



February 28, 2001

VIA HAND DELIVERY

The Honorable David P. Boergers
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: Joint Status Report on the Development of Programs to Increase Price Responsive Demand in New England
FERC Docket Nos. EL00-83-000 et al.

Dear Secretary Boergers:

Pursuant to Rule 1907 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.1907 (2000), the New England Power Pool ("NEPOOL") Participants Committee¹ and ISO New England Inc. ("ISO-NE") hereby jointly submit an original and five (5) copies of this report on the status of their efforts to develop mechanisms to increase price-responsive demand within the NEPOOL Control Area. This update is provided in compliance with the Commission's July 26, 2000 order in NSTAR Services Co. v. New England Power Pool, 92 FERC ¶ 61,065 (2000) (the "NSTAR Order"), wherein the Commission directed, *inter alia*, that ISO-NE work with

¹ Capitalized terms used but not defined in this informational filing are intended to have the same meaning given to such terms in Section 1 of the Restated New England Power Pool Agreement (the "Restated NEPOOL Agreement" or "Agreement") or Section 1 of the Restated NEPOOL Open Access Transmission Tariff ("NEPOOL Tariff" or "Tariff").

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NEPOOL market participants and state commissions “to develop options for increasing price responsive demand in addition to its load response program and future demand-side bidding, and to file a report discussing the opportunities for and barriers to implementation by February 28, 2001.”² NEPOOL and ISO-NE now report on their efforts to date and on the status of two distinct elements of a comprehensive load response program, one of which has been approved by NEPOOL and the second of which is in the final stages of promulgation within the NEPOOL committee process.

Section I of this filing provides relevant background information. Section II identifies the status of NEPOOL’s and ISO-NE’s joint efforts to finalize the two elements of the summer 2001 load response program, the first element reflecting arrangements to utilize more fully and efficiently interruptible load when needed for reliability, and the second element reflecting arrangements to identify and dispatch price-responsive demand within New England. Section III provides additional information in support of this compliance filing.

I. BACKGROUND

In the NSTAR Order, the Commission stated that “the lack of price-responsive demand was a major impediment to the competitiveness of electricity markets.”³ The Commission noted that it had previously “encouraged the ISO and NEPOOL market participants to work with state

² Id. at 61,201

³ Id.

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commissions to enhance the demand-side responsiveness in the market.”⁴ The NSTAR Order adopted deadlines for the identification and filing of load response initiatives and required this status report by February 28, 2001, with “[s]pecific options that can be formulated and/or implemented earlier should be filed in advance of this date; all feasible options should be filed no later than April 1, 2001.”⁵

In commenting upon a proposal for demand curves in the Operating Reserve markets in the CMS/MSS Order, which was referenced by the Commission in the NSTAR Order, the Commission observed that “a successful transition to competitive electricity markets will necessarily involve an increased participation of the demand side of the market in making resource decisions.”⁶ The Commission further explained that programs (including one for New England) that it had “recently approved to pay customers for curtailing load are examples of how the demand side of the market can be given an increased role by enabling reaction to a price signal.”⁷ At that time, the Commission requested further development of such programs and encouraged that they “provide customers improved price signals.”⁸

⁴ NSTAR Order at 61,201, citing the June 28, 2000 order in ISO New England Inc., 91 FERC ¶ 61,311 (2000) (the “CMS/MSS Order”).

⁵ NSTAR Order at 61,201.

⁶ CMS/MSS Order at 62,065.

⁷ Id.

⁸ Id.

Since the issuance of the CMS/MSS Order and the NSTAR Order, ISO-NE and NEPOOL have consulted with state public utility commissions and worked diligently to develop regional load response programs, building upon experiences gained with programs from prior years.⁹

A. The Hartford Conference

A two-day technical conference entitled *Enhancing Load Response Opportunities in Competitive Markets* was held in Hartford, Connecticut, October 16-17, 2000. The conference

⁹ NEPOOL and ISO-NE have put in place load response programs for both summers since the May 1, 1999 implementation of restructured markets in New England. The summer 1999 program, which was modeled in part after a load response program NEPOOL successfully implemented in 1997, and featured a fixed payment (\$8,000/MW/per event) for voluntary reductions by customers during times when there were shortages in available capacity in New England, as defined by reference to events that are anticipated and/or declared pursuant to Operating Procedure No. ("OP 4 events"). That program, which was not finalized until early July 1999, was not put to use because there were no OP4 events in the summer of 1999 following its implementation.

In May 2000, the Commission approved a revised load response program for the summer of 2000, with the pricing for the interruptions designed to trigger a market response. New England Power Pool, 91 FERC ¶ 61,203 (May 31, 2000). Like the prior year, the 2000 program included a trigger that permitted interruption of and payment to customers for curtailing load during OP4 events. In addition, under the 2000 program, loads that chose to curtail based on the prevailing Energy Clearing Price ("ECP") would be paid for their voluntary curtailments. Customers could elect to sign up for curtailment "blocks" of \$500 per MWh, \$750 per MWh, or \$1000 MWh. If ISO-NE anticipated that in the next hour the ECP would exceed the block price, then those customers in the block would be notified so they could reduce their load. The customer would have the option to reduce load or not and be entitled to a price for interruption based on, in general, the higher of the block price or the ECP for that hour based on the amount of reduction. As with the Summer 1999 program, the Summer 2000 program was never called upon because there were no severe OP4 events and there were no hours during the summer of 2000 for which of projected ECPs exceeded \$500 per MWh.

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was sponsored by the four signatories to the ISO Memorandum of Understanding (“MOU”) (ISO-NE, the New York Independent System Operator, PJM Interconnection, L.L.C., and the Independent Electricity Market Operator of Ontario) and by the signatories to the Northeast Regulatory Memorandum of Understanding Working Group, the state public utility commissions within the three ISO control areas.¹⁰ Over two hundred and fifty people, including two representatives from the Commission’s staff, attended the conference, which focused on case studies of demand response programs with a special emphasis on program designs to overcome barriers to implementation.¹¹

The conference highlighted that, in all three regions where restructured markets have been implemented, wholesale energy prices generally are stable for the vast majority of hours.¹² For that reason, the most effect from a load response program would reduce the ECP in those few hours each year when demand is high and the price supply curve is steep. During these times, very small reductions in demand can dramatically reduce clearing prices. Presenters at the conference also suggested that there is a broad spectrum of electricity consumers that have the

¹⁰ These include Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Maryland and Delaware.

¹¹ See Appendix A for the Conference brochure. The conference presentations are on the ISO-MOU website (www.isomou.com) under “Events”, sub-heading “Enhancing Load Response Opportunities in Competitive Markets”.

¹² This is consistent with ISO-NE’s observations in its Monthly Market Reports.

ability to reduce demand in modest amounts,¹³ with some estimating the possibility of as much as 10 percent of reduction in peak loads through load response programs.¹⁴

Because this conference was interregional, there were broad discussions of lessons learned from a number of load response programs developed within the regions covered. Under each program, customers received incentives to reduce consumption during times of peak demand, thereby both enhancing reliability and reducing price volatility. The programs differed in the procedures for enrolling customers, the actual incentives paid, the compensation (if any) to contract suppliers and distribution companies, and the settlement processes. The programs, as initially implemented, were all for the summer (high demand) period only. However, each ISO indicated that it was considering expanding its programs to a year-round basis. Each ISO was also evaluating ways to improve and in some cases re-design load response programs to increase customer participation and to improve the market efficiency of customer response.

Conference attendees focused on how best to optimize participation in the programs and to reduce obstacles to participation. From the retail customers' perspectives, the messages were to keep the programs simple and to demonstrate to customers the financial benefits from the program so they could weigh such benefits against the disruptions to their normal operations. The following regulatory barriers to effective implementation were also identified:

¹³ See, presentation of Dr. Veronica Rabl, EPRI, and Janet Besser, Lexecon Consulting, Session #1.

¹⁴ See, presentation of Dr. Joel Gilbert, Apogee Interactive, Session #3.

- retail rate structure -- a customer on a fixed standard offer retail rate does not have an incentive to conserve or reduce consumption when wholesale prices spike;
- economic signals to distribution companies -- many distribution companies recover their costs based on a fixed rate per kilowatt-hour times the number of kilowatt-hours sold. When customers reduce consumption, the distribution company's revenues decline.
- environmental concerns – some customers reduce their peak demand under a load response program by running their own generation. Some of that self-generation is diesel, which increases pollution when operated and, if operated for reasons of price response, may be subject to air permit restrictions that prevent operation when needed for reliability.

In short, this conference, dedicated exclusively to load response initiatives, provided an important forum for diverse stakeholders from different control areas to discuss the common issues that all are facing when trying to develop and implement programs that involve retail customer participation in wholesale markets. Informed participants worked together on identifying issues requiring resolution that were impeding progress on more effective load response programs.¹⁵ Through such collaboration, the programs proposed for the NEPOOL Control Area, as well as programs for other control areas in the Northeast, are more likely to benefit from lessons learned and have a greater chance of success.

B. The Winter Dry-Run Project

During the winter of 2000-2001, ISO-NE has initiated a “dry-run” load response program to gain experience and test the application of Internet-based systems for the management of customer loads. So far, approximately 17 customers have agreed to participate in the dry-run

¹⁵ See, Day 2, Session #2, “How Do We Make Load Response Happen”, for a summary list.

program. The dry-run is designed to test the hardware and the software that would provide ISO-NE with the ability to manage load with essentially the click of a mouse. Customers signing on to this program will, during a test period unknown to them, be asked to interrupt their consumption following a signal from ISO-NE, and will be paid a testing fee of up to \$4,000/MWh of interruption. The total cost of the dry-run program, including the expected testing fees, is being paid out of ISO-NE's third party consultant budget and funding from a state regulatory agency.¹⁶ This dry-run testing program will confirm the ability of ISO-NE to measure in real time the amount in megawatts interrupted by participating customers, using the new metering and internet communications hardware. ISO-NE expects to test this system and call for interruptions in March. If the tests are successful, the hardware and software will be used, along with the new Market Rules that have been developed and will be filed with the Commission, for the Summer 2001 program described below.

II. STATUS ON 2001 PROGRAMS TO ENCOURAGE ADDITIONAL LOAD RESPONSE AND PRICE-RESPONSIVE DEMAND

Based on the substantial efforts and experiences to date, NEPOOL and ISO-NE have been working together to define the details of revised load response programs to increase the amount of price-responsive demand within the NEPOOL Control Area. In addition to the

¹⁶ With 26 MWs of interruptible load signed up for the winter program, ISO-NE expects the cost of interruption to be approximately \$20,000. The fixed payment amount noted above is limited by individual site. One participant in the dry-run has 22 MWs at one site with payments

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interregional technical conference discussed above, ISO-NE, NEPOOL Participants, state utility commission staff, and representatives of New England air regulators, have reviewed the design of last year's load response program and revised that design. Following numerous technical, working group and Markets Committee meetings at which these issues were explored, on January 31, 2001, the NEPOOL Markets Committee recommended that the NEPOOL Participants Committee approve Market Rule changes to implement a new interruptible load program with two distinct classes.¹⁷

All customers enrolling in the recommended program would be required to have interval meters and to install special, Internet-based software and hardware that will be connected to an ISO-NE database. Consistent with the directives within the CMS/MSS Order, the programs will "provide customers improved price signals" by allowing customers through the Internet-based system to see real-time five-minute price signals (as well as day-ahead and updated hourly ECP forecasts). The system will also provide ISO-NE with real-time information on individual customer loads.

Under the recommended program, individual customers could be enrolled by any NEPOOL Participant (not just the supplier to the customer). ISO-NE, as billing agent for

capped at \$4,000 for the interruption. The remaining 4 MWs would each receive \$4,000/MWh for interruption.

¹⁷ Pursuant to the NEPOOL governance procedures, absent a delegation of its authority, the NEPOOL Participants Committee must approve all new and revised Market Rules. The Markets Committee is the technical committee tasked with proposing revisions to the NEPOOL Market Rules. Under exigent circumstances, ISO-NE may file changes to the NEPOOL Market Rules unilaterally.

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NEPOOL, would provide compensation to the NEPOOL Participant in accordance with Market Rules that will distinguish between two classes of Interruptible Loads. The NEPOOL Participant enrolling the customer would then compensate the customer based on the terms of its contract with that customer.

The revised program proposes two classes of Interruptible Load. "Class 1" Interruptible Loads would be called upon only after a Second Contingency Loss,¹⁸ or following the implementation of voltage reductions. Customers who elect this option would be obligated to reduce load within 30 minutes of receiving a notification from ISO-NE that they have been activated. The NEPOOL Participants who enroll these customers would receive for each MWh of available interruptible load in the peak weekday hours an administratively-determined payment equal to the clearing price for Thirty-Minute Operating Reserve. In addition, if the load is called on to interrupt and does interrupt, the enrolling Participant would receive the ECP for each MWh interrupted. If the load is called on to interrupt but does not interrupt, the enrolling Participant must return the payment for being available to interrupt back to the more recent of the first of the month or the last actual interruption.

On February 15, 2001, the NEPOOL Participants Committee unanimously approved a program for the Class 1 Interruptible Loads as described above. Costs associated with the payments made under this program would be allocated to Participants based upon Electrical

¹⁸ NEPOOL Operating Procedure No. 8 defines Second Contingency Loss as the largest capability outage (MW) which would result from the loss of a single element after allowing for the First Contingency Loss.

Load. As part of its approval, the NEPOOL Participants Committee agreed to pay all 100% of the acquisition and installation costs for up to 1000 Internet-based communication systems installed with customers signing up for the program. To address environmental concerns raised by regulators and Participants, ISO-NE has committed to collect data that will help assess the impact of this program on the environment.

The second type of interruptible load, "Class 2," would be load that participates in a program where it can decide from event to event whether to interrupt if the ECP exceeds a predetermined level. If the projected ECP exceeds a specified Energy trigger price and within a designated window of opportunity thereafter, customers could, based on real-time pricing information, decide whether or not to reduce their load. If a customer decides to reduce load, ISO-NE will document the reduction and pay the NEPOOL Participant who enrolled the customer some amount for the interruption.

The NEPOOL Participants Committee considered the proposal for Class 2 Interruptible Loads at its February 15 meeting, but deferred action on the proposal so that additional details could be explored. The Committee directed the Markets Committee to consider further issues relating to (1) an ECP trigger price for interruption, (2) the payments to be made for Class 2 loads that interrupt, and (3) whether and to what extent NEPOOL should subsidize the installation costs of some or all of the Internet-based communication systems required for this aspect of the program.

On February 21, 2001, the Markets Committee considered these issues and finalized details that were necessary to complete the proposed Market Rule changes for the Class 2

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interruptible program. By a vote of 95%, the Markets Committee recommended that the NEPOOL Participants Committee approve Market Rule changes specifying that Class 2 interruptible loads be permitted to interrupt on any weekday, non-holiday, between the hours of 0800 and 2300, whenever ISO-NE forecasts an ECP of \$100/MWH or greater for any hour within the day and the ISO has “opened” the interruption period by distributing a message through the Internet-based communication system. Such interruptions may be for any duration within this window and will be paid at 100% of the ECP for the hours interrupted (whether or not the ECP equals or exceeds \$100). The Markets Committee also recommended by a 73% vote that the NEPOOL Participants Committee approve NEPOOL funding half of the cost for acquiring and installing up to 1,000 of the devices sited with customers signing up for the program. The other half of the cost would be paid by either the customer or the NEPOOL Participant signing up the customer. ISO-NE would administer the NEPOOL funds and be charged with seeking to ensure that these systems are broadly and fairly distributed geographically.

The NEPOOL Participants Committee is expected to vote at its meeting on March 2, 2001 on the Market Rule changes recommended by the Markets Committee relating to the Class 2 portion of the 2001 load response initiative. If these changes are approved, NEPOOL expects to file the Market Rule changes associated with both Class 1 and Class 2 Interruptible Loads promptly following expiration of the internal NEPOOL appeal period of Section 7.7 of the Restated NEPOOL Agreement (for the Class 2 changes), which would occur on March 19. If NEPOOL is unable to approve the Class 2 portion of the program, NEPOOL will file the Class 1

program early in the week following the NEPOOL Participants Committee March 2 meeting.¹⁹

The filing letter accompanying such submissions will describe these programs in greater detail.

Assuming successful testing of the hardware and software and acceptance of the upcoming filing by the Commission, it is the intent of NEPOOL and ISO-NE that both programs be operational for Summer 2001. The programs have been designed to operate independently of the ISO-NE settlement system to narrow the barriers to early implementation.

The load response programs described above are another step in developing robust and varied opportunities for consumers to participate in the restructured electricity markets. ISO-NE and NEPOOL are committed to continue efforts with state regulatory agencies to further expand and improve this program. The first review will be during the fall of 2001 to identify and evaluate the key lessons learned from this summer. Other possible enhancements have already been identified by the New England stakeholders and work continues to expand the participation of consumers within the wholesale power markets.²⁰

¹⁹ As of this date, no Participant has appealed Class 1 of the revised interruptible load response program. The appeal period expires on March 2, 2001.

²⁰ In a filing made on 12/29/00 in Docket Nos. EL00-62-000 et al, NEPOOL provided a status report on NEPOOL and ISO-NE efforts to develop a forward market for Operating Reserves. This new market, conceptually, could replace the existing Installed Capability (ICAP) mechanism. It could also allow ISO-NE to call on these reserves to produce Energy at contractually specified prices. One component of forward reserve bids could be a customer commitment to curtail usage, *i.e.*, reduce load, for a specific bid price. For example, a customer could agree to reduce consumption by 2 MW for compensation at the rate of \$100 per MW for a minimum duration of 6 hours. The ISO could provide compensation to the customer in the form

III. ADDITIONAL SUPPORTING INFORMATION

This status report is submitted in compliance with the Commission's NSTAR Order. Accordingly, copies of this report are being served on all persons on the Commission's official service lists in the captioned proceeding. All NEPOOL Participants Committee members, as well as the governors and electric utility regulatory agencies for the six New England states which comprise the NEPOOL Control Area, have been furnished with an electronic copy of this status report. In accordance with the Commission's rules and practice, there is no need for these entities to be included on the Commission's official service list in the captioned proceeding unless such entities already are or become intervenors in these proceedings.

If the Commission concludes that a notice of this report is desirable, a draft form of notice that is suitable for publication in the Federal Register is included as Appendix B to this filing. A diskette containing this form of notice is also enclosed.

of a reserve market payment for being available and, if actually called to reduce load, an Energy market payment for the MWs reduced.

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Correspondence and communications regarding this filing should be addressed to ISO-NE and the Chair of the NEPOOL Participants Committee and the undersigned as follows:

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Please acknowledge receipt of this filing by date-stamping the enclosed extra copy and returning it with the courier hand delivering this filing.

Respectfully submitted,

ISO New England Inc.

New England Power Pool Participants
Committee

By _____
Kathleen A. Carrigan
Its Vice President, General Counsel &
Secretary

By _____
David T. Doot
Its Secretary and Counsel

By _____
N. Beth Emery
Its Counsel

cc: Persons identified on the Service Lists in the captioned proceeding
NEPOOL Participants Committee Members and Alternates
New England Governors and Regulators

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused the foregoing document to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 28th day of February, 2001.

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APPENDIX A

APPENDIX B