UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;
William L. Massey and Nora Mead Brownell.

ISO New England, Inc. Docket No. ER03-854-000
ER03-854-001

ORDER ACCEPTING SCARCITY PRICING PROPOSAL

(Issued July 25, 2003)

1. In this order, the Commission accepts the filing of ISO New England, Inc. (ISO-NE) to set a scarcity price for energy during reserve shortages. This order will provide interim relief until ISO-NE makes a comprehensive filing dealing with scarcity pricing and related issues in March 2004. This order benefits New England customers by ensuring that energy will be priced so as to send appropriate market signals.

BACKGROUND

2. On May 15, 2003, pursuant to Section 205 of the Federal Power Act ISO-NE filed a package of amendments to New England Power Pool (NEPOOL) Market Rule 1 and Appendix F affecting the rules for setting energy prices during peak periods (Scarcity Pricing Proposal). The Scarcity Pricing Proposal's reforms are intended to improve energy price signals in the real time market during periods of system-wide reserve scarcity. ISO-NE submits that the Scarcity Pricing Proposal is in the public interest as it ensures that New England's energy prices are set more efficiently and provides proper incentives to all generators during shortage conditions.

3. The Scarcity Pricing Proposal failed to receive the required two-thirds majority from the NEPOOL Participants Committee, and thus ISO-NE files this under Section 6.17(e) of the Interim ISO Agreement.[1] In fact, ISO-NE submitted two alternative

[1]Section 6.17(e) of the ISO Interim Agreement reads: If the ISO determines in good faith that (i) the failure to immediately implement a new System Rule or Procedure or a modification to the existing System Rules or Procedures would substantially and adversely affect (A) System reliability or security, or (B) the competitiveness or efficiency of the NEPOOL Market, and (ii) invoking the rulemaking procedures of the
(continued...)

versions of the proposal to the NEPOOL Participants Committee and neither received the requisite super-majority for passage. Moreover, ISO-NE believes that resubmitting the proposal for another vote would not be of value and would delay its implementation. ISO-NE states that it has determined in good faith that the failure to implement the Scarcity Pricing Proposal immediately would substantially and adversely affect the competitiveness and efficiency of the NEPOOL Markets.

4. ISO-NE requests an effective date of July 1, 2003 so that the Scarcity Pricing Proposal will be in effect during the bulk of the coming summer period. In its response, filed June 20, 2003, ISO-NE states that it will not implement the proposal on July 1 absent a Commission order. Additionally, ISO-NE states that it will require two business days from when it knows the rule has been accepted before the proposal can go into effect.

5. The Scarcity Pricing Proposal is an interim measure and is intended to ensure that energy prices are set at efficient levels when the NEPOOL Control Area is short of Operating Reserves. One part of the Scarcity Pricing Proposal would reinstitute certain reforms (the "Patton reforms") that were in effect in New England prior to the Summer of 2002, but that could not be carried over when ISO-NE implemented NE-SMD on March 1, 2003, due to software limitations. These reforms would: (1) make offers from the most expensive dispatchable external transaction purchase scheduled eligible to set the energy price during periods of reserve shortages and (2) make resources providing operating reserves eligible for opportunity costs. The other part of the Scarcity Pricing Proposal sets the energy component of the LMP at $1000/MWh in shortage conditions to assure that the price of energy properly reflects its value as either energy or Operating Reserves. ISO-NE states that the dispatch algorithm includes in the calculation of LMPs the effect of losses from the marginal resource to the reference node, and thus it is possible for the energy component (the LMP at the reference node) to exceed $1,000.[2]

6. The Scarcity Pricing Proposal will apply only to real time dispatch and the real time market. ISO-NE will declare a Reserve Shortage Condition when it (1) is experiencing, or must take action to avoid experiencing, a deficiency in total ten minute

---

[1](...continued)
relevant NEPOOL Committee would not allow for timely redress of the ISO's concerns, the ISO may promulgate and implement such new or modified System Rule or Procedure unilaterally upon written notice to the NEPOOL Executive Committee, subject to approval by the FERC, if required.

[2]See ISO New England, Inc., 99 FERC ¶ 61,124 (2002).

Operating Reserves, or (2) is experiencing a deficiency in total operating reserves that has lasted longer than a four-hour period of time and has begun or is anticipating taking out-of-merit actions or engaging in emergency energy transactions to maintain or preserve Operating Reserves. The Reserve Shortage Condition will be terminated when ISO-NE has determined that system conditions have improved to the point where out-of-merit dispatch is no longer needed to maintain required operating reserves. Under the Scarcity Pricing Proposal, ISO-NE will notify the market when Reserve Scarcity Conditions occur and adjust real time LMPs before they are published.[3]

7. During reserve shortage conditions, if ISO-NE's actions have not restored operating reserves to required levels the energy component of the affected nodal Real-Time prices will be set to the higher of $l000/MWh or the energy component of the nodal Real-Time price. Moreover, if ISO-NE calls a reserve shortage condition and a deficiency level is avoided by scheduling a dispatchable import, the energy component of LMP will be set at the higher of its original value or the most expensive import required to eliminate the deficiency. If a resource is dispatched down to provide operating reserves, it will receive an opportunity cost payment equal to the difference between the adjusted LMP and the resource's supply offer.

8. As proposed, Market Rule 1 stipulates that if the market monitoring unit and independent market advisor determine that the shortage condition and subsequent prices resulted from one or more participants physically withholding, the real time prices would not be adjusted.

9. ISO-NE states that the New York Independent System Operator's (NYISO's) scarcity pricing proposal is fundamentally consistent with that of ISO-NE's. Moreover, ISO-NE states that implementation of its Scarcity Pricing Proposal should not create or exacerbate any seams issues between the New England and New York markets. ISO-NE's and NYISO's Independent Market Advisor, Dr. David Patton, also attests to the consistency between the respective proposals in an affidavit attached to ISO-NE's filing.

10. ISO-NE states that its scarcity pricing proposal is envisioned as an interim measure, to be replaced when ISO-NE develops fully co-optimized energy and reserve

---

[3]The Scarcity Pricing Proposal will apply only when a reserve shortage condition is declared system-wide. However, it is possible that export-constrained areas may have adequate resources to meet energy and reserves needs. As such, the Scarcity Pricing Proposal's energy pricing provisions will not apply to export constrained areas.

markets.[4] ISO-NE states that these markets might utilize a demand curve representing the value of reserves at different levels, allowing the markets to set prices efficiently to reflect different levels of scarcity during shortage conditions of different intensity.

11. On May 28, 2003, ISO-NE filed an errata correcting clerical errors in its earlier filing.

Notice of Filings, Protests, and Interventions

12. Notice of ISO-NE's May 15 filing was published in the Federal Register,[5] with motions to intervene, notices of intervention, comments and protests due by June 5, 2003. Notice of ISO-NE's May 28 filing was published in the Federal Register,[6] with motions to intervene, notices of intervention, comments and protests due by June 18, 2003.

13. Timely motions to intervene were filed by Vermont Department of Public Service; Mirant Americas Energy Marketing, LLP, Mirant New England, LLC, Mirant Canal, LLC, and Mirant Kendall, LLC (Mirant); Dominion Energy Marketing, Inc.; and Dominion Energy Marketing, Inc.

14. New England Consumer Owned Entities (NE COE) filed a motion to intervene and reject filing. Timely motions to intervene with protests were filed by NSTAR Electric and Gas Corporation (NSTAR); and NEPOOL Industrial Customer Coalition, Luminescent Systems, Inc., Connecticut Office of Consumer Counsel, New Hampshire Office of Consumer Advocate (collectively New England Customers).

15. Timely motions to intervene with comments were filed by Northeast Utilities Service Company on behalf of the NU Operating Cos and Select Energy (NU); Connecticut Department of Public Utility Control (CT DPUC); NEPOOL Participants Committee; Maine Public Utilities Commission (MPUC) and Calpine Eastern Corporation (Calpine). Timely motions to intervene in support of the proposal were filed by Consolidated Edison Energy, Inc.; Coral Power LLC, Edison Mission Energy, Inc., Edison Mission Marketing & Trading, Inc., and Aquila Merchant Services, Inc. (Coral);

---

[4]Under fully co-optimized energy and reserve markets, ISO-NE would consider jointly the generators that offer to supply energy and/or reserves in developing a schedule that minimizes the combined cost of providing energy and reserves.

[5]68 Fed. Reg. 31697 (2003).

[6]68 Fed. Reg. 33927 (2003).

and PSEG Companies. NRG Companies (NRG); and USGen New England (USGen) filed untimely motions to intervene and comments.

DISCUSSION

Procedural Issues

16. Pursuant to Rule 214(c) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(c) (2003), the notices of intervention and timely unopposed motions to intervene serve to make the state commissions and movants, respectively, parties to this proceeding. Given the early stage of this proceeding and the absence of undue delay or prejudice, we find good cause to grant all untimely, unopposed interventions. As to ISO-NE's response, under Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2)(2003), a party may not file an answer to a protest unless the decisional authority so orders. Because ISO-NE's answer provides additional material that will assist in the Commission's consideration of this case, the Commission will accept it.

Analysis

ISO-NE's Authority to File Proposal

17. NSTAR asserts that ISO-NE lacks the authority to unilaterally submit this filing under Section 6.17(e) of the ISO Agreement; NE COE filed a motion to reject on the same basis. NSTAR argues that ISO-NE possesses the authority to make this filing only if a failure to immediately implement such rule would substantially and adversely affect (1) system reliability or security, or (2) competitiveness or efficiency of the NEPOOL market. NSTAR submits that the current Standard Market Design for New England (NE-SMD) does not pose a threat to NEPOOL System reliability or security; nor does implementation of Market Rule 1 jeopardize the competitiveness and efficiency of the NEPOOL Market.[7]   Additionally, NSTAR contends that ISO-NE has not met the immediacy test required of an emergency filing. NE COE argues that ISO-NE has not demonstrated the existence of a market design "emergency" nor has it identified imminent

---

[7]At page 2 of its transmittal letter, ISO-NE states that it "has determined in good faith that the failure to implement the Scarcity Pricing Proposal would substantially and adversely affect the competitiveness and efficiency of the NEPOOL Markets and that further invoking the rulemaking procedures of the relevant NEPOOL Committee would not allow for timely redress of the ISO's concerns."

harm that would come to New England were the proposal not implemented. NE COE further argues that ISO-NE has failed to demonstrate that the competitiveness and efficiency of the NEPOOL Markets depend on implementing the Scarcity Pricing Proposal. NE COE urges the Commission to give the NE-SMD regimen an opportunity to achieve its promise of a design under which locational marginal prices are supposed to incentivize responsive (and responsible) market behavior.

18. Though the NEPOOL Participants Committee does not take a position on the merits of ISO-NE's proposal, it as a procedural matter requests that the Commission specifically consider the issue of whether the filing is being accepted as a Section 205 filing because ISO-NE has demonstrated that the criteria for such a filing has been satisfied here, or a Section 206 filing, which ISO-NE can make to change Market Rules in any event. The NEPOOL Participants Committee states that to accept the proposal as a Section 205 filing, the Commission should conclude that this determination by ISO-NE satisfies the second criterion of Section 6.17(e). Alternatively, the Commission could accept this as a Section 206 filing, but only with a finding that the filing satisfies the requirements for Section 206 relief.

19. In its response, ISO-NE argues that the Scarcity Pricing Proposal "provides the quintessential example of when ISO-NE must use its Section 6.17(e) authority."[8] Contrary to assertions that it cut off debate on the issue, ISO-NE asserts that it made a good faith determination that there would not be any value in resubmitting the proposal for another vote after several attempts. ISO-NE further argues that the NEPOOL Participants Committee affirmed this determination in its Motion to Intervene by stating that there was little hope that additional refinements would have produced adequate support to gain the 66.67 percent required for NEPOOL approval.

20. Commission Response: We find that ISO-NE properly proceeded under Section 6.17(e), and may therefore make this filing pursuant to Section 205.[9]

---

[8] ISO-NE Response at 2.

[9] See ISO New England, Inc., 104 FERC ¶ 61,039 at P 25 (2003) ("[I]t is appropriate for ISO-NE to exercise its power under Section 6.17(e) to adopt, subject to the Commission's approval, emergency modifications to its market rules, if ISO-NE believes in good faith that the failure to immediately implement a modification would substantially and adversely affect the competitiveness or efficiency of the NEPOOL Market, and invoking the rulemaking procedures of the relevant NEPOOL Committee would not allow for timely redress of ISO-NE's concerns").

21. As has been previously noted, summer is the peak period in ISO-NE,[10] and ISO-NE is seeking to reinstate energy pricing rules that were implemented in 2002 in order to improve market efficiency. In addition, ISO-NE seeks to set the energy component of the LMP at $1,000/MWh during reserve shortages. It states that it has made this filing under Section 6.17(e) so as to ensure that the Scarcity Pricing Proposal will be in effect during the summer of 2003.[11] In his supporting affidavit, Dr. Patton stated that ISO-NE is proposing these rule changes "to improve the efficiency of energy prices during periods of shortage,"[12] and enumerated the ways in which they will do so. Thus, ISO-NE has shown that failure to approve the Scarcity Pricing Proposal would adversely affect the efficiency of the New England market.

22. Contrary to NE COE's contention, ISO-NE is not required to demonstrate the existence of an "imminent market design emergency" before it acts under Section 6.17(e); the provision speaks to the necessity for immediate action to prevent adverse effects. Section 6.17(e) provides that ISO-NE must have a good-faith belief that "the failure to immediately implement" new rules would "substantially and adversely affect" the efficiency of the NEPOOL Market, and that going through the NEPOOL rulemaking process would not allow time to address ISO-NE's concerns. Such is the case here: if the Scarcity Pricing Proposal is not put into place now, the efficiency of the NEPOOL market during the peak summer period will be impaired.

23. As to NEPOOL's request that the Commission also accept this filing pursuant to Section 206, this request is moot, since we find above that ISO-NE may make this filing pursuant to Section 205.

Mitigation

24. Several intervenors — MPUC, NSTAR, NE COE, and CT DPUC — are concerned that the Scarcity Pricing Proposal "incentivizes" the creation of reserve shortage conditions and as such encourages bidders to make units unavailable. Furthermore, many of these intervenors argue that the Scarcity Pricing Proposal contains no specific measures to mitigate market power.

---

[10]ISO New England, Inc., 104 FERC ¶ 61,039 at P 5 (2003); Devon Power LLC, et al.,103 FERC ¶ 61,082 at P 8 (2003) (Devon Order), order on reh'g, 104 FERC 61,123 (2003).

[11]ISO-NE transmittal letter at 4.

[12]Patton affidavit at 3.

25. NE COE asserts that ISO-NE provides no assurance that it intends to address the incentives to exercise market power introduced through approval of the Scarcity Pricing Proposal. NE COE and CT DPUC argue (1) that proposed Section 2.5(d)(ii) of Market Rule 1 will be insufficient protection against incentives to withhold, and (2) that provision merely negates the price adjustment rather than deterring physical withholding.[13] NE COE questions whether ISO-NE's stated intent to focus attention on physical withholding or the existing market monitoring regime will be sufficient protection in the face of "new incentives" to market misconduct created by the Scarcity Pricing Proposal. NE COE does not believe that the absence of instances in which ISO-NE's market monitoring group has detected physical withholding provides any indication as to its ability to prevent withholding under the Scarcity Pricing Proposal. Moreover, NSTAR argues, both ISO-NE and Dr. Patton acknowledge that the proposal may increase the incentive to physically withhold resources, and ISO-NE has a history of lax implementation of bid mitigation measures. CT DPUC does not believe that measures raising market prices are appropriate without corresponding measures to prevent withholding during shortage conditions. Thus, CT DPUC argues that the Commission should table the Scarcity Pricing Proposal until sufficient measures are in place to assure little or no withholding during shortage conditions.

26. MPUC states that during times of scarcity, there may be no practical way to determine what part of the price represents “scarcity rents” and which part represents the exercise of market power. Thus, MPUC asks that the Commission direct ISO-NE to create an approach which links the price paid during scarcity hours to bids made during periods when there is less likelihood of prices reflecting market power.

27. Commission Response: We disagree with intervenors that the Scarcity Pricing Proposal should be rejected because of an increased incentive to physically withhold. The Commission is satisfied that ISO-NE's scarcity pricing proposal, in combination with its existing market power monitoring and mitigation mechanism, are adequate to address the potential for physical withholding. In brief, a participant that attempts to create a reserve shortage by physical withholding will obtain no financial benefit from doing so, but will instead face financial penalties. First, under the Scarcity Pricing Proposal, LMPs

[13] The relevant portion of Section 2.5(d)(ii) reads: "If the Market Monitoring Unit, in conjunction with the Independent Market Advisor, determines that the Reserve Shortage Condition and the subsequent adjustments to the affected Energy and Loss Components of the nodal Real-Time Prices as set under this Section 2.5(d) were the result of physical withholding (as defined in Appendix A to Market Rule 1) by one or more Participants, the affected nodal Real-Time Prices will not be adjusted in the price finalization as set forth in Section 2.9."

will not be adjusted upward to $1,000 if the market monitoring unit and the independent market advisor determine that the shortage condition has resulted from one or more participants physically withholding. In addition, under ISO-NE's mitigation plan, a participant is subject to financial penalties when it engages in physical withholding.[14]

28. We find that the combination of proposed mitigation measures, ISO-NE's record of effective market monitoring, and various analyses and reports that indicate the overall competitiveness of ISO-NE's markets support for our decision to authorize the scarcity pricing mechanism. NSTAR has made no showing that ISO-NE has a history of lax implementation of bid mitigation measures, and we are satisfied with the monitor's previous actions as detailed in quarterly and annual reports. Nevertheless, to ensure that ISO-NE's measures for mitigating physical withholding remain adequate, we direct the ISO-NE market monitor to address specifically in its next annual report any market power concerns associated with the scarcity pricing mechanism it experiences during the Summer of 2003.

29. We will not adopt the suggestion of MPUC to link the prices during scarce periods to bids made during non-scarce periods. We agree with ISO-NE that prices during reserve shortages should rise to $1,000/MWh, even if all supply bids are below $1,000. That is because when the New England control area is short of reserves, ISO-NE would be willing to pay up to $1,000/MWh to purchase additional energy, and it is useful to send that signal to the market. In the short run, such a signal may encourage additional supplies from other control areas and it may encourage some buyers to reduce their purchases of energy. In the longer run, such a signal would provide an increased incentive for additional generation capacity to be available (through reduced outages as well as through additional generation investment).

[14] Under Appendix A of ISO-NE's Market Rule 1, physical withholding subject to mitigation is deemed to occur when a Participant fails to make available (a) the lower of 10 percent or 100 MW of a Resource's capacity, or (b) the lower of 5 percent or 200 MW of a Participant's total capacity for Participants with more than one Resource; or the Participant operates a Resource in Real-Time at an output level that is less than 90 percent of ISO-NE's Dispatch Rate for the Resource. Capacity that is unjustifiably derated, and that portion of a Resource's available output that is not offered or that exceeds the economic withholding threshold, is considered to be withheld. The amounts deemed withheld do not include output that is subject to a forced outage or that is out of service for maintenance in accordance with an ISO maintenance schedule. Forced outages are subject to verification by ISO-NE.

Interim Measure

30. MPUC questions whether the limited number of hours to which the Scarcity Pricing Proposal will apply justifies the expense and resources needed to implement the proposal, particularly if those resources were applied to developing long-term solutions. Moreover, the MPUC is concerned that, given the interim nature of the proposal and lack of assurance that revenues from it will be devoted to new generation investments, it will not produce the long-term investment in generation ISO-NE seeks to provide.

31. NSTAR submits that the Devon Order makes clear that the Commission anticipates that ISO-NE will turn its attention to a long-term pricing solution. The Scarcity Pricing Proposal is an interim measure and NSTAR argues that ISO-NE must craft a long-term solution that balances appropriate pricing signals with deterrents to the exercise of market power on a system-wide basis.

32. NU does not believe that the Scarcity Pricing Proposal will create incentives to entry and encourages ISO-NE to develop the co-optimized energy and reserve markets for implementation no later than the summer of 2004. NU is concerned that the development of such markets will be delayed absent clear indication from the Commission of the importance of implementing this solution.

33. Commission Response: In the Commission's September 20 Order accepting ISO-NE's Market Rule 1, we found missing from the filed Market Rule 1 many desirable market features, such as a full range of reserves markets, ICAP improvements including locational/deliverability requirements, full nodal pricing, and the remaining Patton Reforms. The Commission encouraged ISO-NE to implement these features as quickly as possible. ISO-NE's markets cannot achieve full efficiency until all these market features are in place. The Commission did find sufficient merit to accept the filed Market Rule 1 as a starting point.

34. Similarly, we find that the interim Scarcity Pricing Proposal is a reasonable start in the process of implementing a long-term solution to appropriate market pricing signals during periods of resource scarcity. We do not agree with MPUC's statement that the expense in implementing the proposal is not justified. The majority of the development expense is already complete and MPUC provides no support for its assertion that the costs to implement the program will be excessive. MPUC and NSTAR argue that a long-term solution is more desirable, and we concur. However, we disagree with MPUC and NSTAR's assertion that an interim solution will not produce price signals that are incentives to attract and retain needed investment. We find that a solution sooner rather than later more desirable. We further find that the Scarcity Pricing Proposal addresses a

specific and well-defined market flaw, and contains within it the commitment to working on a long term solution that will efficiently integrate with market improvements.

35. In the Devon Order, we required ISO-NE to make a filing no later than March 1, 2004 providing location or deliverability requirements for the resource adequacy market, to be implemented no later than June 1, 2004.[15] A properly designed scarcity pricing mechanism, by establishing efficient prices in the spot energy markets, may be consistent with the price signals in the long term bilateral markets that would arise from a resource adequacy requirement that contains a locational or deliverability feature. ISO-NE states that it expects to replace the instant scarcity pricing proposal with an improved proposal when it has developed fully co-optimized energy and reserve markets. We wish to ensure that New England's resource adequacy requirements and its spot market pricing rules are mutually supportive of efficient and competitive markets. Therefore, we direct ISO-NE, after consulting with its stakeholders and its independent market advisor, to address, in its filing to provide for locational or deliverability requirements for the resource adequacy market, how best to modify its scarcity pricing proposal when it has developed fully co-optimized energy and reserve markets. As described further below, this filing should include a discussion of the advantages and disadvantages of establishing different scarcity prices to reflect different levels of scarcity, as well as of establishing scarcity prices for smaller areas of New England when generation scarcity is experienced in discrete, smaller areas.

Proposal Administratively Sets Prices

36. The MPUC and New England Customers state that ISO-NE has not justified $1000/MWH as the appropriate price during scarcity periods. Moreover, New England Customers assert that ISO-NE does not justify how the proposal's pricing construct establishes efficient energy prices. New England Customers argue that ISO-NE and Dr. Patton fail to explain why the use of the market-clearing price as the basis for establishing prices was dismissed.

37. If the Commission does not reject the filing on procedural grounds, NE COE protests the Scarcity Pricing Proposal for several reasons. NE COE asserts that the underlying assumption of the proposal — that the "value" of energy is equal to the $1000/MWH bid cap during reserve shortage conditions — is fallacious and has not been demonstrated by ISO-NE. CT DPUC argues that ISO-NE has failed to demonstrate the

[15] Devon Order at P 37 ("we will direct ISO-NE to file no later than March 1, 2004 for implementation no later than June 1, 2004, a mechanism that implements location or deliverability requirements in the ICAP or resource adequacy market").

need for such a price to motivate the construction of new, cost-effective peaking units. NE COE and CT DPUC assert that the $1000/MWH bid cap was originally established, administratively, to prevent generators from gouging customers and was necessitated by the lack of effective demand response in New England. CT DPUC contends that the bid cap level should not serve as the basis for scarcity pricing during scarcity conditions. NE COE submits that the Commission has made clear that arbitrarily determined bid caps reflect the need to limit market power rather than establish the value of resources

38. NE COE protest the possibility that nodal prices may exceed the $1,000/MWH bid cap in place in New England and New York. NE COE submit that the Commission recently confirmed the appropriateness of and need for the $1,000/MWH bid cap under SMD in Docket No. ER02-2330-000.[16] NE COE asserts that the Commission should not accept a proposal that caps only the energy component. If the Commission accepts ISO-NE's proposal, the Commission should also rule that nodal LMP shall not exceed $1,000/MWH.

39. Commission Response: The Commission finds there is indeed justification for the $1000/MWh price level as proposed by ISO-NE. As described by Dr. Patton in his affidavit, a shortage occurs when there are not enough resources to simultaneously meet energy and ancillary services requirements. During such a shortage, reserves can be substituted for energy and vice-versa. During a reserve shortage, it is reasonable for the LMP to be set at the highest price that ISO-NE is willing to pay a generator to produce more energy, since additional energy production would reduce or eliminate the reserve shortage. Because of the $1,000/MWh safety net bid cap in New England, $1,000/MWh is the maximum offer price that ISO-NE will accept from a generator for producing energy. Such a price will encourage generators outside of New England to offer additional energy supplies to New England, and it will encourage New England buyers to reduce their purchases, both of which will help to alleviate the shortage. Over the long run, such a price will also encourage existing generators to take additional steps to avoid forced outages during periods when reserve shortages are likely, and it will encourage new generators to enter the market. New England Customers suggest that the price during reserve shortages should be set below $1,000/MWh – at the market clearing price. However, when LMPs are below $1,000 and a reserve shortage exist, the LMPs are not market clearing prices, since total demand for generation capacity (to meet energy and reserves) exceeds the total supply offered to the market. Market clearing prices are prices that result in supplies that match demand; but demand exceeds supply during reserve shortages.

[16]NEPOOL and ISO New England Inc., 101 FERC ¶ 61,287,(September 20, 2002), on reh'g, 101 FERC ¶ 61,344 (December 20, 2002).

40. NE COE's request to cap the nodal price at $1000 is inconsistent with the existing bid cap, which restricts energy bids (but not LMPs) to a maximum of $1000/MWh. LMP consists of the components: energy price, losses and congestion. Thus, LMPs at some nodes may exceed the $1,000/MWh energy component because of the costs of losses and congestion.

Alternatives to the Scarcity Pricing Proposal

41. MPUC argues that ISO-NE should be required to develop alternative proposals that are a function of the market price, such as setting the administratively determined price at the highest energy bid before the reserve scarcity event.

42. NE COE asserts that, insofar as the Scarcity Pricing Proposal is designed to remedy "a limitation in the current version of New England's SMD," namely, that external resources called upon during reserve shortage conditions are ineligible to set the energy price, ISO-NE can address this problem without adopting this proposal. NE COE states that ISO-NE presented an alternative Scarcity Pricing Proposal to the NEPOOL Participants Committee that would have more directly addressed this problem without imposing the $1,000 MW/h bid cap in reserve shortage conditions.[17]

43. CT DPUC believes that the scarcity price should be capped at $1000/MWH and that the premium over what would otherwise be the energy price should depend on the severity of the shortage condition. For a shortage condition where operating reserves are at least 90 percent of the required level, CT DPUC recommends that a $50/MWH premium apply. For each additional 10 percent increase in the severity of the shortage, the premium should increase an additional $50/MWH.[18] CT DPUC believes that scarcity pricing as such conveys the severity of the shortage and reflects the underlying marginal costs of generating resources. In contrast, CT DPUC submits that the Scarcity Pricing Proposal may provide an excessive price premium even if the required operating reserve level was marginally breached.

44. While NRG states that the Scarcity Pricing Proposal will improve pricing during shortage conditions, it asserts that when the cost of measures to avoid reserve shortage

[17] NE COE submit that under this proposal the price during reserve shortage conditions would be based on specific supply offers and not on the automatic imposition of the bid cap.

[18] If operating reserves are less than 90 percent of required, but greater than 80 percent, the premium would be $100/MWh.

conditions exceeds the cost of dispatching generation based on its bids, the costs of such measures should be reflected in energy prices. NRG argues that when reserve shortage conditions are likely, ISO-NE will take a number of actions to prevent a shortage, such as those required under OP-4, OP-8, OP-7, OP-9, and OP-10. NRG states that the costs of actions to avoid shortages are not reflected in energy prices and that this depresses prices below the efficient level needed to support existing and new resources. NRG submits that not only will energy prices be depressed below cost prior to a reserve shortage, but the scarcity pricing under ISO-NE's proposal may either never be realized or may last for far less time than the actual underlying emergency conditions. NRG contends that the avoidance or delay of scarcity pricing will have a material effect on price levels and thus the effectiveness of price signals.

45. NRG asserts that ISO-NE states that while there were 23 hours of OP-4 conditions during the summer of 2002, the Scarcity Pricing Proposal would have only been in effect for two hours. NRG argues that suppliers should have received higher scarcity prices in approximately 10 times more hours in 2002 than they would under the proposed reserve shortage pricing. The availability of high prices in 21 additional hours would dramatically alter the ability of low-capacity factor generators to recover their fixed and variable costs. NRG argues that restricting scarcity pricing to only those few hours in which reserve shortages are actually experienced, while suppressing prices during the greater number of hours when actions are taken to avoid reserve shortages, will materially reduce the ability of needed generators to recover their fixed and variable costs. Thus, NRG asks the Commission to direct ISO-NE to file revisions no later than July 1, 2003, establishing scarcity prices for each extraordinary action ISO-NE is required to take prior to reserve shortages, including those it takes to avoid reserve shortages, at levels that reflect the costs of those actions.

46. Commission Response: The scarcity pricing mechanism proposed by ISO-NE is a reasonable one, but not the only one. Intervenors suggest modifications to the administrative process that permits scarcity prices to reflect the degree of scarcity. We support such adjustments in principle and note that ISO-NE is also committed to further developments along these lines. As discussed earlier, such adjustments should be discussed in the filing that ISO-NE makes prior to March 1, 2004 to provide for locational or deliverability requirements for the resource adequacy market. However, the efficiency of ISO-NE's markets during the imminent summer period requires a scarcity pricing mechanism, and we authorize ISO-NE's proposal as a critical interim measure. We encourage all parties to continue to refine such mechanisms for scarcity pricing and expand opportunities for customers to respond directly to real-time prices, the most effective means of determining scarcity prices.

Existing Measures

47. NSTAR argues that the PUSH bid mechanism developed in the Devon Order establishes a workable, sufficient interim measure. NSTAR argues that the Commission's PUSH bid mechanism is a step toward adequately compensating units that are required to run for a small number of hours to maintain reliability. In responding to the Devon Order, NSTAR urged the Commission to consider applying this interim proposal on a system-wide basis, rather than limiting it to Designated Congestion Areas (DCAs), which would provide a regional interim solution. NSTAR argues that the PUSH bid mechanism and the Scarcity Pricing Proposal are both intended to provide economic signals to support seldom-run units that provide a valuable service. NSTAR asserts that the Commission's PUSH bid mechanism allows the market to adequately compensate targeted peaking units while the Scarcity Pricing Proposal takes no account of the fiscal needs or expected opportunity to recover the costs of such units.

48. Alluding to the PUSH bid mechanism, NE COE questions why New England requires "redundant" scarcity pricing mechanisms and argues that another scarcity-pricing mechanism is not needed.

49. Commission Response. The PUSH mechanism is a temporary measure that gives selected reliability units the ability to bid non-competitively in limited circumstances because other critical market design features that reflect scarcity and resource adequacy have not been fully implemented. The selected high-cost, seldom-run units were particularly vulnerable to these market design flaws, and the PUSH mechanism was authorized to give them greater ability to participate in the market without the support of out-of-market payments that may distort market prices generally. Thus, we do not agree that it is desirable to expand the PUSH mechanism over the proposed scarcity pricing mechanism.

Locational Shortages

50. NRG argues that ISO-NE'S proposal should be modified to recognize reserve shortages that may arise in a limited area. As NRG interprets the proposal, scarcity pricing would not be activated if there is an operating reserve deficiency solely within an import constrained NEPOOL sub-region. NRG argues that this is flawed for two reasons: (1) NEPOOL's and the Northeast Power Coordinating Council's (NPCC's) procedures recognize that reserve shortages may be experienced on a local basis, and must be responded to accordingly; (2) Market Rule 1 explicitly recognizes the importance of sending appropriate price signals that scarcity conditions exist within sub-regions of NEPOOL.

51. NRG argues that OP-8 requires ISO-NE to appropriately distribute operating reserves where they are actually needed and OP-4 explicitly requires the implementation of its actions by a regional satellite alone when conditions warrant. Moreover, NRG submits that ISO-NE predicts capacity deficiencies – which are precisely the conditions which OP-4's required actions address – will occur six times in Southwest Connecticut this summer.

52. NRG also argues that despite the clear requirement that ISO-NE maintain adequate reserves on a locational basis, and the equally clear requirements that it incur extraordinary costs to avoid locational reserve shortages, ISO-NE has not proposed a locational scarcity pricing mechanism. Furthermore, the lack of such a mechanism is contrary to Commission determinations in the Devon Order to create efficient levels of scarcity pricing in constrained locations of NEPOOL.

53. NRG argues that the Commission should accept the proposal, on an interim basis, and require ISO-NE to file no later than August 2, 2003, revisions providing full scarcity pricing that will reflect all costly actions taken to meet demand and avoid or manage reserve shortages occurring solely or substantially within sub-regions of the NEPOOL control area.

54. MPUC argues that to the extent that the rule does not distinguish between local reserve shortages and system wide reserve shortages, it should do so in order to be consistent with a LMP system and with the New York proposal. MPUC asserts that New England's rules should be coordinated with those of New York.

55. MPUC argues that the proposal does not contain criteria for determining when a "pool wide" reserve deficiency exists and when a zone will be excluded from the Reserve Shortage Pricing Event. The rule also lacks a mechanism to determine whether a zone or zones that are transmission export constrained should be excluded from the Reserve Pricing Shortage Event. While the proposal appears to contemplate that the adjusted scarcity price will not be applied to transmission export constrained areas, the mechanism for determining which areas are to be excluded is not spelled out in the rule. If the Commission approves the proposal, it should require ISO-NE to specify the steps that it will take when declaring a Reserve Shortage Pricing Event for excluding zones that could not contribute reserves due to transmission export constraints.

56. Commission Response: We agree that scarcity prices should be established only when and where scarcity conditions exist. Thus, in periods when portions of the NEPOOL Control Area are experiencing a Reserve Shortage Pricing Event, prices in those portions of the NEPOOL Control Area should be established at scarcity levels,

while prices in the remaining portions of the NEPOOL Control Area should not be raised to scarcity levels. We agree with MPUC that the proposal does not contain sufficiently specific criteria to determine when a Reliability Region will be excluded from a Reserve Shortage Pricing Event and when a Reliability Region will be included. Therefore, we direct ISO-NE to include in Market Rule 1 and relevant manuals the criteria and process by which it will determine when a Reliability Region is excluded from, and when it is included in, the Reserve Shortage Condition Pricing Event. The Commission will require ISO-NE to file a compliance filing within 30 days of the date of this order. As to NRG's argument that the proposal be modified to manage shortages within NEPOOL sub-regions, the Commission will not require such substantial changes to the proposal here. However, we encourage ISO-NE and the stakeholders to consider pricing mechanisms for the future that would establish scarcity pricing signals in sub-regions that experience reserve shortages. As discussed earlier, ISO-NE should discuss such mechanisms in its filing to be made prior to March 1, 2004 to establish locational or deliverability requirements for the resource adequacy market.

Hedging Strategy

57. Calpine supports the restoration of scarcity price signals through the ISO's proposed rule changes. However, it disagrees with a hedging strategy proposed by ISO-NE in its transmittal letter.[19] Therein, ISO-NE outlined a strategy to protect participants against exposure to replacement energy purchases in the event of unexpected outages. Calpine argues that the ISO's proposed strategy would impose significant costs on generators, exposing them to energy uplift charges. Calpine asserts that ISO-NE's approach is not an adequate hedge. In order to cover the risks of participating in the Day-ahead market, Calpine requests that the Commission allow generator owners to reflect lost opportunity costs or a risk premium in committing to a Day-ahead Market sale.

58. Commission Response: Calpine's comments in this docket appear to be a request to adjust the reference prices (used in the ISO-NE market power mitigation process) to reflect the increased costs associated with committing to a Day-ahead Market sale. We deny Calpine's request. In most cases, reference prices are determined by a unit's bidding history during competitive conditions, so any legitimate market risks will be reflected in a unit's bids, and thus automatically reflected in its reference price. If a seller believes that it can justify a higher reference price, it can consult with ISO-NE as specified in Section 3.1.3 of Appendix A of Market Rule 1. Thus, no changes in the practices and procedures for determining reference levels are required by ISO-NE's scarcity pricing proposal.

[19] See ISO-NE transmittal letter at page 9.

The Commission orders:

(A) ISO-NE's Scarcity Pricing Proposal is accepted, effective two business days from the date of this order.

(B) ISO-NE is required to file within 30 days of the date of this order a compliance filing including in Market Rule 1 and relevant manuals the criteria and process by which it will determine when a Reliability Region is excluded from, and when it is included in, the Reserve Shortage Condition Pricing Event, as described above.

(C) In the filing that ISO-NE makes no later than March 1, 2004, in response to the Devon Order, ISO-NE must address how best to modify its scarcity pricing proposal to be implemented when it has developed fully co-optimized energy and ancillary service markets.

By the Commission.

(S E A L)

Linda Mitry,
Acting Secretary.