, ISO-New England notes that market participants may self-supply reserves in real time by making available their generation or demand resources to provide energy and reserves, with the result that they pay and their resources receive the same clearing price (assuming that the supply resource and the load obligation are in the same location). ISO-New England argues that it is not possible to guarantee that a market participant's reserve charges will be offset exactly by any credits the participant earns by providing reserves given the complexity of real-time operations and the potential for transmission constraints and unexpected contingencies.

48. ISO-New England notes that the Commission has previously recognized that Market Participants cannot perfectly match their real-time load against the amount of any energy/reserve services that they self-schedule in advance. ISO-New England argues that the FPA section 205 standard for acceptance of ASM Phase II, however, is not perfection; rather, the proposed changes need only be just and reasonable. According to

[21] For example, ISO-New England states that under the existing rules, the costs associated with Local Second Contingency Protection Resources are aggregated and charged pro rata to each Market Participant in proportion to the sum of its Real-Time Load Obligations during the Operating Day within the affected Reliability Region. Thus, to the extent the Pool-Planned Units in which Municipals have an interest are located in the affected region, *i.e.*, NEMA/Boston, ISO-New England claims that these resources would receive a credit corresponding to the reserves they provide.

ISO-New England, the Commission has held that self-supply similar to that proposed in ASM Phase II fully satisfies the section 205 standard.[22]

49. In Municipals' answer to ISO-New England's answer, Municipals note that the case ISO-New England cites, *Cabrillo Power*, has nothing to do with whether this particular issue should be dismissed procedurally.[23] Municipals reiterate that they seek the imposition of a condition on ASM Phase II that NEMA municipally-owned utilities with Pool-Planned Unit Entitlements may use those Entitlements to meet their Locational Forward Reserve Market obligations where the Pool-Planned Unit is capable of supplying the requisite service.

50. Responding to ISO-New England's claim that Municipals have failed to demonstrate that their Pool-Planned Unit Entitlements provide for anything other than capacity and energy, Municipals argue that: (1) if this contention is true, then ISO-New England should not object to the relief sought by Municipals, since Municipals only seek to use their Pool-Planned Unit Entitlements where the Pool-Planned Unit is actually capable of supplying the requisite service; and (2) ISO-New England's assertion that the Pool-Planned Unit Entitlements provide only capacity and energy is simply wrong. Municipals state that ISO operations personnel are aware that certain of the Pool-Planned Unit units in which Municipals hold Entitlements participate in the current interim Forward Reserve Market.

51. Responding to ISO-New England's answer that Municipals fail to explain why these Pool-Planned Unit Entitlements merit special treatment that has not been afforded historically or under the current rules, Municipals argue that this issue is triggered by the potential approval of ASM Phase II (specifically, locational reserve obligations) that have not previously been part of the New England markets. Municipals note that the main issue is whether Pool-Planned Unit Entitlements should be accorded appropriate self-supply recognition in auction, consistent with the implementation of both locational

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[22] As support, ISO-New England cites *New England Power Pool and ISO New England Inc*., 100 FERC ¶ 61,287 (2002), *order on reh'g and accepting compliance filings*, 101 FERC ¶ 61,344 (2002), where the Commission approved New England's Standard Market Design under which resources providing energy are paid the nodal price, while load-serving entities pay the zonal clearing price.

[23] Municipals note that *Cabrillo Power* concerned a protestor's objection to a reliability determination for the Cabrillo unit, seeking to challenge that designation in a Section 205 proceeding. Here Municipals argue that it is the proposed design of ASM Phase II, the precise matter at issue in this docket, that treats them unjustly and unreasonably, failing to recognize life-of-unit Pool-Planned Unit investments made by municipally-owned systems in the NEMA auction zone.

energy and capacity markets in New England. Municipals argue that ASM Phase II offers no opportunity for NEMA municipally-owned entities with Entitlements in remotely-located Pool-Planned Units to use them to meet their NEMA locational requirements.

4. Commission Determination

52. The Commission will deny the Municipals' request to impose a special condition to allow NEMA municipally-owned utilities with Pool-Planned Unit Entitlements to use them to meet their Locational Forward Reserve Market obligations. The Commission will also deny Municipals' request to set this matter for hearing. This issue derives from the fact that due to the likelihood of congestion, ISO-New England is not able to guarantee that the Municipals in NEMA/Boston will remain cost-neutral when using Pool-Planned Unit resources outside of NEMA/Boston to self-supply locational reserves. As the Municipals state, this issue does not exist in the interim forward reserve market because no locational forward reserve requirements exist now, and prices are uniform throughout New England for reserve products.

53. Under the interim forward reserves market, ISO-New England has procured additional resources in NEMA to meet local second contingency requirements, with the costs for these resources allocated through uplift charges which the Municipals, among others, must pay. The Commission notes that the idea behind the Locational Forward Reserve Market is to convert these uplift costs into transparent market costs by establishing separate locational reserve requirements with locational prices.

54. The combination of a forward reserve market along with the special treatment that the Municipals seek here would eliminate the Municipals' current uplift payments and not require them to pay the higher reserve prices that are likely for the NEMA load pocket. The Commission agrees with ISO-New England that the remedy the Municipals seek would be contrary to the underlying basis for locational reserve requirements.

55. The Locational Forward Reserve Market is founded on the premise that location matters; resources outside of NEMA cannot physically satisfy the reserve needs for loads inside NEMA when transmission constraints are binding. The forward reserve market is not just a financial market, as argued by the Municipals. Rather, ISO-New England is using the forward reserve market to procure physical resources located where they are needed to meet their operational reserve requirements.

E. Locational Requirements of ASM Phase II

1. Background

56. As stated elsewhere in this order, under the interim forward reserves market, ISO-New England has procured additional resources to meet local second contingency

requirements, with the costs for these resources allocated through uplift charges. ASM Phase II establishes locational reserve requirements, replacing non-market uplift costs with transparent market costs.

2. Comments

57. NICC asserts that ISO-New England's proposal is driven by the unsubstantiated presumption that the New England wholesale power market possesses the level of competition necessary to translate additional price signals into incentives for the construction of quick-start generation resources where they are needed to ensure system reliability. NICC states that the instant filing does not include any evidence that New England's wholesale power market is competitive and, therefore, provides no basis for concluding that additional locational price signals will result in efficient investment in generating resources where they are needed to ensure system reliability.

58. NICC points out that the Direct Testimony of ISO-New England's Manager of Market Development, which accompanies the ASM Phase II filing at Appendix 2, does not address the competitiveness of the New England market. NICC notes that ISO-New England's assertion that additional price signals will lead to efficient investment of the desired type is theoretical, at best, and the mere invocation of theory is an insufficient substitute for substantial evidence and reasoned explanations.

59. Further, NICC states that any Commission action that places "the market" before customers' interest and the public interest undermines the fundamental customer protection objectives of the FPA. NICC argues that markets can only be a means to a public interest-motivated end (*e.g.*, lower prices and greater efficiency), not an end in and of themselves.

60. Although NICC does not dispute that certain areas in New England may be experiencing sub-optimal investment, the ASM Phase II filing includes no "root cause" analysis of the relative lack of investment in quick-start generating resources. Rather, NICC claims that the filing operates from the mere presumption that quick-start units are not plentiful because prices are not high enough.

61. NICC asserts that absent outright rejection of ISO-New England's locational reserve requirement proposal, the Commission must find that the proposal, as filed, is deficient for failure to include such an analysis. Accordingly, NICC states that the Commission should reject ISO-New England's Locational Forward Reserve Market proposal at least until ISO-New England submits a "root cause" analysis focusing on the underlying reasons for this investment level and the potential impact on reliability, and provides a well-reasoned remedy to the underlying causes. NICC states that at a minimum, such a study must address: (1) existing barriers to entry of new quick-start generation; (2) the apparent failure of locational marginal pricing to send sufficient price signals to result in the right mix of generation at the right locations; (3) the impact of

planned transmission upgrades in New England on quick-start generation needs; and (4) the costs and benefits of the locational reserve requirement proposal.

3. Answers

62. ISO-New England points out that FPA section 205 does not obligate a filing party to provide the analyses sought by NICC. Rather, ISO-New England notes that the Commission has expressly stated that cost-benefit analyses are not required because "customers will be protected by the review of applications pursuant to sections 205, 206 and 219 of the FPA, which require all rates be just and reasonable and not unduly discriminatory or preferential."[24]

63. ISO-New England claims that the Commission supports the competitive doctrine that the price of electricity is just and reasonable when it accurately reflects the marginal cost of supply determined under competitive market conditions. ISO-New England states that just as real-time prices reflect the marginal costs associated with the varying loads over time, adding locational requirements enables price diversity that improves the accuracy in reflecting locational varying marginal costs.

64. ISO-New England explains that the goal of the ASM Phase II market design is to procure through a market mechanism those resources that are required to meet the operational reserve needs of the New England Control Area, the same requirements with which the ISO plans and operates the system now. ISO-New England asserts that at present, to the extent that sufficient capacity is not cleared through the energy market to ensure adequate local reserves, ISO-New England takes out-of-market actions to commit the needed resources, which distort energy prices in the entire market. ISO-New England states that regardless of whether the Forward Reserve Market is modified to include a locational component, ISO-New England will continue to commit resources to meet local requirements when necessary. ISO-New England states that the issue raised by NICC is whether consumers should continue to pay for the reserves needed to ensure local reliability through so-called uplift payments or whether a market mechanism based on locational clearing prices will produce more efficient results in the long-run.

65. ISO-New England states that by building on the existing Forward Reserve Market framework, the ASM Phase II proposal will secure the resources needed to meet the locational reserve requirements. In addition, ISO-New England states that the prices will reflect the expected value of penalties for failure to meet delivery obligations biasing selection in the auction toward resources that are expected to have the highest availability. ISO-New England asserts that the addition of the locational aspect to the market will reveal the value of having off-line capability in import-constrained areas,

[24] *Promoting Transmission Investment through Pricing Reform,* Notice of Proposed Rulemaking, 113 FERC ¶ 61,182 at P 16 (2005).

stimulating investment. ISO-New England notes that should the market be tight or short of supply, the imposition of the $14.00/kW-month price cap will constrain prices at the cost of entry.

66. Further, ISO-New England states that the local reserve requirements and the costs of meeting them are significant while the costs attributable to the addition of local reserve requirements in the Forward Reserve Market are just and reasonable. First, ISO-New England states that the charges for the service will be based on an auction and therefore represent a market price. Second, ISO-New England notes that if there is insufficient competition or insufficient supply, the auction price will be capped at the cost to provide the service from a new unit. ISO-New England claims that this is the cost that a Market Participant would have to pay in order to provide the service itself. Third, ISO-New England states that any Market Participant may participate in the auction as a supplier. ISO-New England claims that the inclusion of demand response as a type of supply significantly improves the ability of consumers, especially large industrial consumers, to self-supply or even profit in the Forward Reserve Market.

67. In contrast to NICC's position, ISO-New England asserts that the New England market is sufficiently competitive to ensure that price signals will result in investment. ISO-New England claims that the existing Forward Reserve Market has been successful on several fronts, noting that between the first auction and the most recent auction, the amount of supply offered against the obligations had doubled. ISO-New England asserts that the fact that this increase in supply has occurred while the price has dropped by more than half provides evidence that the market is competitive and does respond to new supply entering the market in response to price. In addition, ISO-New England claims that several intervenors have identified projects that they are developing as reasons not to delay the introduction of ASM Phase II. ISO-New England disputes the argument that the market is not competitive, given the experience in the interim Forward Reserve Market along with the planned new reserve capacity for New England.

68. ISO-New England notes that apart from the existing Forward Reserve Market, over the past five years New England has established workably competitive electricity markets that are performing well with minimal market power concerns. ISO-New England notes that while the capacity addition during 2005 was the lowest at 97 MW, ISO-New England is currently tracking 37 new generation projects totaling 4,920 MW. ISO-New England claims that investment in transmission was robust in 2005, with several important projects underway. ISO-New England asserts that a well-established resource planning process is playing an important role in minimizing risks and facilitating investment, and that the settlement reached regarding a locational installed capacity market is likely to further improve the investment climate.

4. <u>Commission Determination</u>

69. The Commission rejects NICC's assertion that the New England wholesale power market is not sufficiently competitive to ensure that the addition of a locational component to the existing Forward Reserve Market will provide incentives for the construction of quick-start generators. As ISO-New England points out in its answer, the existing Forward Reserve Market has been successful in greatly increasing supply offered into the auctions and decreasing overall prices. This point is not disputed. Moreover, a cost-based offer cap of $14,000/MW-month (reflecting the carrying cost of an aero-derivative combustion turbine) would limit the ability any seller to exercise market power. As ISO-New England states, New England has very significant local reserve requirements that cannot be met from resources outside the local area.[25] It is reasonable for ISO-New England to recognize these specific local requirements when it procures reserves in its forward reserves market; by doing so, forward reserve prices in each local area will better signal the distinct reserve needs of each area.

70. Further, the Commission has supported the development of locational markets in previous proceedings, stating:

> We have identified locational installed capacity as a market design feature that can serve as a solution.[26] The New England market as a whole appears to have adequate capacity. At the same time, nearly all existing units within [Southwest Connecticut] are needed for reliability. Additionally, ISO-New England has also recently conducted a Request for Proposals to obtain additional resources in [Southwest Connecticut]. Thus, the use of a local capacity market would better reflect the value of capacity in [Southwest Connecticut] than the existing system-wide capacity market. Thus, the use of a locational capacity market could be a solution to the Reliability Compensation Issues in [Southwest Connecticut].[27]

The locational reserve requirements in the proposed ASM Phase II market design accomplishes the Commission's objective of better reflecting the value of forward reserves.

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[25] *See* ASM Phase II Proposal, Attachment 2 at 6, 13-15 (Direct Testimony of Marc D. Montalvo) (Montalvo Testimony).

[26] *New England Power Pool and ISO-New England Inc.*, 105 FERC ¶ 61,204 at P 19 (2003).

[27] *Devon Power LLC*, 107 FERC ¶ 61, 240 at P 37 (2004).

71. The Commission disagrees with NICC and finds as unnecessary any additional "root cause" analysis into investment in quick-start generating resources. NICC acknowledges that several areas in New England possess "sub-optimal" investment in locational reserves and acknowledges that the interim market funds locational reserves through non-market Net Commitment Period Compensation (uplift) payments. In the Interim Forward Reserve market, these locational reserve uplift payments provide no signal to the market as to the value of those resources. We note that the idea behind the locational aspect is not simply to raise prices, as indicated by NICC, but to transfer currently non-market uplift payments into a mechanism that accurately reflects the marginal cost of supply determined under competitive market conditions.

F. Capacity Market Issues

1. Background

72. Concurrent with the Commission's review of ASM Phase II, the Commission is reviewing a proposed settlement to address the longstanding issues regarding ISO-New England's capacity market. As such, NICC states that assuming the Commission does not simply reject ISO-New England's filing, the Commission must, at a minimum, avoid proceeding with ASM Phase II on the timetable that ISO-New England requests.

2. Comments

73. NICC argues that moving forward with ASM Phase II at this time is not only inappropriate given the alleged deficiencies in ISO-New England's filing, but also untimely in light of the fact that New England's resource adequacy construct remains in flux. NICC therefore requests that the Commission postpone action on ASM Phase II at least until the details of New England's resource adequacy construct (where a settlement-in-principle was recently reached) has been filed with and approved by the Commission. NICC is concerned that without knowing these details, customers have no assurance that locational aspects of ASM Phase II would not represent a "double price signal" for new generation in particular areas, leading to potential over-recovery.

74. Pinpoint states that as the Commission addresses New England's resource adequacy construct, it must ensure that any cap established in the forward reserve market be incrementally higher than any corresponding cap in the capacity market to reward the additional risk present in the reserve market.

75. NRG asserts that the proposed Ancillary Service Market design will not be the panacea for addressing the long-run reserve requirements of the NEPOOL system, nor will it solve the resource adequacy needs of the NEPOOL system. NRG notes that because the proposed market design reduces the Locational Forward Reserve Market payment by the capacity price for the Reserve Zone, the financial benefits of participation in the Locational Forward Reserve Market markets are only incremental to the financial benefits of the participation in the ICAP markets. Thus, NRG argues that it does not

expect sustainable price signals for resources capable of providing reserves alone. Further, NRG states that given the vertical demand curve design of the Locational Forward Reserve Market, there will remain a continuing need for the implementation of a robust and compensatory ICAP market to align the compensation of suppliers with the needs of the system operator. Therefore, NRG believes that the Commission should look to other market dynamics other than ASM Phase II that create willingness to invest in generating facilities.

3. Answers

76. ISO-New England states that the Commission should reject NICC's request to delay implementation of the ASM Phase II proposal until the Commission has approved a locational capacity market. ISO-New England claims that the Commission has stated that capacity and operating reserves are separate and distinct products, explicitly rejecting contentions that the two markets are duplicative.[28] ISO-New England also states that in the Initial Decision involving the development of a locational installed capacity market in New England, the Presiding Administrative Law Judge clearly recognized capacity as a separate product deserving its own market separate and apart from the Forward Reserve Market.[29]

77. Further, ISO-New England states that simultaneous existence of both a forward reserve market and a capacity market is not an issue in this section 205 proceeding; New England already has both a capacity and a forward reserve market. Instead, ISO-New England claims that the issue here is whether the proposed changes to the forward market delineated in the ASM Phase II proposal, which incorporate local requirements into the existing design, are just and reasonable. ISO-New England therefore states that the Commission should not entertain in this proceeding and should reject any arguments associated with elements or implementation of a locational capacity market.

4. Commission Determination

78. The Commission will reject NICC's request to delay implementation of ASM Phase II. As ISO-New England points out, the Commission has found that the markets for capacity and operating reserves are separate, distinct, and non-duplicative. Further, there are currently both interim capacity and operating reserve markets in New England, and both were found to be just and reasonable. Therefore, the issue in this proceeding is whether the revisions to the forward market proposed in the ASM Phase II instant filing are just and reasonable. The current state of the capacity market in New England does

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[28] ISO-New England cites *New England Power Pool and ISO-New England Inc.*, 105 FERC ¶ 61,204 at P 27 (2003).

[29] *See Devon Power LLC*, 111 FERC ¶ 63,063 (2005), *exceptions pending*.

not control this proceeding, and we will therefore not delay implementation of ASM Phase II while ISO-New England's capacity market is being developed.

79. We find that Pinpoint's request to ensure that any cap established in the forward reserve market must be higher than any corresponding cap in the capacity market is outside the scope of this proceeding. However, we note that ISO-New England states that it has agreed with stakeholders that the settlement rules will be modified to accommodate the design of any successor capacity market currently pending before the Commission, and that such modification will maintain the principle of paying only for the incremental value of operating reserves through the Forward Reserve Market.[30]

G. Binary Pricing/Administratively Set Parameters

1. Background

80. Under ASM Phase II, locational and system reserve requirements will be administratively determined in recognition of ISO-New England Operating Criteria and procedures.

2. Comments

81. NRG argues that the proposed set of rules for the Locational Forward Reserve Market establish a supply and demand dynamic that is similar to the ICAP market today in NEPOOL, a design that the Commission has found to be unjust and unreasonable. NRG also argues that the demand for reserves is fixed and static since, for each reserve category and location, there is only one quantity of reserves required and procured. Thus, NRG asserts that the same vertical demand curve that has been a problem in the ICAP market is built into the proposed Locational Forward Reserve Market.

82. Specifically, NRG states that proposed section 9.2.3 of Market Rule 1 defines the methodology to determine the precise quantity of the Forward Reserve Market Reserve Requirements to be acquired locationally as part of each Locational Forward Reserve Market auction period. NRG states that although locational amounts of reserves may be adjusted from one auction to the next based upon the need to commit resources for second contingency support, the result is that in every auction a fixed quantity of reserves will be required.

83. NRG states that, similar to the workings of today's ICAP market, units providing reserve services in real time face low marginal costs of providing the service. Furthermore, competitive market behavior drives existing providers of these reserve services to offer their services at their marginal costs. NRG states that once costs are sunk (which they are for units bidding into the Locational Forward Reserve Market

[30] *See* Montalvo Testimony at 35.

auctions), the economically rational behavior under this market structure results in very high prices during shortage conditions and prices near zero during periods of surplus. Thus, NRG states that the Commission should expect reserve market prices to rapidly fall to the level of marginal costs with only a slight oversupply situation. NRG asserts that the result is a market signal that is insufficient to provide incentive to new reserve capable resources and inadequate to compensate existing resources.

84. NRG states that New England has experienced the market dynamics described herein under the existing Forward Reserve Market model, as in each successive auction reserve quantities have increased and prices have decreased. NRG notes that results from the most recent auction produced a price of $2/kW-month, a price that is insufficient to adequately compensate existing reserve providers, and certainly not enough to provide incentive for new generation.[31] Given the downward trend in prices, NRG asserts that even those suppliers for whom ISO-New England anecdotally measures success of new supply have reconsidered their participation in the market.

85. NRG asserts that the $2/kW-month market outcomes closely reflect marginal cost of the service provided, leaving little or no room for contribution to other fixed operating or carrying costs. NRG claims there is little reason to anticipate different outcomes from the Locational Forward Reserve Market design proposed here. NRG argues that without appropriate compensation from these markets, these resources will be required to seek out-of-market alternatives like RMR agreements.

86. NSTAR, while supportive of the ASM Phase II proposal, expresses similar concerns regarding administratively-set parameters, arguing that market outputs (auction clearing prices) should reflect market inputs (auction offers). NSTAR states that this approach protects against gaming or other unintended consequences. NSTAR raises the following examples of administratively-set parameters established by ASM Phase II: Reserve Constraint Penalty Factors, clearing auctions at the Offer Cap (section III.9.4 of the OATT), and defining the Offer Cap at the highest-cost combustion turbine choice (rather than the lowest-cost combustion turbine choice).

3. Answers

87. ISO-New England notes that although the ASM Phase II proposal does not modify the basic approach to clearing the forward reserve auction that is currently employed by ISO-New England and approved by the Commission, NRG now takes issue with the existing approach. Regarding NRG's contention that the ASM Phase II proposal results

[31] NRG asserts that, based on the Montalvo Testimony (at 24), new generation requires prices between $7/kW-month to $13/kW-month to enter the market.

in binary pricing,[32] ISO-New England argues that the basic clearing methodology used in the interim Forward Reserve Market has not resulted in binary pricing and that NRG fails to demonstrate why binary pricing will result when the same clearing methodology is used in the future. ISO-New England notes that the Forward Reserve Market operates on a seasonal basis, and over each season the marginal cost of availability is greater than zero. In addition, ISO-New England notes that the expected value of penalties is strictly greater than zero, *i.e.*, resources incur going-forward costs to maintain availability and provide reserves. Thus, ISO-New England states that unless the resource portfolio setting the price has no going-forward operating and maintenance costs and is always available, the clearing price should not be zero.

88. Finally, ISO-New England argues that the results of the interim Forward Reserve Market show that even a surplus of 100 percent does not collapse the clearing price in the market. Rather, the price in the interim market has fallen in almost linear inverse proportion to the supply increase. Given the actual experience with the clearing of the Forward Reserve Market thus far, ISO-New England claims that NRG's arguments regarding binary pricing are simply unfounded.

4. **Commission Determination**

89. The Commission will not require ISO-New England to modify ASM Phase II to reflect the positions of NRG and NSTAR. As ISO-New England notes, the interim Forward Reserve Market (outside of a locational aspect) uses the same auction clearing methodology for system reserves as that proposed under ASM Phase II. Thus, as this methodology is unchanged, we do not believe that this FPA section 205 filing is the proper forum for resolving NRG's grievances. We note that the intent of locational reserves is to create a transparent locational price signal for the procurement of local reserves whose costs are currently allocated through uplift. NRG's argument, that in each successive auction in the interim Forward Reserve Market reserve quantities have increased and prices have decreased, is not convincing. Rather, it can be argued that this result reflects a competitive and efficient reserve market. Regarding NRG's arguments concerning the potential for insufficient clearing prices in the Locational Forward Reserve Market auction, we note that the $2/kW-month clearing price from the recent interim Forward Reserve Market auction represents an overall system reserve price. Thus, this price is not necessarily indicative of locational reserve prices under ASM Phase II for import-constrained areas that cannot depend on transmission to satisfy local second contingencies; the precise areas where Locational Forward Reserve Market is

[32] As reflected in NRG's position, binary pricing refers to a condition where prices may be extremely high during scarcity conditions, and low (potentially insufficient to procure investment) when the quantity of reserves is adequate.

intended to remedy insufficient quick-start reserve issues. In addition, NRG's comments comparing the situation in the forward reserve market to that of the current ICAP market (where excess system capacity has resulted in reduced capacity prices) ignore the fact that the Commission sought a locational capacity market to address this issue.

90. Regarding NSTAR's concerns over administratively-determined parameters, we note that these values were determined as a result of negotiations with stakeholders. Further, the Reserve Constraint Penalty Factors will set the Real-Time Reserve Clearing prices only when there are insufficient reserves available to meet the reserve requirement or when the system cannot maintain the requirement through redispatch. As ISO-New England notes, the Reserve Constraint Penalty Factors values are intended to reflect the maximum price that will be paid to re-dispatch the system to create Operating Reserves, comparable values to the maximum prices allowed under the reserve market demand curves used in New York Independent System Operator, Inc. (New York ISO).[33] ISO-New England observes that the compatibility of the real-time pricing methodologies between ISO-New England and New York ISO will allow for the offering of reserve capability across control area boundaries once technical dispatch issues are resolved.[34] Similarly, the forward reserve cap assumes that the benchmark incremental Forward Reserve Market technology is an aero-derivative combustion turbine, and the cap value reflects the sum of components that a supplier would be expected to consider in developing a bid.[35] Importantly, ISO-New England notes that along with the stakeholders, it may reevaluate the Forward Reserve Offer Cap periodically to reflect changes in cost over time.[36] Given the fact that ISO-New England has stated that it will address and change administratively numbers in the future as necessary, we find that NSTAR will have an opportunity at a future date to voice its concerns, if necessary, through the stakeholder process.

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[33] Applicants' Transmittal Letter at 13-14.

[34] Montalvo Testimony at 41.

[35] These components would include foregone energy revenues and commitment costs, expected performance penalties, incremental operating expenses and capital investments, any expected capacity payments, and potentially, a risk premium to reflect forecast uncertainty (Applicants' Transmittal Letter at 10).

[36] *Id.*

H. Portfolio Deadline

1. Background

91. As part of the ASM Phase II proposal, ISO-New England will allow for portfolio offers, bilateral trading of obligations, and increased flexibility regarding the assignment of resources (until midnight prior to the Operating Day).

2. Comments

92. While NRG praises ISO-New England's proposal allowing for portfolio offers and bilateral trading of obligations, NRG claims that the midnight deadline for designating resources artificially hinders secondary market transactions that would far more efficiently allocate resources capable of meeting the reserve needs of the system in real time. NRG asserts that since ISO-New England will always operate the system with the requisite reserve levels if available, suppliers should be able to seek out and procure the lowest cost means of meeting those obligations without arbitrary barriers to participation. NRG argues that if the reserves are available in real time, they ought to be eligible for forward reserves designation. NRG argues that the Commission should require ISO-New England to provide greater flexibility in allowing suppliers to designate resources on an hour-ahead basis, at a minimum, or on an after-the-fact basis, as is done for financial transactions in the energy market.

3. Answers

93. ISO-New England claims that NRG overlooks the fact that the whole notion of a strike price and a reserve market is to ensure reliability. ISO-New England argues that the very short timeframe for assignments sought by NRG raises reliability concerns. ISO-New England states that it could hypothetically allow resource assignments during the day and impose penalties for non-delivery from a strictly financial perspective, but such short notice designation of reserve resources may not provide system operators with the necessary resources to meet the reserve requirements if sufficient resources were not assigned and available.

94. ISO-New England explains that in establishing the deadline by which suppliers must assign resources, ISO-New England and stakeholders designed a market to meet operational needs. ISO-New England asserts that by having assignments prior to the Operating Day, system operators are able to assess whether there is sufficient on-line capacity or available off-line fast-start capacity to meet all locational and system operating reserve requirements during the operating day and to develop an operating plan that meets all operating needs, including Operating Reserves. ISO-New England states that should additional capacity be required, system operators have time to make necessary supplemental commitments. ISO-New England claims that it is critical that system operations have time to make these commitments because many of the resources inside of the import constrained areas have long start times and must be given start-up

instructions many hours before the on-peak period begins to ensure that they are available for dispatch. ISO-New England argues that NRG has failed to proffer any reason justifying the increased reliability risk and drastically underplays the fact that the upgraded Forward Reserve Market will provide suppliers with significant increased flexibility by allowing them to manage their risks more efficiently by participating in the market on a portfolio basis.

95. In its answer, NRG argues that contrary to ISO-New England's allegations, in seeking greater flexibility to designate units for forward reserves it is not seeking to adversely impact reliability. NRG states that the midnight deadline for designating resources artificially hinders secondary market transactions that would more efficiently allocate resources capable of meeting system reserve needs in real time. Further, NRG argues that greater flexibility in unit substitution will improve system reliability, as a supplier could substitute a unit for reserve service if necessary due to forced outage.

4. Commission Determination

96. The Commission disagrees with NRG's arguments concerning ISO-New England's portfolio deadline. As NRG is aware, ASM Phase II improves on the interim Forward Reserve Market by allowing suppliers to manage their Forward Reserve Resources on a portfolio basis, offers increased flexibility regarding the assignment of resources (until midnight prior to the Operating Day), and allows for bilateral trade of obligations. Further, as ISO-New England notes, under the day-ahead assignment system of ASM Phase II, system operators will have the ability to assess whether there is sufficient on-line capacity or available off-line fast-start capacity to meet all locational and system operating reserve requirements for the operating day. NRG, however, seeks the additional ability to designate resources on an hour-ahead basis, at a minimum, or on an after-the-fact basis. We agree with ISO-New England that NRG's arguments do not recognize reliability concerns, specifically with ISO-New England's point concerning resources inside import constrained areas that require extended start-up times that must receive start-up instructions well in advance of any on-peak period. NRG does not address this point. Further, we find that NRG's arguments provide no basis for this additional operational risk, especially considering the increased relative operational flexibility already provided under ASM Phase II when compared with the interim Forward Reserve Market.

I. Dispatchable Asset-Related Demand

1. Background

97. As part of the ASM Phase II proposal, demand resources (Asset-Related Demand) will be able to bid their resources directly into the energy and reserve markets on compatible footing with generating resources.

2. Comments

98. NICC and EnerNOC support the changes proposed under ASM Phase II that will permit dispatchable demand resources (*i.e.*, "Dispatchable Asset Related Demand") to bid their resources directly into the energy and reserve markets on a comparable basis with generating resources. However, NICC argues that further integration of demand resources into the New England market design should not supersede existing demand response programs. NICC states that given ISO-New England's resource adequacy concerns and pockets of chronic transmission congestion, it is axiomatic that New England's demand response programs are needed and should be encouraged. Therefore, NICC requests that the Commission clarify that the incorporation of "Dispatchable Asset Related Demand" into the New England market design will be a complement to, rather than a substitute for, existing demand response programs.

99. EnerNOC states that ASM Phase II as proposed includes several elements that preclude full participation of Demand Resources at this time. For example, EnerNOC notes that resources that meet the following criteria are ineligible to participate in reserve markets under ASM Phase II: Resources that are engaged in existing ISO-New England programs; resources that are less than 5 MW; and non-dipatchable resources that lack the proper telemetering equipment. EnerNOC notes that a further obstacle to full participation is the requirement that makes Demand Resources subject to Special Case Nodal Pricing.

100. EnerNOC states that ISO-New England recognizes that additional steps are required to integrate demand resource assets into New England's markets. EnerNOC supports ISO-New England's commitment to undertake a pilot project validating the ability of existing demand resource assets to participate in ASM Phase II.

3. Answers

101. ISO-New England states that the measures pertaining to demand resources in ASM Phase II are, in fact, intended to co-exist with, not supersede, existing demand response programs. However, ISO-New England notes that the current demand response programs will expire in 2008. ISO-New England states that the ASM Phase II filing does not prejudice the continuation or form of these programs after their expiration. Finally, ISO-New England observes that demand resource owners must decide whether to register as either Dispatchable Asset Related Demand or to participate in a demand response program. As ISO-New England notes, if a resource were permitted to register as Dispatchable Asset Related Demand and participate in a demand response program, that resource would be paid twice for providing comparable services.

4. Commission Determination

102. Although highlighting that the current demand response programs will expire in 2008, ISO-New England is clear in its answer that Dispatchable Asset Related Demand will be a complement to, rather than a substitute for, existing demand response programs. In addition, EnerNOC notes that ISO-New England has committed to a pilot project validating the ability of existing demand resource assets to participate in ASM Phase II. The Commission finds that ISO-New England's clarification adequately responds to the protestors' concerns.

J. Removing Limits on Net Commitment Period Compensation Payments/ Multi-Settlement Market

1. Background

103. Under the existing Forward Reserve Market rules, on-line Forward Reserve resources must forgo the ability to receive day-ahead Net Commitment Period Compensation credits, which cover any deficit between a supplier's bid costs (including start-up and minimum-generation costs) and its revenues from ISO-New England's spot markets. As stated in the currently effective tariff, the purpose of this rule is to "permit the ISO to evaluate the cost trade-off between (i) generating resources that must be committed on line, at extra operating cost, in order to provide Operating Reserve, and (ii) flexible resources that can provide Operating Reserve when off-line without extra operating cost."[37]

2. Comments

104. ISO-New England states that the objective of this rule is for reserve resources to include any reserve commitment costs in their Forward Reserve Market supply offers.[38] As a result, according to NEPOOL and ISO-New England in their original filing to propose a forward reserve market,[39] the bids to provide Forward Reserves by on-line resources would reflect the foregone Net Commitment Period Compensation credits. The resulting increase in the Forward Reserve price would help to encourage entry by new quick-start units. NEPOOL and ISO-New England argued that inclusion of start-up and minimum-generation costs in the on-line unit's bids is essential to yield the optimal mix of resource types, which should result in the most cost-effective and economically efficient investment in reserve technology.

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[37] *See* currently effective Section 9.5.1(b) of the Market Rule 1.

[38] *See* Montalvo Testimony at 33.

[39] *See* NEPOOL and ISO New England Filing in ER03-138, Sept. 8, 2003, Transmittal Letter at 5.

105. However, ISO-New England states that its experience under the current rules is that base-load resources are the only on-line resources that have effectively competed to provide forward reserves, and base-load resources rarely include start-up costs in their bids.[40] As a result, ISO-New England and NEPOOL propose in the instant filing to eliminate the existing limits on Net Commitment Period Compensation payments and to increase the performance penalties.[41]

3. Commission Determination

106. No party objects to the proposal of ISO-New England and NEPOOL for removing the requirement that on-line resources forgo Net Commitment Period Compensation payments. Accordingly, we will accept this feature of the filing. However, the proposal would rely on an untested feature – increased failure-to-reserve and failure-to-active penalties – to create an incentive for sellers to include commitment costs in their forward reserve bids. If the incentive is successful so that bids reflect each seller's full costs (including commitment costs) of providing reserves, ISO-New England will be able to select the resources that can provide forward reserves at the lowest actual costs.

107. Because of the untested nature of this feature, once ASM Phase II has been operational for at least six months, we will require ISO-New England to include in its semi-annual report on ASM Phase II (detailed below) a summary on whether these objectives are being met. Specifically, the report should evaluate how successful the penalties have been in achieving the intended effect on supplier bids and the intended objective of procuring the lowest-cost resources to provide reserves.

108. ISO-New England and NEPOOL also state that they and their stakeholders have not identified sufficient value in creating a multi-settlement market, such as by implementing a day-ahead market that would settle against the Real-Time Reserve Market. They also state, however, that ISO-New England expects to continue to study these options further.[42] In the semi-annual report discussed below, ISO-New England is to also discuss whether allowing forward reserve suppliers to buy back their obligations in a future day-ahead spot market would promote or impede the objectives of

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[40] *See* Montalvo Testimony at 33-34. Montalvo states that base-load resources offer expensive capability from the top end of their output range, which is not often economic in the energy market but is a good source of reserves

[41] Applicants' Transmittal Letter at 16. See also the blacklined version of the proposed tariff, which has struck the language in the currently effective Section 9.5.1(b) that requires on-line resources to forgo Net Commitment Period Compensation credits.

[42] Applicants' Transmittal Letter at 15.

(i) encouraging sellers to include their full costs (including commitment costs) in their forward reserve bids, and (ii) procuring the lowest-cost resources to provide reserves.

K. Periodic Reporting

1. Comments

109. Coral asserts that ISO-New England should be required to file with the Commission periodic reports (preferably quarterly but at least every six months) assessing the performance of the new market. Coral claims that this would be consistent with the practices of New York ISO, which provides semi-annual assessments of the implementation of its Standard Market Design 2.

2. Commission Determination

110. As noted by the requirements for semi-annual reporting established elsewhere in this order, the Commission agrees with Coral's position and will require ISO-New England to file a report semi-annually on the performance of the new market, including recommendations for future improvements. In addition, as stated previously, these reports should provide: (1) updates on the implementation of a forward TMSR market, including descriptions of proposals that have been considered to date, impediments to implementation that still need to be resolved, and a proposed schedule to resolve such impediments;[43] (2) details concerning ISO-New England's operational and economic rationale for considering involuntary load shedding in determining reserve requirements in NEMA/Boston and the effect on reliability of considering involuntary load shedding;[44] (3) once ASM Phase II has been operational for at least six months, a summary on whether increased failure-to-reserve and failure-to-active penalties have successfully created an incentive for sellers to include commitment costs in their forward reserve bids (allowing ISO-New England to select the lowest-cost resources to provide reserves);[45] and (4) a discussion concerning whether allowing forward reserve suppliers to buy back their obligations in a future day-ahead spot market would promote or impede the objectives of (i) encouraging sellers to include their full costs (including commitment costs) in their forward reserve bids, and (ii) procuring the lowest-cost resources to provide reserves.[46]

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[43] *See supra* P 33.

[44] *See supra* P 41.

[45] *See supra* P 107.

[46] *See supra* P 108.

L. **Waivers**

111. The Commission's review of the ASM Phase II proposal indicates that it appears to be just and reasonable, and that it has not been shown to be unjust, unreasonable, unduly discriminatory or preferential, or otherwise unlawful. The Commission therefore accepts the proposal, subject to the reporting requirements described above. We will grant waiver of the Commission's 120-day prior notice requirement, 18 C.F.R. § 35.3 (2005), to allow the proposal to be effective October 1, 2006, as requested.[47]

The Commission orders:

(A) ISO-New England's proposed revisions to its tariff are accepted, to become effective October 1, 2006, or later, subject to ISO-New England's written notice to the Commission and NEPOOL not less than two weeks prior to implementation, as requested.

(B) ISO-New England is required to issue a report semi-annually on the performance of the new market, including recommendations for future improvements, as discussed in the body of this order. The first report will be due six months from the date of issuance of this order, with each subsequent report due every six months.

By the Commission.

(S E A L)

Magalie R. Salas,
Secretary.

[47] *See Central Hudson Gas & Elec. Corp.*, 60 FERC ¶ 61,106, *reh'g denied*, 61 FERC ¶ 61,089 (1992).