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## NEPOOL BOARD OF REVIEW

In the Matter of the Appeal  
Case No. 01-NE-BD-2008  
(NRG Energy, Inc.)

July 16, 2008

Before: Feinstein, Chairman, Lotis, Museler, Petrowski and Siegel, Members

### DECISION DENYING APPEAL WITH RECOMMENDATIONS

#### Procedural Background

On June 13, 2008, NRG Energy Inc. (“NRG”) appealed two actions of the NEPOOL Participants Committee (“PC”) at its June 6, 2008 meeting. Specifically, NRG appeals the PC’s actions (1) adopting ISO-NE’s proposed revisions to Market Rule 1 regarding compensation for units needed for reliability under FCM (“Rejected De-List Bid Compensation Rule”) and (2) rejecting NRG’s proposed amendment which would revise the treatment of FCM de-list bids for reliability reasons to address such circumstances through the FCM reconfiguration auction.

PSEG Energy Resources & Trade LLC (“PSEG”) and FirstLight Power Resources Management LLC (“FirstLight”) intervened in support of the appeal. The Massachusetts Municipal Wholesale Electric Company (“MMWEC”) and the Connecticut Municipal Electric Energy Cooperative (“CMEEC”) (jointly) intervened in opposition to the appeal.

The Secretary and Counsel for the PC submitted a filing detailing the actions of the PC at issue with supporting documentation and general background regarding Market Rule 1.

On July 7, the Board issued a notice requesting that ISO-NE submit comments on the appeal on or before July 12. By letter dated July 11, ISO-NE advised the Board that it would not be providing a response. ISO-NE cites the current NEPOOL rules as excluding its participation as a party before the Board, and refers the Board to the materials supplied the Board by the PC and the July 1, 2008, Joint Filing by the PC and ISO-NE with FERC involving the same issue as present in this appeal.

#### Position of the Parties

NRG argues that ISO-NE’s rejected de-list compensation rule will result in non-compensatory rates. NRG states that under ISO-NE’s rule, the payment to resources whose de-list bids (specifically static and dynamic de-list bids) are rejected for reliability reasons will be made on the basis of the rejected de-list bid. According to NRG, this theory of compensation is flawed because it is based on the erroneous assumption that the

de-list bid represents a voluntary determination by the resource of the minimum price at which it would operate. NRG maintains that this premise is flawed for several reasons:

1. ISO-NE's de-list bid mitigation formula sets forth a calculation of "net risk-adjusted going forward costs," that only looks at a subset of a facility's fixed costs of continued operation;
2. The calculation of "net risk-adjusted going forward costs" requires consideration of past energy market revenues as a proxy for expected future energy market revenues. While the formula allows for limited adjustments to historic data for "known and measurable costs that would or are likely to be incurred in the relevant Capacity Commitment Period," it does not allow any similar adjustments to revenue components, most notably associated with infra-marginal revenues; and
3. A resource desiring to de-list is required to submit a static de-list bid in conformance with ISO-NE's bid mitigation rules, or must submit a de-list bid at less than 80% of CONE ("Cost of New Entry").

NRG argues that the subset of going-forward costs and the method of projecting infra-marginal revenues based on past performance were approved by FERC not as a basis for compensation, but rather as a method of mitigating market power of existing resources in the submission of de-list bids. NRG believes that it is not a valid extension of that reasoning to require a resource that did not clear in the market, and whose de-list bid is rejected for reliability reasons, to operate based upon its bid - a compensation level that it did not voluntarily select, but rather was mandated by ISO-NE's mitigation rules.

NRG maintains that ISO-NE cannot with one-hand limit the ability of a resource to submit a fully compensatory bid and then with the other require the resource to operate at a loss since the ISO-NE's "net risk-adjusted going forward costs" may exclude some or all of the real cash costs associated with such items as debt service, labor, property taxes, corporate overhead, and insurance as well as excluding capital recovery.

For these reasons, NRG concludes that ISO-NE's Rejected De-List Compensation Rule results in a confiscatory level of compensation since it does not provide for full cost-of-service compensation for a resource that is not permitted to de-list pursuant to a static or dynamic de-list bid.

As an alternative, NRG proposed an amendment to the ISO-NE proposal which NRG considers to be market-based. Under NRG's amendment, the rejection of the de-list bid in the primary FCM auction would terminate that rejected de-list resource's participation in the primary auction. Additionally, the rejected de-list resources no longer would be bound strictly to its submitted de-list bid price, but would be obligated to offer its capacity into the first annual reconfiguration auction, under the standing rules for reconfiguration auctions. NRG argues that its amendment would implement a focused process, over an approximately six-month period, to identify any transmission upgrades that could resolve reliability constraints prior to the relevant commitment period.

PSEG and FirstLight support NRG's appeal and make these additional observations:

PSEG notes that within the FCM auction, de-list bids rejected for reliability would still be counted as capacity to satisfy the local ("LSR") and Installed Capacity Requirement ("ICR"); however a resource's de-list bid would not be reflected in the auction outcome. Instead, the ISO will keep the MWs of that unit participating in the auction, effectively at a zero priced offer. Requiring the units to remain in the auction at prices below their desired offer levels suppresses the true competitive clearing price in the auction.

PSEG maintains that under the ISO-NE proposal, no price signal is created to inform competitors to attempt to meet the specific need that triggered the ISO's rejection of the de-list bid, nor is there provision that requires the ISO to replace the unit through the reconfiguration auctions.

PSEG argues that the NRG is superior because it would have the ISO remove the MWs associated with the de-list bid from the supply stack, and concomitantly reduce the quantity of ICR purchased in the auction. In this way, the clearing price in the auction would better reflect the supply-demand relationships required for efficient price outcomes in the auction.

FirstLight cites an example to illustrate its argument that ISO-NE's proposal would produce an unjust and unreasonable outcome. In 2007, NRG's affiliate, Norwalk Power filed an RMR Agreement with an Annual Fixed Revenue Requirement of \$37,664,400 per year for the 336 MW facility, or \$9.34/kW-month. The first FCA was held February 4-6, 2008, and Norwalk Units 1- 2 submitted dynamic de-list bids of \$5.999/kW-month, *i.e.*, less than 80 percent of the administratively- determined \$7.50 CONE of the first FCA. While the FCA cleared at \$4.50/kW-month, Norwalk's dynamic de-list bids were nevertheless rejected by ISO-NE because of reliability concerns. Under the ISO-NE proposal, Norwalk would be paid nearly \$3.35/kW-month less than its cost of service. Because Norwalk Units 1 and 2 are 1960s vintage, oil-fired generators, they are likely to run infrequently and only for reliability, and will not have a reasonable opportunity to recover the balance of their costs from margins in the energy markets.

MMWEC and CMEEC argue that NRG's appeal should be denied in its entirety.<sup>1</sup> MMWEC and CMEEC make these principal arguments: (1) NRG is not obligated to participate in the capacity market and therefore is not required to operate at compensation levels calculated in accordance with the Rejected De-List Bid Compensation Rule. NRG may submit permanent de-list bids which, if accepted, and in the event its units are needed for reliability, would allow NRG to seek full cost of service rates before FERC, (2) the payment of units needed for their reliability based on their "net risk-adjusted going forward costs," rather than their full cost of service, is consistent with FERC policy, (3) reconfiguration auctions were not intended by FERC to be used to set compensation for

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<sup>1</sup> Preliminarily, MMWEC and CMEEC question whether this appeal is properly before the Board since it will be FERC that must ultimately decide whether ISO-NE's proposal is just and reasonable. It is noted that ISO-NE filed its proposal with FERC on July 1, 2008, after MMWEC and CMEEC comments were received. Pursuant to its authority to rule on appeals of PC's actions, the Board will rule upon this appeal. *Section 11, Restated NEPOOL Agreement*. This ruling may be of assistance in providing a more complete record for FERC review of the ISO-NE filing in this matter.

units whose de-list bids are rejected for reliability reasons and (4) the purpose of the reconfiguration auction was not to permit the de-listed resource itself to bid into the auction and bid up a “market price” to replace itself.

## Discussion

### **The Board denies NRG’s appeal of the PC’s adoption of ISO- NE’s proposed revisions to Market Rule 1.**

The Board takes note of the lengthy stakeholder and FERC’s processes culminating in FERC’s adoption of ISO-NE’s capacity market(s), and its subsequent resolution of various requests for rehearing. While one could look at various individual elements of the ISO-NE Capacity Market(s) and debate the pros and cons of the myriad definitions and rules that constitute the implementation of that market, the market must be looked at broadly to determine whether or not it produces a better result than either the old regulatory regime and/or the RMR type arrangements it is intended to replace. Designing an admittedly somewhat “artificial” market for capacity is a daunting task and the other U.S. entities which have been working on this problem have had varying degrees of success, and their approaches are still evolving.

ISO-NE’s Capacity Market(s) will also likely continue to evolve and problems with it (both foreseen and unforeseen) will have to be addressed by the Market participants, the ISO, and FERC going forward. While the Board believes that the ISO-NE Capacity Market(s), looked at broadly, are superior to what they are replacing, we believe it is inappropriate in this appeal to comment on the overall design of the Capacity Market. The design of these types of markets (as opposed to genuine commodity type markets such as the Day-Ahead or Real-Time Energy Markets), is very subjective. A successful market design for these types of non-traditional markets should really be judged as one which the participants and the ISO can agree on, and which the Commission can approve. A successful market design should not be judged strictly on the basis of economic theory alone.

Therefore, in reaching its decision to deny NRG’s appeal, the Board focused on whether the adopted changes to Market Rule 1 in this case result in unfair or discriminatory treatment of NRG and other capacity providers with respect to rejected de-list bids; particularly static or dynamic de-list bids.

NRG had various options available to it when deciding on how to offer its capacity into the FCM, as well as the level of its offer. It could have offered into the FCM (as a price taker) and taken the clearing price, or chosen to offer one of the de-list options. Since NRG’s appeal is based on the static and dynamic de-list offers, the Board focused on these situations, but does note that NRG did have other options.

The essence of NRG’s appeal is that the ISO-NE Market Rule 1 rule revisions do not provide fair and adequate compensation for units whose Static or Dynamic de-list bids “cleared” the FCM auction but were nonetheless rejected for reliability reasons. NRG argues that a number of the elements of the "going forward, risk adjusted costs" are not included in the formula(s) used by the Market Monitor. NRG maintains that those

formulas, while a part of a FERC- approved settlement agreement, were not intended to reflect adequate compensation for a unit whose de-list bid was rejected for reliability reasons. Further, NRG implies that adequate compensation would only be achieved by adopting “cost of service” rates as provided for in the prior RMR contracts.

Taking the last point first, the Board believes that FERC has determined in the course of the FCM proceedings that, while cost-of-service rates were appropriate in the absence of a functioning capacity market, just and reasonable compensation would be provided by the FERC-approved FCM. The revisions to Market Rule 1 are intended to address the subject issue of just and reasonable compensation for units submitting de-list offers in the FCM that are rejected for reliability reasons. Therefore, the Board believes that the FCM Market(s) and their provisions for compensation in these cases are intended by FERC to provide just and reasonable compensation and there is no basis to believe that FERC intended that cost-of-service level compensation is required under these circumstances, although it did not specifically preclude that possibility.

On the other hand, FERC clearly intended that the FCM to be developed by the ISO incorporate just and reasonable compensation rules. (*See*, FERC's July 25, 2007, Order, par.26). NRG asserts that it would not be allowed to recover just and reasonable costs because previously approved rules for evaluating de-list offers by the Market Monitor exclude certain costs and potentially preclude proper estimation of certain revenue components of the formulas.

The Board understands the potential issues raised by NRG and believes that the previously approved rules for the compensation of rejected de-list bids should be reviewed in light of the experience of the initial FCA.

However, it also believes that NRG had the ability within the existing rules (and knowing the direction the rejected for reliability de-list bid rules would likely take) to submit offers that reflected its view of just and reasonable compensation. In those circumstances, it would have preserved the opportunity to seek FERC review if its offers were deemed unacceptable by the ISO.

Specifically, NRG could have submitted a static de-list bid reflecting its view of just and reasonable going forward risk adjusted compensation above the 0.8 CONE level. If this offer was rejected by the Market Monitor, NRG could have either accepted the Market Monitor's modified offer; or it could have appealed the Market Monitor's decision to FERC “in the Annual November Filing.” (Commission order of July 25, 2007 at par. 55).

NRG could also have submitted a dynamic de-list bid capped at 0.8 CONE.level; but not above this level.

NRG chose to submit a static de-list offer just below the 0.8 CONE level which avoided Market Monitor review of its offer. It was not forced to choose that offer level by the rules. If it thought that its offer did not reflect just and reasonable compensation under these circumstances, it must have recognized that there was a risk of its having to accept the de-list offer as compensation if its de-list bid was rejected for reliability reasons or selected in the FCA itself.

NRG is concerned that the exclusion of certain going forward costs from the formula contained in Section III.13.1.2.3.2.1.2 of Market Rule 1 (*e.g.*, debt service costs) will prevent it from recovering just and reasonable costs. Taken individually, NRG's concerns are understandable. However, a number of subjective components of the formula, coupled with the provision that NRG will keep any infra-marginal revenues obtained during the year it is required to provide capacity services in addition to its de-list offer capacity payments, provides the opportunity to realize compensatory rates. As noted earlier, NRG could have offered a static de-list bid at a higher level with access to FERC in the event that its offer was rejected by the Market Monitor.

Finally, although the Board believes that the ISO recommended and the PC approved changes to Market Rule 1 which have now been submitted to FERC for approval are reasonable and should not be overturned as requested in the NRG appeal, the PC in conjunction with ISO-NE and FERC should undertake a one-time review of the appropriate compensation for NRG's subject units in this case as well as the compensation for other units that may have been similarly affected.

The Board makes this recommendation because at the time of the auction, the then-proposed changes to Market Rule 1 had not been adopted, and, at the same time, NRG was proposing its Amendment 1. There was then some uncertainty with regard to what compensation would be provided for units making static and dynamic de-list offers in the FCA. As a matter of fundamental fairness, the Board believes that clarifying FERC's view of "just and reasonable" compensation in the subject circumstances would serve to avoid future litigation challenges premised on the lack of notice, and ensure that the "just and reasonable" standard of the FPA is met.

**The Board denies NRG's appeal of the PC's rejection of NRG's proposed Amendment #1 to the ISO-NE proposal.**

NRG's proposed Amendment #1 does address two of the problems with the ISO-NE proposal adopted by the PC, namely:

1. It attempts to emphasize reasonable and cost-effective solutions to transmission related reliability problems and
2. Where transmission solutions are not forthcoming or not feasible, it attempts to utilize market auction options instead of mandated, rule-based solutions to provide generation solutions to transmission reliability problems.

However, the Board believes that NRG's proposed Amendment #1 would not achieve its intended purposes and is not superior at this point in FCM development to the Amendment to Market Rule 1 approved by the PC and sent to FERC for approval.

While advocating transmission solutions to solve local reliability issues and to provide a more open grid for more unrestricted energy market operation, NRG's Amendment #1 attempts to create another mechanism. In its May 9, 2008, memo to the PC's market

committee which accompanied its appeal, NRG states that under its proposal “the ISO will convene a focused process to elicit potential solutions, primarily transmission based, that could be implemented in time for the applicable Capacity Commitment Period and could resolve the reliability need cost-effectively” (NRG May 9, 2008 memo, pg. 2, full paragraph 3).

While addressing transmission reliability issues rapidly is certainly a worthwhile goal, NRG’s proposal is at least somewhat duplicative of ISO-NE’s and the Transmission Operator’s (“TO”) existing processes for addressing these types of problems. Further, NRG does not provide a rationale for why its proposal will result in a superior or faster resolution to these types of problems than the existing ISO-NE’s and the TO’s processes.

As previously noted, ISO-NE and the PC have made significant progress in achieving transmission system expansions and solutions to reliability problems (both system-wide and local) over the past few years. Given this success, it seems to the Board that addressing quicker response to transmission related reliability problems can be better accomplished by further refining and improving the ISO-NE’s and the TO’s existing transmission planning processes, rather than creating yet another process to resolve the same types of problems.

NRG also advocates utilizing Reconfiguration Auctions for the resolution of reliability problems and allowing the entities whose de-list bid was rejected for reliability reasons to bid into these Reconfiguration Auctions instead of being included as price-taker resources. As stated above, the use of market auctions as opposed to statutory rule-based solutions for compensation of units whose de-list bids are rejected for reliability reasons is a worthy goal and is consistent with FERC’s guidance. However, there are two problems with NRG’s proposal; first, allowing a unit whose de-list bid has been rejected for reliability reasons to bid again in the Reconfiguration Auction likely violates FERC’s guidance that generators must not have the option to move between market or regulated rates (see *Bridgeport Energy, LLC* 118 FERC ¶ 61,243 @ P66 (2007) (Bridgeport III); and *ISO New England Inc.*, 123 FERC ¶61,290 @P54 (June 20, 2008) (June 20 Order).

Further, as discussed below, the Board also believes that NRG’s proposal, on its face, has several problems that are not consistent with good market principles.

The Board recognizes that a well designed and functioning market needs to have forward price signals that are generated by the free interplay of supply and demand. It is equally understood that the development of the FCM did not happen in a vacuum. There are special characteristics of the forward capacity market and power market that must be taken into consideration.

Absent any regulatory intervention, the unique attributes of power supply and reliability value, including large inelasticity, would result in boom/bust pricing signals. After a lengthy process, it would appear the market participants have decided that this market interplay is not in the best interests of long-term market design. While the current designed market auction may have imperfections, adopting the NRG amendment would afford NRG and other generators the protection from the downside of a market without a

statutory floor or cost recovery mechanism while allowing full enjoyment of returns due primarily to congestion pricing.

The middle ground chosen by the Participants and implemented by ISO-NE can and will be revisited as new resources respond to the price signals from the FCM and other revenue generating products. For now, the Board does not see how the NRG proposal improves the current market design or addresses a flaw in fair compensation.

### **Alternative Solutions to Transmission Reliability Issues in NEPOOL**

The Board respectfully provides its insight into the issue of using generation to solve transmission reliability issues. In fact, the Board is troubled that the prior solution, *i.e.*, Reliability Must Run (RMR) units and the recently implemented de-list market rules attempt to solve transmission system engineering (and laws of physics) problems with generation capacity market solutions. Transmission reliability should be addressed, wherever possible, with engineering solutions that are implemented with the least cost process concept. The current NEPOOL and ISO-NE use of market rules does not achieve this goal as will be described below. While the subject NRG problem may require the current NEPOOL/ISO-NE solution in the short term, in the long term innovative transmission-based solutions to transmission reliability problems need to be vigorously pursued.

#### **Background**

Prior to the implementation of the FCM, ISO-NE designated specific generating units as RMR units that had to be available to provide support for transmission reliability issues, such as voltage control and support and/or to provide generator voltage regulator support during system disturbances to maintain system stability. These units have been high cost power producers that do not obtain sufficient revenue from energy sales to support their cost of operation and maintenance.

In general, these units are the older legacy units previously installed and owned by the then traditional integrated utilities and are now owned by independent developers or power producers.

The electric power system is a complex mechanism that requires more than just the connection of generators to substations and transmission lines to effectively and reliably deliver power (Megawatts – MW) to end use customers. In addition to the production of real power (MW), an alternating current (AC) power system must have sufficient reactive power (Megavars - MVAR) to maintain system synchronism and stability. For the lay person, reactive power can best be described as the energy required to magnetize the different devices that use magnetic fields to perform their desired functions. This includes motors, transformers, fluorescent light ballasts and many other similar devices. By virtue of the electrical characteristics of long transmission lines, MVARs cannot be delivered over long distances between geographical areas, thus MVARs have to be produced locally. MVARs can be produced by electric generating units, capacitor banks or the newer solid state devices that have been developed.

The formerly integrated electric utilities were able to provide the MVARs needed for their local area load from the generators they installed to meet their local real power requirements. Thus, as deregulation and traditional utility ownership of generators passed to new owners, the need to provide transmission voltage support (local MVAR support) also transferred to the new owners. Unfortunately, the energy market made the operation of these older generating units uneconomical and the RMR solution was implemented. NEPOOL and ISO-NE has attempted via the FCM de-list process to bring a market driven solution for the need to support transmission system voltage requirements from generators. The Board believes that this solution may not be producing the best outcome at the lowest cost.

## Discussion

The Board is troubled that in this era of deregulation and free markets that NEPOOL and the ISO-NE still have to use a power market solution to solve what is clearly a transmission engineering problem. This is especially true since there may be engineering solutions that can provide reliable voltage and stability control at a significantly lower cost than maintaining the operation of older, inefficient and costly to operate generating units.

The installation of switchable capacitor banks or Static Var Compensators (SVCs) in substations can provide the necessary voltage support or system stability control that is presently being provided by the RMR or de-list generating units. The installation of these devices would be considered transmission reliability improvements that can be made at a lower annual cost than paying generator owners to operate their uneconomical units. The implementation costs can be recovered through the tariffs of the ISO-NE and/or the Transmission Owners.

ISO-NE and NEPOOL have made significant improvements in the NE Transmission System and their Commission-approved planning process is providing an effective vehicle for achieving the necessary transmission improvements. In particular the approved projects in the Boston and Southwest Connecticut areas represent major efforts to eliminate congestion and reduce the number of instances where the NRG type of problem could exist.

However, it is somewhat frustrating to see how little technical innovation has been implemented on the power system following the deregulation of the power utility industry. Hi-tech innovative solutions to resolve transmission problems are becoming increasingly available and should be emphasized wherever possible to eliminate the need for non-market based solutions where transmission constraints and reliability problems are encountered.

As an example, just view the significant amount of technical innovation that has been implemented in the telecommunications industry following the break-up of the former AT&T. Communication costs have dropped, mobile telephones have proliferated and are replacing the traditional land line telephone service and one can now contact almost everyone worldwide via voice, text or video.

The PC and ISO-NE are encouraged to financially support and foster economic innovative solutions to displace old, obsolete technology which impedes the use and effectiveness of competitive market mechanisms.

**RULING AND RECOMMENDATIONS**

1. NRG’s appeal is denied.
2. The PC, in conjunction with ISO-NE and FERC, should undertake a one-time review of the appropriate compensation for NRG’s subject units in this case, as well as the compensation for other units that may have been similarly affected by ISO-NE’s implementation of the rules.
3. The PC, in conjunction with ISO-NE and FERC, should review the previously approved rules for the compensation of rejected de-list bids in light of the experience of the initial FCA.
4. The PC and ISO-NE are encouraged to financially support and foster economic innovative solutions to displace old, obsolete technology which impedes the use and effectiveness of competitive market mechanisms.

The PC’s Secretary and Counsel shall submit this Decision to FERC for such assistance as it may provide in establishing a more complete record for review of the joint filing of the PC and ISO-NE in this matter. (Sec.11.7 (h), *Second Restated NEPOOL Agreement*).

NEPOOL BOARD OF REVIEW

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Jacob Feinstein, Chairman

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