111 FERC ¶61,364
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

ISO New England, Inc. and New England Power Pool — Docket No. ER05-795-000

ORDER ACCEPTING TARIFF REVISIONS
AND REQUIRING FURTHER FILINGS

(Issued June 6, 2005)

1. On April 7, 2005 ISO New England Inc. (ISO-NE) and the New England Power Pool (NEPOOL) jointly submitted a package of three market modifications to the Commission pursuant to section 205 of the Federal Power Act.[1] This order accepts the proposed tariff revisions for filing, effective October 1, 2005, as requested, and requires further filings. This action benefits customers because it provides improved incentives to provide ancillary services to New England customers.

Background

2. The market modifications proposed by ISO-NE are referred to as Phase I of the Ancillary Services Market (ASM) project.[2] ISO-NE requests that, if approved, Phase I become effective on or after October 1, 2005, with the proviso that ISO-NE will give written notice to the Commission and NEPOOL no later than two weeks prior to the commencement of ASM Phase I modifications.

[1] 16 U.S.C. § 824d (2000).

[2] Phase II of the ASM project, as currently contemplated by ISO-NE, includes market modifications that are under development and are the subject of ongoing stakeholder processes. ISO-NE and NEPOOL anticipate filing the Phase II modifications in the fall of 2005 for implementation no earlier than June 1, 2006 by agreement of the ISO-NE and NEPOOL Participants.

3. The proposed modifications to ISO-NE's market would (1) re-institute a regulation market design that pays generators based on the amount of service provided; (2) provide generators greater flexibility to adjust their supply offers during the re-offer period that occurs after the day-ahead energy market closes; and (3) implement software changes that will allow a dispatchable external transaction purchase to be eligible to set the nodal energy clearing price when it is the marginal resource. ISO-NE and NEPOOL state that the ASM Phase I modifications reflect steps that could lead to further market improvements and development. At its March 11, 2005 meeting, the Participants Committee voted 95.27 percent in favor of supporting these three elements for filing as ASM Phase I.

Proposed Modifications

A. Regulation Market Modifications

4. With regard to regulation, ISO-NE proposes several modifications. First, ISO-NE proposes to replace the existing day-ahead methodology for calculating the regulation clearing price with a real-time pricing methodology. Second, ISO-NE proposes to pay units providing regulation service a performance-based component. Third, ISO-NE proposes to pay units any unit-specific opportunity costs incurred by a generation owner while providing regulation service.

5. The regulation market rules currently in place were adopted as part of the New England Standard Market Design proceeding, in which ISO-NE decided to use substantially the same software as PJM Interconnection, LLC (PJM) to operate markets for energy and regulation similar to those operated by PJM.[3]

6. Under the current market rules, generators that provide regulation service are credited with the higher of: (1) the regulation clearing price times the assigned regulating capability, or (2) the generator's supply offer times the assigned capability plus the real-time opportunity costs per MWh. ISO-NE selects the resources whose combined regulation offer prices and estimated unit-specific opportunity costs are lowest to provide regulation service for a specific hour. The regulation clearing price for that specific hour is determined once the set of resources is selected for that hour. The regulation clearing price is the sum of the highest regulation offer and unit-specific estimated opportunity cost of the set of resources selected for the hour. Currently, ISO-NE uses day-ahead

[3] *New England Power Pool and ISO New England Inc.*, 100 FERC ¶ 61,287, *order on reh'g*, 101 FERC ¶ 61,344 (2002), *order on reh'g*, 103 FERC ¶ 61,304, *order on reh'g*, 105 FERC ¶ 61,211 (2003).

locational marginal prices (LMPs) and the day-ahead generation schedule to estimate the opportunity cost that would be incurred by each capable unit. Hourly regulation clearing prices are calculated at 2200 hours for the next operating day and do not change based on a change in the set of resources actually providing regulation during an operating hour. Where the sum of a resource's actual, real-time opportunity costs and offer price are greater than the regulation clearing price (implying that the clearing price did not fully compensate the resource), the resource is credited after the fact through uplift payments.

7. The regulation market modifications proposed in the instant filing generally represent a return to the market design in place prior to the implementation of Standard Market Design in March 2003. Under the proposed changes, generators would continue to submit regulation supply offers prior to the normal day-ahead energy market closing time or during the re-offer period.[4] Regulation supply offers would consist of the regulation offer price as well as regulation limits and response rates. Regulation clearing prices would be determined by the offer prices of the resources providing service during the hour in real time, rather than being determined day ahead. The proposed changes include a three-part mechanism for paying generators. The regulation clearing price would be paid to generators based on the amount of regulation capacity that they make available. Second, additional payments would be made to generators based on actual performance.[5] Third, generators providing regulation service would be eligible for unit specific energy opportunity costs that are incurred while providing regulation service.

8. ISO-NE states that it is proposing modifications to the regulation market because day-ahead LMPs—which are currently used to calculate regulation clearing prices—can often differ substantially from the real time conditions. Furthermore, ISO-NE asserts that

[4] Generators must submit supply offers by 1200 hours on the day prior to the operating day to participate in the day-ahead market. After the closing of the day-ahead market, the market is cleared and the results posted at 1600 hours. There is a daily re-offer period between 1600 and 1800 hours, which allows market participants to modify previously submitted data and/or submit new supply offer data to be used during the real-time dispatch for the applicable operating day.

[5] Each generator would receive an additional payment based on the amount that it ramps up and down (measured by the absolute value of movement up or down from its "set point") in response to ISO-NE's regulation signals.

calculating the hourly regulation clearing price based on the set of resources that are actually providing regulation produces the most accurate and economically efficient methodology for determining the value of regulation service.[6]

9. ISO-NE and NEPOOL state that the proposal to include payment of unit-specific opportunity costs versus including opportunity costs in the regulation clearing price was the subject of much discussion during the stakeholder process. ISO-NE and NEPOOL state that some generators argued that opportunity costs should be incorporated in the regulation clearing price rather than paid to individual generators. ISO-NE and the NEPOOL Markets Committee discussed (and the NEPOOL Markets Committee reviewed) various alternatives that would have allowed opportunity costs to be included in the regulation clearing price. However, ISO-NE and NEPOOL decided that time and cost constraints dictated that they continue with the modifications proposed herein, though they state that this does not preclude ISO-NE and NEPOOL from reevaluating these alternatives in the future. ISO-NE and NEPOOL estimate that pursuing an alternative market design, one that would allow opportunity costs to be included, *ex ante*, in the regulation clearing price, would entail a major effort lasting at least 18 months.

B. Re-offer Period

10. Currently, generators may submit revisions only to supply offers for resources that were not scheduled in the day-ahead market. The filed modifications include a proposal to allow generators to revise supply offers for resources that have cleared the day-ahead energy market. Revised supply offers will not alter firm financial obligations determined by the day-ahead market clearing process. Based on stakeholder discussions and input from ISO-NE's internal Market Monitoring Unit and the Independent Market Advisor, ISO-NE and NEPOOL concluded that the potential for inappropriate market behavior is minimal, and that any gaming could be addressed adequately through the existing market monitoring and mitigation provisions.

C. Dispatchable External Energy Transactions

11. The filed modifications include a proposal to allow a dispatchable external transaction purchase to be included in calculating the energy clearing price when this transaction is the marginal resource. According to the applicants, this aspect of the proposal reinstitutes a prior Commission-approved price-setting rule now that the necessary software improvements can be made in a cost-efficient manner and there is

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[6] *See* Testimony of Jim Milligan and Marc Montalvo, Attachment 2 to ISO-NE's April 7 Filing.

support for such change. Under the proposed rule, dispatchable external transaction purchases scheduled in any hour will be evaluated *ex ante* for each five-minute dispatch cycle. If the transaction is determined to be the marginal resource, the transaction will be eligible to set *ex ante* dispatch rates and *ex post* LMPs.

<u>Notice of Filing, Interventions, Comments And Protests</u>

12. Notice of the filing was published in the *Federal Register*, 70 Fed. Reg. 20,892 (2005), with comments, interventions and protests due on or before April 28, 2005. Timely motions to intervene raising no substantive comments were filed by Dominion Energy New England, Inc. and Dominion Energy Marketing, Inc. (collectively, the Dominion Companies), and Mirant Americas Energy Marketing, LP, Mirant New England, LLC, Mirant Canal, LLC, and Mirant Kendall, LLC (collectively, Mirant Parties). Northeast Utilities Companies (NU) and TransCanada Power Marketing Ltd. (TransCanada) filed timely motions to intervene and comments in support of the filing. Calpine Corporation (Calpine) filed a timely motion to intervene and protest. NRG Companies[7] filed a motion to intervene out-of-time and limited protest. On May 13, 2005, ISO-NE and NEPOOL filed a response to the protests.

13. Calpine and NRG do not oppose the stated objective of the regulation market change to reinstitute a payment for regulation ramping, or any other aspects of ASM Phase I. Rather, Calpine and NRG focus on the portion of the regulation market changes which would exclude the lost opportunity cost incurred by a marginal regulation resource in providing regulation service from the determination of the regulation clearing price. Although ISO-NE and NEPOOL would continue to evaluate regulation resources based on their regulation offers plus any lost opportunity costs, they propose to remove the lost opportunity cost element from the calculation of the regulation clearing price. If the resulting regulation clearing price understates the total cost (regulation offer plus lost opportunity cost) of the marginal regulation resource, ISO-NE and NEPOOL propose to pay the shortfall through a regulation market uplift charge.

14. Calpine believes that this cost component is critical to the regulation resource evaluation and selection process when calculating the regulation clearing price, and requests the Commission to direct ISO-NE and NEPOOL to restore the lost opportunity cost component into the calculation of the regulation clearing price. NRG adds that the

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[7] NRG Companies include NRG Power Marketing, Inc., Connecticut Jet Power LLC, Devon Power LLC, Middletown Power LLC, Montville Power LLC, Norwalk Power LLC, and Somerset Power LLC.

regulation clearing price is set using only the highest accepted bid, without that bid's opportunity cost, even though the bid's opportunity cost was part of the basis for selecting the market-clearing bid.

15. Calpine states that removal of the lost opportunity cost component from the determination of the regulation clearing price is inconsistent with the evaluation of regulation offers and will result in under-compensation of regulation resources. Calpine states that with this methodology, when the marginal regulation resource incurs a lost opportunity cost in its provision of regulation service, the regulation clearing price for that will not reflect the full marginal cost and will understate the regulation clearing price. NRG adds that pricing a service to include only a portion of the marginal cost undervalues the service and leads to inefficient use of or allocation of resources. Calpine and NRG state that such a methodology is contrary to an efficient market clearing process, efficient prices, and diminishes transparency in the regulation market.

16. Calpine states that ISO-NE's position is inconsistent with its positions regarding similar market proposals. Calpine cites ASM Phase II, in which ISO-NE is proposing to price Spinning Reserves in non-scarcity hours based on lost opportunity costs incurred in the provision of spinning reserves. Calpine also states that omitting opportunity cost in the calculation of regulation clearing price represents a unilateral proposal by the ISO-NE unconfirmed by any stakeholder vote or even NEPOOL. Calpine surmises that the NEPOOL approval to submit the ASM Phase I changes despite its exclusion of lost opportunity costs from the calculation of regulation clearing price simply represents an expedient method for seeking approval and implementation of the ASM Phase I package. NRG states approval of this package of improvements in no way was an explicit acknowledgement that ignoring lost opportunity costs was the appropriate market design.

17. Thus, Calpine requests that the Commission direct ISO-NE to file changes to Market Rule 1 to reflect the lost opportunity cost of marginal regulation resources in the regulation clearing price within six months, or, on or before January 1, 2007. NRG requests that the Commission direct ISO-NE to incorporate the lost opportunity cost component in the regulation clearing price pricing algorithm no later than the implementation of Phase II of the AMS project or, in the alternative, to better articulate why it is not in the public interest to do so.

Discussion

A. Procedural Matters

18. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2004), the timely, unopposed motions to intervene serve to make

the entities that filed them parties to this proceeding. We will grant NRG Companies' motion to intervene out-of-time given their interest in this proceeding, the early stage of the proceeding, and the absence of any undue prejudice or delay.

19. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2004), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We are not persuaded to accept ISO-NE and NEPOOL's response, and therefore reject it.

B. Analysis

20. The Commission will accept the proposed modifications filed by ISO-NE and NEPOOL. We find that the modifications will collectively introduce beneficial changes into ISO-NE's markets. In particular, we find that the modifications concerning the re-offer period and dispatchable external transaction purchases will further enhance flexibility and transparency. We also note that there is substantial stakeholder support for the proposed modifications.

21. We will, however, require ISO-NE and NEPOOL to make two further filings, as follows.

1. Tariff language

22. We will require ISO-NE and NEPOOL to make a compliance filing within 30 days of this order addressing two apparent small discrepancies between what ISO-NE and NEPOOL assert that this filing will accomplish, and the actual language of the tariff provisions, specifically, on Tariff Sheets 7117 through 7118A.

23. In ISO-NE's and NEPOOL's transmittal letter, at 6-7, they state that generators offering to provide regulation service will be ranked based on their bids, and that the generators with the lowest bids will be selected to provide regulation service. This is the proposal that the Commission is accepting. However, the proposed language at Tariff Sheets 7117 – 7118A appears to be inconsistent with this stated intent.

24. Section III.1.11.5(b), beginning on Tariff Sheet 7117, reads: "Resources offering to sell Regulation shall be selected to provide Regulation on the basis of the lowest overall estimated cost rate calculated as: the sum of each eligible Resource's estimated Time-On-Regulation Credit, estimated Regulation Service Credit and estimated Regulation Opportunity Cost; divided by the generating Resource's Regulation capability, …" However, the first element here, the "Time-On-Regulation Credit," is not based on the individual Resource's bid (contrary to the transmittal letter's statement), but rather on the estimated Regulation Clearing Price, which will be the same for every

Resource. The provision provides, in the middle of Tariff Sheet 7118: "Estimated Time-On-Regulation Credit shall be determined by the ISO by multiplying the generating Resource's Regulation capability by an estimated Regulation Clearing Price." It would appear that every resource would have the same per-unit Time-On-Regulation Credit, because the Credit is based on the Regulation Clearing Price.

25. Additionally, the same tariff provision, continuing on Tariff Sheet 7118A, reads: "Estimated Regulation Service Credits shall be equal to the estimated Time-On-Regulation Credits to maintain the target revenue mix between Time-On-Regulation payments and Regulation Service payments specified under Section III.3.2.2(h)." This tariff provision does not clearly describe how the Regulation Service Credit is to be calculated in such a way that it is based on the individual Resource's bid.

26. In its compliance filing, ISO-NE and NEPOOL are directed to revise Section III.1.11.5(b) so as to ensure that generators offering to provide regulation service will be ranked based on their bids, and that the generators with the lowest bids will be selected to provide regulation service, consistent with the intent stated in the transmittal letter.

2. Opportunity costs

27. With regard to opportunity costs, the Commission will not direct ISO-NE to undertake efforts to include energy opportunity costs in determining the regulation clearing price at this time. However, we believe that including opportunity costs in the regulation clearing price would represent a further improvement to the regulation market. We believe that including opportunity costs in the regulation clearing price provides an incentive for generating resources to submit offer bids that reflect the actual costs of operations, as identical bid categories would be considered in selecting generators and in calculating the regulation clearing price. This would increase the likelihood that the resources with the lowest actual costs would be selected to provide regulation. Additionally, we believe that including opportunity costs in the regulation clearing price, by increasing the price available to all resources providing regulation and reducing uplift, will provide a better long-run price signal for the installation of specialized equipment necessary to provide regulation service.

28. ISO-NE and NEPOOL estimate that pursuing a market design that would allow opportunity costs to be included, *ex ante*, in the regulation clearing price, would entail a major effort lasting at least 18 months. We recognize the efforts of ISO-NE and its stakeholders concerning the array of other market improvements currently moving forward in New England—namely, locational installed capacity and phase II of ASM—and time and resources those initiatives will occupy in the next year. We do not intend to distract ISO-NE and the NEPOOL Participants Committee from implementation of critical market design features. Nor do we intend for ISO-NE to undertake any major

initiative to include opportunity costs into the regulation clearing price if the costs will outweigh the benefits. Thus, we direct ISO-NE to submit, within 180 days of the date of this order, either a plan addressing how it intends to re-introduce opportunity costs into the regulation clearing price, or, in the alternative, an explanation as to how such a requirement would impose undue or extraordinary constraints on time and resources.

The Commission orders:

(A) The Commission accepts ISO-NE's and NEPOOL's filing.

(B) The Commission directs ISO-NE and NEPOOL, within 30 days of the date of this order, to revise Section III.1.11.5(b) so as to ensure that generators offering to provide regulation service will be ranked based on their bids, and that the generators with the lowest bids will be selected to provide regulation service, consistent with the intent stated in the transmittal letter, as discussed above.

(C) The Commission directs ISO-NE, within 180 days of the date of this order, to submit either a plan addressing how it intends to re-introduce opportunity costs into the regulation clearing price, or, in the alternative, an explanation as to how such a requirement would impose undue or extraordinary constraints on time and resources, as discussed above.

By the Commission.

(S E A L)

Linda Mitry,
Deputy Secretary.