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FEDERAL ENERGY
REGULATORY COMMISSION

Sherry A. Quirk
Direct Dial: 202 775 6814

VIA HAND DELIVERY

Ms. Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Explanatory Statement In Support of Settlement Agreement of the Settling Parties and Request for Expedited Consideration and Settlement Agreement Resolving All Issues, Devon Power LLC, et al., Docket Nos. ER03-563-000, -030, and -055.

Dear Secretary Salas:

In accordance with Rule 602 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") Rules of Practice and Procedure, 18 C.F.R. § 385.602 (2005), the Settling Parties submit an Explanatory Statement of the Settling Parties and Request for Expedited Consideration ("Explanatory Statement") and Settlement Agreement Resolving All Issues ("Settlement Agreement") for approval by the Commission in the above captioned proceedings. Enclosed for filing are an original and fourteen (14) copies of the following documents:

- Explanatory Statement of the Settling Parties and Request for Expedited Consideration and supporting documents;
- Settlement Agreement Resolving All Issues and attachment;
- Draft letter order and a diskette containing such draft order in Microsoft Word format; and
- Draft form of notice of filing, suitable for publication in the *Federal Register*, and a diskette containing this form of notice.

This filing is made pursuant to Rule 602 of the Commission's Rules of Practice and Procedure and pursuant to the Commission's October 21, 2005 order in the captioned proceeding. Pursuant to Rule 602 of the Commission's Rules, initial comments must be filed within twenty (20) days of the filing. Reply comments may be filed not later than thirty (30) days after the filing of the offer. Accordingly, initial comments regarding this settlement must be filed on or before March 27, 2006, and reply comments must be filed on or before April 6, 2006. The Settling Parties request Commission action approving the Settlement Agreement in its entirety, without modification or condition, on or by June 30, 2006. To the extent necessary, waiver of the Commission's notice requirements is requested.

* The parties to the Settlement Agreement as of the date of the Settlement Agreement are identified in Section V of the Explanatory Statement.

For convenience, the following is a list of the documents being filed herewith.

| Attachment Number | Document |
|--------------------------|---|
| | Explanatory Statement of the Settling Parties in Support of Settlement Agreement and Request for Expedited Consideration (with Attachments 1- 7, as listed below) |
| Attachment 1 | Settlement Agreement Resolving All Issues (with Attachment 1A) |
| Attachment 1A | Definitions |
| Attachment 2 | Affidavit of Robert Stoddard |
| Attachment 3 | Affidavit of Miles Bidwell |
| Attachment 4 | Affidavit of Peter Cramton |
| Attachment 5 | NEPOOL Vote Tally |
| Attachment 6 | Affidavit of David LaPlante |
| Attachment 7 | Draft form of Notice of Filing and diskette containing such draft notice |
| Attachment 8 | Draft Letter Order Approving Settlement and diskette containing such draft order |

Also enclosed are two extra copies of the filing to be date-stamped and returned with our messenger.

The signatories to the Settlement Agreement support the Agreement. Due to the time pressures associated with completing this filing, the Settling Parties have not had sufficient opportunity to thoroughly review the final version of the Explanatory Statement, or to clear the final version of the Explanatory Statement within their respective organizations. As such, the Settling Parties at this time reserve their rights to file comments addressing specific aspects of the Explanatory Statement that may conflict with the Settlement Agreement, and commit to raise whatever such issues they may have (if any) in their Initial Comments.

As explained above, certain affidavits have been filed as part of and are referenced in the Explanatory Statement. Execution of the Settlement Agreement does not imply support, endorsement, or subscription to all or any of the Affidavits, which are being submitted only on behalf of the specific parties listed therein.

This submission includes affidavits on behalf of Robert Stoddard and David LaPlante (Attachments 2 and 6, respectively) that presently contain faxed copies of the affiants' notarized signatures. We will substitute original copies by further submission tomorrow, March 7, 2006. We will also forward additional Settlement Agreement signature pages as they are provided to us. Should you have any questions or need further information concerning this filing, please call me at the number above.

Sincerely,



Sherry A. Quirk

Attorney for ISO New England, Inc.

Encl.

cc: Service List
Individuals and Entities identified in Explanatory Statement.

substantial effort to finalize detailed market rules and manuals, and an approval on or before that date permits the necessary detail work to be completed in time to support the December 1, 2006 implementation.

This Settlement Agreement is the result of more than 30 days of noticed, formal settlement conferences among more than 175 parties pursuant to notice by and involvement of Administrative Law Judge Lawrence Brenner (the "Settlement Judge"). Those settlement talks were preceded by 24 days of hearings involving 64 parties, thousands of pages of exhibits, roughly 5000 pages of transcript, and a 283-page initial decision issued on June 15, 2005 (the "Initial Decision").³ Consistent with Commission direction,⁴ the Settling Parties have developed an alternative to the Initial Decision's locational installed capacity ("LICAP") mechanism that would replace the LICAP mechanism to achieve the Commission's goals, as stated in the June 2004 Order.⁵ In the long term, the capacity market proposed in the Settlement Agreement establishes a "market-type mechanism"⁶ to attract new Resources to meet the growing electric energy needs of the New England region, generally using the Forward Capacity Market ("FCM") design recommended by state regulators and consumer representatives. For a transition period before the FCM, the Settlement Agreement provides a level of compensation to suppliers that is lower than the compensation that would have been paid had the LICAP mechanism approved in the Initial Decision been adopted by the Commission. These transition payments will serve as a bridge to the FCM. The market design, in both the short and long term, also provides a price

³ *Devon Power LLC, et al.*, 111 FERC ¶ 63,063 (2005) ("Initial Decision").

⁴ *Devon Power LLC, et al.*, Docket ER03-563-030, oral argument, September 20, 2005. Tr. 252:20—253:10.

⁵ *Devon Power LLC, et al.*, 107 FERC ¶ 61, 240 at P 1 (2004) ("June 2004 Order").

⁶ 107 FERC ¶ 61, 240 at P 7.

signal for capacity to perform when needed and facilitates participation in the capacity market by intermittent and demand response resources. As shown in Attachments 2, 3, and 4, Witnesses Robert Stoddard, on behalf of Capacity Suppliers and Dominion, Miles Bidwell, on behalf of the Connecticut Department of Public Utility Control (“CT DPUC”), and Peter Cramton, on behalf of the ISO, support the FCM as a workable market design for the New England region.⁷

Based on polling by the Settlement Judge, this Settlement Agreement has the support of public utility regulators from four of the six New England states, and is either supported or not opposed by a broad cross-section of generation owners, transmission owners, load serving entities and ISO New England Inc. (the “ISO”). NEPOOL supports this settlement by a 78.46% vote of its Markets Participants.

I. INTRODUCTION

As demonstrated in this Explanatory Statement, the Settlement Agreement strikes a just, reasonable, and fair balance among suppliers, state public utility regulators, consumer advocates, and load, and should be approved. The Settlement Agreement achieves two fundamental objectives shared by all parties to this case. First, the FCM provides a market structure that will encourage needed new generation to be built. Second, the FCM is designed to allow new capacity to set the clearing price, thus providing a market-based measure of the cost of new entry.

Section II of this Explanatory Statement provides a summary of the case, and Section III contains an overview of the Settlement Agreement. In Section IV, the Settling Parties explain their request for expedited consideration of the Settlement Agreement. Section V identifies the

⁷ Execution of the Settlement Agreement does not imply support, endorsement, or subscription to all or any of the Affidavits, which are being submitted only on behalf of the specific parties listed therein.

Settling Parties. A more detailed explanation of the Settlement Agreement, along with the information required by the Commission to be included with an explanatory statement, is contained in Section VI. Section VII provides additional details concerning the service of this Settlement Agreement and Explanatory Statement on interested parties, and Section VIII provides a concluding statement.

Notwithstanding the very broad support for this Settlement Agreement, the Settling Parties do expect that aspects of the Settlement Agreement will be opposed. The Maine Public Utilities Commission, the Massachusetts Department of Telecommunications and Energy, and the Massachusetts Attorney General have expressed opposition to the proposed settlement. Although the Connecticut Department of Public Utility Control and the Connecticut Office of Consumer Counsel support the settlement, the Connecticut Attorney General has stated its opposition. In addition, some transmission-owning utilities and load serving entities do not support the settlement. As will be shown below, however, the Commission should approve the Settlement Agreement, notwithstanding these objections.

It is well settled that the Commission “can approve contested settlements as long as it determines that the proposal will establish just and reasonable rates.”⁸ The Commission’s decision to approve a contested portion of a settlement must be supported by substantial evidence or a finding that, as to the contested matter, there is no genuine issue of material fact.⁹ This standard is embedded in section 385.602(h) of the Commission’s regulations.¹⁰

⁸ *New Orleans Public Service, Inc. v. FERC*, 659 F.2d 509, 512 (5th Cir. 1981) (citing *Placid Oil Co. v. FPC*, 483 F.2d 880, 893 (5th Cir. 1973), *aff’d. sub nom. Mobil Oil Corp. v. FPC*, 417 U.S. 283, 312-13, 94 S. Ct. 2328, 2347-48, 41 L. Ed. 2d 72 (1974)).

⁹ *Exxon Co., U.S.A. v. FERC*, 182 F.3d 30, 37 (D.C. Cir. 1999). On appeal, a reviewing court “will set aside FERC’s approval if it was ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’” *Id.* However, the test is narrow and the court “is not to

In addressing a contested settlement, at least four approaches are available to the Commission. The Commission may: (1) make a merits decision on each contested issue; (2) approve the settlement as a package if it determines that the overall result of the settlement is just and reasonable; (3) approve the settlement if its benefits to directly affected parties outweigh objections by contesting parties whose interests are too attenuated; or (4) sever contesting parties.¹¹ In this instance, the settlement may be approved as a complete package because it represents a just and reasonable result.

The Settling Parties urge the Commission to evaluate and approve the Settlement Agreement as a package. This Settlement Agreement reflects a complex compromise among all affected parties. Each Settling Party might well oppose at least some individual components within the Agreement if taken in isolation, but the Settling Parties together have agreed to the package as a whole.¹² Changing any aspect of the Agreement would upset the balance achieved in the Agreement and will undoubtedly provoke calls to change other aspects of the Agreement.

substitute its judgment for that of the agency." *Id.* (citing *Motor Vehicle Mfrs. Ass'n of the United States, Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43, 77 L. Ed. 2d 443, 103 S. Ct. 2856 (1983)). Where, the analysis to be performed "requires a high level of technical expertise, [the court] must defer to the informed discretion of the responsible federal agencies." *Id.* Nonetheless, the FERC must engage in rational decision making. *Id.* (citing *Motor Vehicle Mfrs. Ass'n of the United States, Inc.*, 463 U.S. 29 at 43 (1983)).

¹⁰ Section 385.602(h)(i) of the regulations provides that

If the Commission determines that any offer of settlement is contested in whole or in part, by any party, the Commission may decide the merits of the contested settlement issues, if the record contains substantial evidence upon which to base a reasoned decision or the Commission determines there is no genuine issue of material fact.

¹¹ *Trailblazer Pipeline Company*, 85 FERC ¶ 61,345 (1998), *order on reh'g*, 87 FERC ¶ 61,110 (1999).

¹² No Settling Party's support for this Settlement Agreement should be construed as support for any individual component of the Settlement Agreement or for anything more than support for the Settlement Agreement as a whole solely in the context of resolving this proceeding.

Getting the parties to this point has been an extraordinary challenge and there can be no assurance that conditions or changes, no matter how slight they may appear on the surface, could alter that balance. This Settlement Agreement is a complete package that must be considered in its entirety and should be approved in its entirety as just, reasonable, and in the public interest.

While in certain circumstances the Commission is able to sever parties or issues from a contested settlement and approve the settlement among the settling parties as uncontested, the Settling Parties believe that severance is inappropriate in this instance. Ultimately this settlement will create a structure applicable to all generation and load in the region. Contesting parties cannot be severed and permitted to litigate the applicable transition charges or market design elements in specific situations without affecting the rate charged to and received by Settling Parties. Further, many (if not all) Settling Parties agreed to compromise specifically to avoid the uncertainty of prolonged litigation. Issues cannot be severed without upsetting the balance of the Agreement.

II. SUMMARY OF THE CASE

This proceeding began on February 26, 2003, when Devon Power LLC, Middletown Power LLC, Montville Power LLC, Norwalk Power LLC and NRG Power Marketing Inc. (collectively, "NRG") filed, pursuant to Section 205 of the Federal Power Act ("FPA"),¹³ four cost-of-service reliability-must-run ("RMR") agreements covering 1,728 MW of generating capacity located within Connecticut and the Southwest Connecticut ("SWCT") Designated Congestion Areas ("DCAs").

¹³16 U.S.C. § 824d (2000).

In an order issued April 25, 2003¹⁴ (the “April 2003 Order”), the Commission rejected NRG’s RMR agreements, and allowed collection of only going-forward maintenance costs through the tracking mechanism approved in a prior order issued March 25, 2003.¹⁵ The Commission directed the ISO to file a “mechanism that implements location or deliverability requirements in the ICAP or resource adequacy market . . . so that capacity within DCAs may be appropriately compensated for reliability.”¹⁶

Pursuant to the Commission’s directive in the April 2003 Order, on March 1, 2004, the ISO submitted a LICAP filing (the “March 1 Filing”).¹⁷ The ISO’s March 1 Filing was protested and commented on by various parties. Two months later, on June 2, 2004, the Commission issued an order (the “June 2004 Order”)¹⁸ conditionally accepting the March 1 Filing, established hearing procedures regarding that filing, and identified issues to be addressed at hearing. The Commission directed the Presiding Administrative Law Judge to issue an initial decision on or before June 1, 2005, and deferred implementation of the LICAP proposal until January 1, 2006.

Following the June 2004 Order, the LICAP proposal was addressed in hearings before Administrative Law Judge Bobbie J. McCartney (the “Presiding Judge”). Twenty-four days of hearings were held, beginning on February 23, 2005, and concluding on March 31, 2005.

¹⁴ *Devon Power LLC, et al.*, 103 FERC ¶ 61,082 (2003).

¹⁵ *Devon Power LLC, et al.*, 102 FERC ¶ 61,314 (2003).

¹⁶ April 2003 Order at P 37. The Commission further clarified its findings in an order on rehearing in *Devon Power LLC, et al.*, 104 FERC ¶ 61,123 (2003).

¹⁷ Compliance Filing of ISO New England Inc., Docket No. ER03-563-030 (March 1, 2004).

¹⁸ *Devon Power LLC, et al.*, 107 FERC ¶ 61,240 (2004).

Following voluminous briefs by all interested parties, the Presiding Judge issued the Initial Decision on June 15, 2005.¹⁹

In the Initial Decision, the Presiding Judge concluded that the ISO's LICAP proposal, as modified throughout the hearings, was just and reasonable and should be accepted by the Commission with certain modifications. That Initial Decision has been the subject of numerous briefs on and briefs opposing exceptions and is still pending before the Commission.

Following the issuance of the Initial Decision, the Commission granted a request by numerous parties for oral argument on alternatives to LICAP.²⁰ In that same order, the Commission again delayed implementation of LICAP, this time holding that it would not be implemented any earlier than October 1, 2006.

Pursuant to direction of the Commission, on September 13, 2005, parties representing load, including the public utility regulatory commissions for all six states, filed the New England Resource Adequacy Model ("NERAM")²¹ and the New England Locational Resource Adequacy Model ("NELRAM")²² structures as proposed alternatives to LICAP. Those alternatives proposed a forward resource auction to procure capacity, a descending clock auction held several years in advance of an installed capacity commitment period, penalties for non-performance, and

¹⁹ *Devon Power LLC, et al.*, 111 FERC ¶ 63,063 (2005).

²⁰ *Devon Power LLC, et al.*, 112 FERC ¶ 61,179 (2005).

²¹ Statement in Support of the New England Resource Adequacy Market, *Devon Power LLC*, Docket ER03-563-030 (Sept. 13, 2005).

²² Four State Commissions' Proposed Alternative to LICAP *Devon Power LLC*, Docket ER03-563-030 (Sept. 13, 2005).

a phase-in or transition period.²³ All of these features of the proposed alternatives have been incorporated into the Settlement Agreement.²⁴

On October 21, 2005, the Commission granted the request of multiple parties for appointment of the Settlement Judge.²⁵ This Settlement Agreement is the product of that settlement process.

III. OVERVIEW OF SETTLEMENT AGREEMENT

A. THE FORWARD CAPACITY MARKET

The Settlement Agreement provides for the implementation of an alternative to LICAP – a forward capacity market (the “FCM”) establishing competitive auctions for capacity resources to be held three years ahead of their anticipated need. Consistent with proposals advanced before the Commission by state regulators and load, the forward capacity auction (“FCA”), which will be held annually, will be a descending clock auction. A key element of the auction design is the competitive bidding process that will price all capacity from bids made by new capacity. The bidding will start at two times the agreed starting value of CONE of \$7.50/kW-month, so the starting value will be \$15 per kW-month in the first auction. Recognizing the need for market liquidity and that circumstances will change as suppliers’ capacity commitments

²³ The filing, joined by the Maine Public Utilities Commission, stated at p. 13:
Because the performance and payment under [a forward procurement approach] will not occur until 2010, the [state commissions for Maine, New Hampshire, Vermont, and Rhode Island] agree that some payments to existing generation resources are appropriate between the first auction and the initial performance period in 2010. . . . The Commission should direct that the issue of transition payments be resolved through a stakeholder settlement process.

²⁴ Settlement Agreement at § 11, Parts I.A-C and III (Forward Capacity Auction), Part III.F (descending clock auction), Part V.C.2 (availability penalties) and Part VIII (Transition Period).

²⁵ *Devon Power LLC, et al.*, 113 FERC ¶ 61,075 (2005) at P 9.

come due, the FCM provides for an annual reconfiguration auction two years, one year, and just prior to the Commitment Period and twice-yearly seasonal auctions and monthly auctions just prior to, and during each Commitment Period. Due to software and implementation considerations, however, the first initial auction is expected to be held early in 2008 for a Commitment Period beginning June 1, 2010.²⁶ The initial auction for the commitment period beginning June 1, 2011 would be held shortly thereafter.

The parties focused on minimizing the risk of auction failure, either because new proposals for capacity resources do not materialize or because bids to meet future needs are adversely impacted by risk analyses for the new market structure or market power. Acknowledging that uncertainties exist with the initial auctions, the FCM contains a mechanism (specified in Section III.G.4.) that is designed to imitate the principles of a price collar often used on trading floors of large financial markets, which establishes a ceiling on the price for existing capacity resources at 1.4 times the cost of new entry ("CONE"), and a floor of 0.6 times CONE until there have been three successful auctions. In the first year, this means that auction prices for existing capacity can range from \$4.50 to \$10.50. The FCM also contains provisions to ensure that if there is inadequate supply offered or the structure of competition of offers of new supply is insufficient to ensure a competitive result, necessary new resources are brought into the market while limiting the payment to existing suppliers.

With respect to market power concerns, the FCM provides limited opportunities for existing capacity to impact Capacity Clearing Prices. Except within a specified range, all existing capacity that remains listed is effectively a price taker in each FCA and cannot set the clearing prices to be received by other existing capacity resources. Such existing capacity can

²⁶ Settlement Agreement at § 11, Part I.C.

seek, however, to forego receiving any capacity revenues for a Commitment Period by submitting bids to de-list from the capacity market (a "De-List Bid").²⁷ If the Capacity Clearing Price falls below the level of a De-List bid, the existing capacity submitting that bid will be allowed to de-list all or a portion of a Resource unless the absence of that Resource would produce reliability problems, in which case the Resource will be entitled to just and reasonable compensation but will not set the Capacity Clearing Price. Existing capacity also will be permitted to bid to retire/permanently de-list their capacity. Again, if the Capacity Clearing Price falls below the level of a retirement/permanent de-list bid, the Resource submitting that bid will be permitted to retire/permanently de-list, subject to reliability limitations. The Market Monitoring Unit will have specifically delineated authority to review and reject bids that are concluded to be improper, subject to appropriate Commission involvement. This review is intended to ensure that neither monopoly nor monopsony market power are inappropriately exercised.

The level of capacity payments paid to capacity resources will be directly and immediately tied to the availability of those resources. Availability metrics were a highly contested issue in hearings. The Settlement Agreement reflects a compromise that adopts a definition of "Shortage Event" that is intended to capture hours when capacity resources are determined to be most needed due to conditions on the system. The Settlement Agreement provides for loss of capacity compensation for capacity resources that fail to perform (subject to certain well-defined excuses) during these Shortage Events. On any critical day, a resource can have their compensation reduced up to 10% of annual FCA Payment if it is not available and, in any month, a resource can lose up to two and one-half months of its annual FCA Payment. The

²⁷ Settlement Agreement at § 11, Part III.D.5.

availability provisions in the FCM also have a variety of other mechanisms designed to balance, in the specific context of the settlement, the desire for strong economic incentives for capacity resources to be available when needed without creating unnecessary payment risk to resources.

Additional understandings have been worked out with respect to gas-fired resources, intermittent resources, and demand resources. Because of the expected critical need for gas-fired resources during winter shortage hour events, the Settlement Agreement provides for future changes to the market rules that will accelerate when bids must be received for the Day-Ahead Energy Markets during the winter months and when the ISO will issue financially binding dispatch schedules for the next day. Because of the continued mismatch between the time when gas can be nominated for delivery day ahead and when the ISO is certain of the need for particular gas-fired generation, the Settlement Agreement provides assurance that gas-fired generation procuring transportation and gas to meet its binding Day-Ahead schedule will be entitled to certain reimbursements for gas purchased in reliance on the schedule but not burned as a result of the actual dispatch of the unit.

In addition, due to the continuing desire to accommodate wind and other intermittent resources, rather than subject them to additional reductions in compensation for failure to operate at rated capacity during Shortage Events, the FCM provides for reduced capacity ratings for these units that will reflect their intermittent nature of performance. Over the next 12 months, FCM market rules that are comparable to supply side resources will be developed for demand-side capacity resources.

Similar to the litigated LICAP proposal, the FCM includes a reduction in payments for capacity (except for self-supplied capacity) equal to the "Peak Energy Rents" ("PER") that would be expected to be received from a hypothetical proxy unit during the Commitment Period.

This PER deduction will act as both as disincentive for suppliers to raise prices in the energy market and a hedge for load against energy price spikes.

B. TRANSITION TO FCM

A transition period is a necessary part of this settlement because the FCM proposed in the settlement will not result in the purchase of capacity until the 2010/11-Power Year. This leaves a gap between now and 2010/11 that must be filled by an interim compensation arrangement. To address this period, the Settlement Agreement provides for a negotiated level of capacity payments for this interim or transition period. Indeed, the proponents of alternatives to LICAP recognized the need for a transition period. Beginning for the month of December 2006, and extending until the Commitment Period for the first FCA, which is expected to occur on June 1, 2010, these payments start at \$3.05/kW-month, and increase to \$4.10kW-month, paid to all installed capacity. The capacity product is UCAP on a seasonal basis, with a weighted EFORD availability metric.

While there could be disagreement among the Settling Parties as to the actual level of savings to consumers from this Settlement Agreement when compared to LICAP, there is no question that consumers benefit from the settlement. The detailed comparison of the currently projected prices of LICAP and of the settlement transition payment rates are set forth in the Tables 3 and 4 of the attached affidavit of ISO Vice President of Wholesale Markets Strategy David LaPlante (Attachment 6). Along with the other data and record evidence described below, Mr. LaPlante demonstrates that the settlement transition payment rates would be consistently below the projected prices that likely would have been in effect over the same 4-year period had LICAP, which was found to be just and reasonable in the Initial Decision, been implemented. Accordingly, these settlement provisions should be approved as just and reasonable as part of the

overall settlement package. This is particularly true in light of the comprehensive nature of the settlement and the multifaceted balance among a variety of competing interests that included the transition payments.

IV. REQUEST FOR EXPEDITED CONSIDERATION

The Settling Parties respectfully request that the Commission approve the Settlement Agreement without modification or condition no later than June 30, 2006. This schedule is extremely important to achieving the agreement to implement transition payments beginning December 1, 2006, and a first FCA in early 2008. Once the Commission has approved the Settlement Agreement, there will remain many details to be worked out in the stakeholder process, which will provide for consultation with state utility regulatory agencies. For that process to be successful, there must be time for a full review and consideration of the details. The Settlement Agreement proposes that such details for transition can be completed by October 1, 2006, with details for FCM finalized and filed by February 15, 2007. Delay in Commission approval of the Settlement Agreement beyond June 30, 2006, materially increases the risk that the necessary details will not be completed in time for implementation on the schedule required by the Settlement Agreement.

For that reason, Section 2 of the Settlement Agreement provides that it terminates on June 30, 2006, in the absence of a Commission order accepting it. That Section further provides that, if the Commission approves the settlement with modifications or conditions, the Settling Parties have only 30 days to attempt to negotiate modified arrangements that are acceptable to all the Settling Parties.

V. THE SETTLING PARTIES

The parties to the Settlement Agreement (each individually a “Settling Party” and collectively the “Settling Parties”) as of the date of this Explanatory Statement are as follows:²⁸

- American National Power, Inc.
- [Associated Industries of Massachusetts]
- Boston Generating, LLC
- Calpine Eastern Corporation
- Calpine Energy Services, L.P.
- Cape Wind Associates, LLC
- Central Vermont Public Service Corporation
- Connecticut Department of Public Utility Control
- The Connecticut Light and Power Company
- Connecticut Municipal Electric Energy Cooperative
- Connecticut Office of Consumer Counsel
- Conservation Services Group
- Consolidated Edison Energy, Inc.
- [Coral Power, LLC]
- Dominion Energy Marketing, Inc.,
- Dominion Nuclear Connecticut, Inc.
- Dominion Resources, Inc.,
- Duke Energy North America, LLC
- Energy Management, Inc.
- EnerNOC, Inc.
- Entergy Nuclear Generation Company
- Entergy Nuclear Vermont Yankee, LLC
- Exelon Generation Company, LLC
- [Exelon New England Holdings, LLC]
- Fitchburg Gas & Electric Light Company
- FPL Energy, LLC
- Granite Ridge Energy, LLC
- HQ Energy Services (U.S.) Inc.
- ISO New England Inc.
- Lake Road Generating Company, LP
- Long Island Power Authority (LIPA)
- MASSPOWER
- Milford Power Company, LLC

²⁸ Mirant New England no longer exists post-bankruptcy. The Mirant companies are:

- Mirant Americas Energy Marketing, LP
- Mirant Canal, LLC
- Mirant Kendall, LLC

Mirant Americas Energy Marketing, LP
Mirant Canal, LLC
Mirant Kendall, LLC
Mystic Development, LLC, Mystic I, LLC, and Fore River Development, LLC
National Grid USA (on behalf of itself and its subsidiaries that are intervenors in this proceeding)
NEPOOL Participants Committee
New Hampshire Electric Cooperative, Inc.
New Hampshire Office of Consumer Advocate
New Hampshire Public Utilities Commission
NRG (Devon Power, LLC, Middletown Power LLC, Montville Power LLC, Norwalk Harbor, LLC, and NRG Power Marketing)
[Pinpoint Power]
Public Service Company of New Hampshire
[RI Division of Public Utilities and Carriers]
[RI Public Utilities Commission]
Select Energy
Sempra Trading
[Strategic Energy LLC]
TransCanada Power Marketing Limited
The United Illuminating Company
Vermont Department of Public Service
Vermont Public Power Supply Authority
Vermont Public Service Board
[Wellesley Municipal Light Plant]

Brackets denote signature pages to the Settlement Agreement that have not yet been received.

A number of other parties in the proceeding also have been very engaged and involved in the settlement discussions, but have not submitted executed signature pages by the date of this Statement. For some of those parties, additional processes may be required for approval. Other parties may be continuing to work on resolution of related but independent matters before they are able to support the Settlement Agreement. In addition, while there are others who have indicated opposition to the Settlement Agreement, their representatives have been involved in helping to define key aspects of this agreement.

VI. THE SETTLEMENT AGREEMENT

The Settlement Agreement is included as Attachment 1 to this Explanatory Statement. A more detailed summary of the Settlement Agreement is included below. This section also includes additional information in compliance with the Commission's directives regarding settlement agreements.

A. Compliance with Commission Directives Regarding Information to Be Provided with Settlement Agreements

This Statement, including its attachments and the transmittal letter filed herewith, provides the information required by Rule 602 of the Commission's Rules of Practice and Procedure.²⁹ Pursuant to the October 23, 2003 Notice to the Public entitled "Information to be Provided with Settlement Agreements,"³⁰ the Settling Parties state as follows:

This Settlement Agreement resolves significant potential issues regarding the LICAP market recommended by the Initial Decision. The Settling Parties have developed an alternative capacity market, the new FCM, that renders moot significant opposition to the recommended LICAP market and, assuming the Settlement is approved, eliminates the need for potential future litigation on the recommended LICAP market. The FCM will be implemented as quickly as possible and, as noted previously, the transition prices are significantly lower than projected prices if the LICAP mechanism adopted in the Initial Decision had been affirmed by the Commission.

The issues being settled have major policy implications: This case presents the fundamental policy issue of how to design a capacity market in order to resolve reliability

²⁹ 18 C.F.R. § 385.602 (2006).

³⁰ See "Notice to the Public - Information to be Provided with Settlement Agreements," (issued Oct. 15, 2003); "Errata," (issued Oct. 23, 2003).

compensation issues. However, the resolution reflected in this settlement is, by its nature and specific terms, non-precedential. Other than the instant dockets, the Settling Parties are not aware of the results of any other pending cases that will be dictated by Commission action on this Settlement Agreement.³¹ The settlement does not involve an issue of first impression and there are no previous reversals on the issues involved. The Settlement Agreement and the implementing market rules remain subject to the just and reasonable standard established by Sections 205 and 206 of the Federal Power Act, except as specifically provided for in Section 4. of the Settlement Agreement.

In accordance with the December 8, 1999 Notice to the Public entitled "Proposed Settlement Agreements," the Settling Parties are including as Attachment 8 hereto a draft Commission letter order approving the settlement and a diskette containing that letter order in Microsoft Word format.

B. Summary of the Terms of the Settlement Agreement

1. Effectiveness, Termination and Scope of the Agreement

Section 1 of the Settlement Agreement provides that it will become effective either by the Commission approving the agreement in its entirety or, subject to the process described in Section 2, with changes or modifications as agreed by the Settling Parties.

Section 2 sets out provisions for renegotiation if the Commission approves the Settlement Agreement conditionally and termination of the Settlement Agreement if the Commission

³¹ The Settlement Agreement does clarify in Part VIII.E. that unless otherwise agreed in a FERC-approved settlement, transition payments will be netted against any RMR payments. Moreover, in Part VIII.F., the Settlement Agreement clarifies that the beginning of transition payments will not trigger automatic termination of RMR agreements that, by their terms, terminate upon the implementation or effectiveness of a locational ICAP mechanism but that the start of the first Commitment Period will be considered such implementation or effectiveness for purposes of terminating RMR agreements.

disapproves the Settlement Agreement or the parties do not accept a Conditional Approval Order. Unless Settling Parties agree to an extension, the Settlement Agreement shall terminate if the Commission does not approve it by June 30, 2006. If the Commission gives only conditional approval (*i.e.*, it modifies any of the Settlement's terms), settlement discussions will be reinstated for 30 days to permit the Settling Parties to renegotiate and restore the balance of risks and benefits. If the Settling Parties reach agreement, the renegotiated Settlement Agreement will be filed with the Commission. Without a further agreement, the Settlement Agreement will terminate.

The Settlement Agreement resolves all of the issues raised in Docket Nos. ER03-563-030 and ER03-563-055 before the FERC.

2. Market Rules

Section 3 of the Settlement Agreement sets out processes for implementation of the settlement once it is approved by the Commission. First, Section 3.A. details the process for developing the provisions of the ISO Tariff (the "Market Rules") that will be necessary to implement the settlement. The Market Rules will be developed and filed in at least two packages. The first filing will contain rules for implementation of the transition provisions on December 1, 2006, and will be filed by October 1, 2006. The second filing, which must be made by February 15, 2007, will contain the rules for the FCM itself. To the extent addressed in the Settlement Agreement, the parties to the settlement may only challenge the Market Rules on the grounds that they are inconsistent with, or not necessitated by, the Settlement Agreement. Section 3.D. states that the Market Rules will be developed in accordance with NEPOOL's traditional rule review process and will include the opportunity for input from state utility regulators.

Under Section 3.C., a general timeline is laid out for determining a critical input into the FCM – the Installed Capacity Requirement (“ICR”). This process will determine how much capacity will be bought through the auctions. As the Commission is aware, the ISO is currently conducting a stakeholder process in New England (including market participants and state regulators) to review the process for deriving ICR. The goal is to conclude that process during the third quarter of 2006 and, as appropriate, file with the Commission in the fourth quarter of 2006. Based upon the outcome of that filing, the ICR for the first auction will be filed during the third quarter of 2007, with a requested effective date of October 1, 2007, which will enable the first auction to be conducted no later than early 2008. As noted in Section I.C. the first auction will have a truncated Planning Period of slightly over two years, enabling the first Commitment Period to coincide with the June, 2010 through May, 2011 Power Year. Thereafter, auctions will be conducted approximately three and a half years prior to the Commitment Period.

Under Section 4.A., the settling parties waive their Section 206 rights to seek a change in the Settlement Agreement or the Market Rules implementing the agreement for a period of roughly two and one half years (the “Waiver Period”). During this Waiver Period, subject to Section 4.C., the ISO retains its FPA Section 205 rights (subject to appropriate stakeholder processes) but may exercise those rights only upon a showing that the change is needed to prevent a negative effect on system operations or the forward capacity or forward reserves markets. After the Waiver Period, all Settling Parties have their rights provided by law to seek changes.

The Settling Parties agree that two aspects of the settlement require additional special protections against changes. Thus, under Section 4.C., the final prices derived from all auctions and the transition provisions in Section 11, Part VIII cannot be changed unless required by the

public interest under the Mobile Sierra standard. At least one purpose for adopting the Mobile-Sierra standard for final auction prices is to reduce regulatory uncertainty and thus the risk premium that new entrants may require.

Section 11, Part IX, however, allows parties to challenge key inputs to the auction before the auction is run. Once the auction is run, Section 11, Part II.G.3.b. provides that results from the primary auctions will be filed by the ISO pursuant to Section 205 of the FPA. Parties will have 45 days to file objections to the auction results, and this will be the only means of challenging such results. Section 5 provides that the ISO’s internal market monitoring unit will issue a full report analyzing the operations and effectiveness of the FCM 180 days after the second FCA and annually in its Markets Report thereafter.

3. Auction Mechanics

The FCM is a new locational capacity market design that integrates major elements of several proposed forward procurement models – *e.g.*, NERAM and NELRAM (collectively, “RAM Proposals”), and Reliability Options³² – and the Initial Decision’s LICAP. The FCM also shares certain characteristics with the Central Resource Adequacy Market (“CRAM”) that was developed as part of the joint discussions of New England, New York and PJM market participants.³³

Despite the FCM’s new name, however, the Commission is acquainted with many elements of the FCM’s design. Aspects of FCM were presented in filings and at oral argument

³² Testimony describing Reliability Options is an offer of proof in Docket ER03-563-030. See Order Confirming Rulings, Devon Power LLC, ER03-563-030 (Dec. 3, 2004); Hearing Tr. at 1606:16-19.

³³ “Central Resource Adequacy Markets for PJM, NY-ISO and NE-ISO, Final Report” FERC Docket No. ER03-647-004, filed February 26, 2004.

before the Commission in September 2005. The FCM integrates elements of these market designs and is intended to help assure resource adequacy and reliability for New England at just and reasonable rates, in the context of this settlement package as a whole, as supported by the affidavits of Witnesses Stoddard, Bidwell, and Cramton included as Attachments 2, 3 and 4.

a. Capacity Product Definition and Market Structure

The FCM establishes an auction-based market for locational capacity resources in New England. The product is a megawatt of deliverable capacity with a future supply commitment in a Power Year three years in advance.³⁴ The three-year period between the auction and the supply commitment period is the Planning Period. The duration of the supply commitment – the Commitment Period – coincides with the June-to-May Power Year and is one year for all existing capacity, but new capacity may choose a Commitment Period of up to five years.³⁵ The capacity product may be supplied by many types of Capacity Resources, including traditional generating plants, intermittent resources (e.g., wind and hydro),³⁶ and demand response resources³⁷ located in New England, as well as imports of capacity resources from outside New England. Partial delisting provisions incorporated into the design permit Capacity Resources to offer a portion of their capacity in the FCA.³⁸ As set forth further below, the Settlement Agreement also provides an improved definition of the capacity product by distinguishing the

³⁴ This is true for all auctions but the first, which has a projected two-year planning period. The first auction is expected to be held by the end of first quarter of 2008 for a commitment period in Power Year 2010/11. All other auctions will have a three-year planning period. For example, capacity for Power Year 2012/13 will be procured in the first quarter of calendar year 2009.

³⁵ See Settlement Agreement, § 11, Part I.B.

³⁶ *Id.* at Part § 11, II.E.

³⁷ *Id.*

³⁸ *Id.* at § 11, Part II.D.4.

service obligations assumed by the portion of a Resource sold as a capacity (“listed”) and the rights retained by the de-listed portion of a resource.³⁹ Capacity Resources may be designated by a load serving entity to be a self-supplied resource.⁴⁰ As discussed below, the FCM includes a locational component that allows for prices to differ in import- or export-constrained zones.

The capacity product is procured in an annual auction administered by the ISO. The amount of capacity that the ISO will procure in the auction is 100 percent of the forecast Installed Capacity Requirement for the appropriate commitment period.⁴¹ A descending clock auction will be used to set the Capacity Clearing Price.⁴²

Supplementing the FCA are reconfiguration auctions held prior to and during the Commitment Period.⁴³ These reconfiguration auctions provide a mechanism for the ISO, suppliers and traders to buy, sell, and exchange capacity obligations and will maintain market liquidity. The FCM includes three types of reconfiguration auctions: (i) three annual auctions (for trading year-long commitments) before the relevant Commitment Period, (ii) monthly auctions held prior to each commitment month, and (iii) seasonal auctions held prior to June and October of each year to sell a “seasonal strip” product. These reconfiguration auctions preserve any locational element of the initial auction.

³⁹ See generally Settlement Agreement §11, Part IV.

⁴⁰ *Id.* at § 11, Part II.F.

⁴¹ Settlement Agreement, § 11, Part III.C. The ICR is “a measure of the total installed generating capability that the ISO projects is necessary to satisfy its total forecasted load requirements and to maintain sufficient reserve capacity to meet reliability standards.” 2006/2007 Power Year Installed Capacity Requirements, *ISO New England Inc.*, Docket No. ER06-656-000 (Feb. 21, 2006) at 6.

⁴² *Id.* at § 11, Part III.G.

⁴³ *Id.* at § 11, § 11, Part III.M.

b. Participation and Qualification of Capacity Resources

Capacity Resources that participate in the auction will be designated as Existing or New resources.⁴⁴ Existing Capacity is a Capacity Resource previously listed as a resource in New England’s capacity market. New Capacity has never been listed as a capacity resource. Existing Capacity may also qualify as New Capacity if it undertakes specified types of major investments to upgrade its facilities.⁴⁵

Capacity Resources are required to submit qualification documentation to participate in the auction. Existing Capacity is required to submit documentation, as required by the market rules. In addition, an Existing Capacity Resource that intends to submit a bid to exit the market, permanently or temporarily, may be required to submit information supporting its request to the ISO’s Internal Market Monitoring Unit (“Market Monitor”).⁴⁶ New Capacity must submit documentation demonstrating its control over the proposed project site, a critical path schedule with milestones supporting the feasibility of the project being built, and an interconnection analysis showing the impact of connecting to the transmission grid.⁴⁷ New capacity may also be required to submit documentation supporting their bids to the Market Monitor.

Capacity Resources are also required to provide financial assurances to the ISO. Existing Capacity is generally subject to the requirements of the existing Financial Assurance Policy,

⁴⁴ *Id.* at § 11, Part II.B, § 11, Part II.D.2.

⁴⁵ *Id.* at § 11, Part II.B.2.

⁴⁶ The three bid types that enable the Existing Capacity Resource to leave the capacity market are Export Bids, De-list Bids, and Permanent De-list Bids. If any of these bids are greater than a specified price threshold, the bidder is required to submit additional information to the Market Monitor for review.

⁴⁷ *Id.* at §§ 11, Part II.B.3, II.B.4.

Exhibit IA to Section I of the Tariff.⁴⁸ New Capacity is required to provide financial assurances as well.⁴⁹ When deciding a reasonable level of financial assurances for New Capacity, the Settling Parties weighed the concern that higher credit requirements could raise costs, and a lesser requirement would not sufficiently deter a capacity commitment default. The parties agreed that the Settlement Agreement's financial assurance requirement – an annually increasing provision of credit totaling three months of capacity payments priced at the cost of new entry – is reasonable.⁵⁰

In addition, as described below, the FCM allows resources to self-supply. Load-serving entities (“LSEs”) may use owned and contracted resources to self-supply, in whole or in part, the capacity obligations of the loads they serve. Self-supplied resources are required to undertake the same obligations as to qualification and performance as any other Capacity Resources. If designated as self-supplied, the resource will clear the FCA and offset an equal number of megawatts of the projected share of ICR in the Commitment Period for the LSE designating that resource.

c. Mechanics of the Descending Clock Auction

In the simplest form of a descending clock auction, the auction administrator announces a starting price – twice the Cost of New Entry (“CONE”) under the FCM. Bidders are given specified time to decide how many MW to offer at the current auction price. Following the end of each bidding round, the auctioneer adds up the quantity of resources offered at the stated price. If the number of MW offered is more than the number of MW required, the auctioneer

⁴⁸ *Id.* at § 11, Parts II.D.2.c., 11, § 11, Part II.G.2.a.

⁴⁹ *Id.* at § 11, Part II.G.2.b.

⁵⁰ *Id.* at II.G.2.

lowers the price for the following round— *i.e.*, the “clock ticks down”. Bidders then again decide how much to offer at the lower price. When the total amount of MWs submitted equals the total amount of MWs demanded, the auction closes, and the remaining bidders are winners. Bidders in the clock auction must submit bids in every round, and the number of MW they submit may never be larger than the number of MWs they submitted in a previous round.

The last round of the auction sets the Capacity Clearing Price, which is the price received by all Capacity Resources that are winners and is, in most instances, the price incorporated into the next auction’s CONE (which sets the starting price for the next FCA). Consistent with the Commission’s objectives, the FCM is designed to price capacity resources accurately to reflect the cost of new entry. In designing the market, a significant challenge essential to market performance is to establish rules assuring that the clearing price is determined competitively. To achieve this outcome, settling parties agreed that price formation by the market will rely primarily on the bids of New Capacity. Existing Capacity’s De-list Bids, Export Bids and Permanent De-list Bids, and Imports are eligible to set the Capacity Clearing Price only within specified limits.

CONE is set at \$7.50 for the first auction. For all other auctions, CONE is mathematically calculated using the clearing prices of previous auctions.

d. Features of the FCM

Key design elements of the FCM include (1) an auction format to derive competitive prices approximating the cost of new entry, (2) forward procurement of capacity resources, (3) annual commitment periods, (4) opportunities for new entry to participate in the market, (5) procurement of ICR, (6) a locational mechanism to value capacity locationally, when necessary, (7) deductions of PER, (8) market power mitigation rules, and (9) availability-adjusted payments

reducing payments for nonperformance and rewarding Resources available during periods of system stress. Each of these elements is discussed below.

First, the FCA is a competitive market for pricing capacity resources. The market-wide FCA price is derived in a central auction administered by the ISO. The FCA price is derived from competing bids of all types of capacity resources: conventional generation, intermittent resources (wind and hydro), and demand response resources.⁵¹

Several benefits accrue from this market design. First, competing capacity resource suppliers determine the prices. Over time, the compensation received by capacity resources is expected to approximate the cost of new entry, which will appropriately compensate existing generators needed for reliability and attract and retain new entry. Second, capacity resources, without regard to type or technology, receive the same price that clears in the auction. Third, prices that are competitive and paid uniformly across all resources will help New England achieve the right mix of plant technologies – baseload, intermediate, and peakers. In sum, the competitive pricing will benefit all New England stakeholders by producing efficient prices for capacity resources.

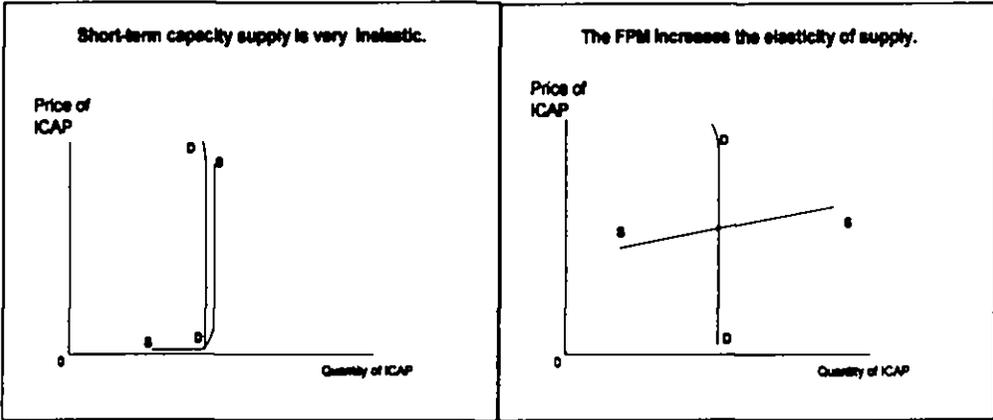
Second, the FCA is forward-looking. The time between the auction and when the capacity resource supplier is obligated to produce is over three years.⁵² This three-year Planning Period is intended to provide a planning period for new entry, so that potential new capacity resources can participate in the auction and compete with incumbent resources. If a potential capacity resource wins in the auction, it has more than three years to build the necessary infrastructure needed to fulfill its capacity obligation. If the potential capacity resource is not

⁵¹ *Id.* at § 11, Part III.G.

⁵² Settlement Agreement, § 11, Part I.B.

selected, it can abandon the project or put the project on hold to bid again in the next annual auction. Likewise, if an existing resource is not selected in the FCM, there is a three-year period to allow the orderly transition to alternative, more economic resources. In economic terms, the planning period increases the elasticity of the short-term supply curve (Figure 1) into an elastic long-term supply curve (Figure 2) because suppliers of capacity resources can respond to price movements by changing the amount of capacity they offer in the auction.⁵³

Figure 1 Figure 2



Potential new suppliers of capacity resources benefit from a three-year planning period, as do existing suppliers, in two significant ways. First, decisions whether to build, retire, or repower can be made well in advance of their obligation. Second, the Planning Period provides relief from reliability-based barriers to exit for generating units seeking to retire. If a unit intends to retire from the market, but is unable because the unit is needed for reliability reasons, the three-year period gives developers time to propose and the ISO time to procure the capacity to

⁵³ See e.g., Motion to Intervene of the New England Conference of Public Utilities Commissioners, Devon Power LLC, Docket No. ER03-563-030 (Mar. 22, 2004), Austin Aff. at P 9 (advocating approach to “design a market where the natural supply curve is more elastic, not fixed [such as] lengthening the supply period to several years so that new and existing generation can compete against one another”).

replace the retiring unit.⁵⁴ In addition, a forward-looking capacity market will assist the ISO to prioritize system planning work and to address transmission and resource capacity needs along the horizon.

Third, the capacity product procured in the FCA is committed for a longer period than the current ICAP and proposed LICAP markets, which trade a monthly capacity product. In the FCA, existing suppliers of capacity resources must offer a capacity product with a year-long commitment. The year-long commitment period locking in the capacity price makes near-term revenue streams more predictable.

New capacity suppliers that win the auction are entitled, however, to a one-time option to lock-in capacity prices for up to five years.⁵⁵ New suppliers are given this option because it gives investors predictable revenues streams during the project's early years and should facilitate project financing. Predictable revenue streams are expected to make the project more appealing to financiers and to lower risk premiums charged on the cost of capital. Ultimately, lower risk premiums for new investment will benefit New England ratepayers because new capacity resources may be supplied at lower cost (which means ratepayers will pay less).

Fourth, the FCA facilitates opportunities for new entry in New England's capacity market. Any potential capacity resource is eligible to participate in the auction. New projects proposed must be feasible, so the market rules will require that they fulfill specified criteria to participate in the auction.⁵⁶

⁵⁴ Settlement Agreement, § 11, Part III.K.

⁵⁵ *Id.* at § 11, Part I.B.

⁵⁶ *Id.* at § 11, Part II.B.3.

Fifth, the ISO will buy the amount of capacity required to maintain the ICR. Each load serving entity (the ultimate purchaser) is required to pay for a share of ICR proportionate to its share of peak load.⁵⁷ Because the ISO will only buy ICR, if the system has surplus capacity, not all capacity resources offered will be purchased. Excess capacity resources that are not selected in the auction may retire, mothball, export, or only participate in New England's energy and other markets. The competitive market will send clear signals to any units that cannot provide lowest-cost capacity to repower or retire, thus opening the grid for New Capacity.

Sixth, the FCM includes a locational component representing New England's import- and export-constrained transmission topologies.⁵⁸ Before the auction, capacity zones will be determined by the ISO based on an identification of transmission limits that may bind. If transmission limits (including predicted transmission upgrades that will be on-line by the Commitment Period) are expected to bind, capacity zones are designated, and separate but simultaneous auctions are held for each zone.

This locational component accomplishes the Commission's objectives in three ways. First, the Settlement Agreement's locational component will provide – as the Commission emphasized the need for – “an incentive . . . in the constrained areas to develop resources or transmission alternatives’ to help mitigate potential rate impacts.”⁵⁹ Second, the locational component will assist to value capacity appropriately in constrained areas. Third, the locational component will configure import-constrained capacity zones to map New England's electrical topology accurately. The need for a locational component will be evaluated by the ISO before

⁵⁷ *Id.* at § 11, Part III.C.

⁵⁸ *Id.* at § 11, Part III.A.

⁵⁹ March Order at P 11 (internal citations omitted).

each auction, so separate auctions will not be held if the capacity zone is determined to be unnecessary. The dynamic character of zonal designations enables state regulators and load to identify and take actions to eliminate transmission constraints creating capacity zones.

Seventh, except for self-supplied capacity,⁶⁰ the FCM includes a deduction from the monthly capacity payment for PER, as in the LICAP model.⁶¹ Under the settlement agreement, however, the PER deduction serves a slightly different purpose because FCA has no demand curve and the PER is not needed to calculate a net CONE value. Under the settlement agreement, the PER deduction primarily acts as a hedge for load against price spikes in the energy market. Because suppliers will be giving back to load energy rents earned by a hypothetical unit in the actual energy market, it also acts as a disincentive for suppliers to exercise market power in the energy market.⁶² In the FCM, the PER deduction is determined by calculating the difference between the real time energy price and a strike price derived from the incremental hypothetical cost of a proxy unit. Settlement Agreement, § 11, Part V.B.1. In addition, the PER is converted to a 12-month rolling average and is subtracted from Capacity Resources' monthly capacity payments. *Id.* at § 11, Part V.B.2. The rolling average smoothes month-to-month PER variations to stabilize Capacity Resources' revenue streams from the FCM over a year.

⁶⁰ The PER adjustment does not apply to Self-Supplied FCA Resources, because the entitlement holders of those Resources are able to credit inframarginal revenues directly against the capacity costs of their Self-Supplied FCA Resources.

⁶¹ Settlement Agreement, § 11, Part V.B.

⁶² In this respect it has a similar effect as the PER deduction under the demand curve. See ISO-17 (Stoft) at 95:7-17 ("What the energy market gives to an exercise of market power...[PER] takes it away").

Eighth, the FCM builds in four types of rules to prevent market failures associated with high concentrations of market power, whether held by buyers or sellers. These rules are integrated into the market and are transparent and predictable. Integration, transparency, and predictability allow participants to make their investment and pricing decisions in consideration of these rules.

The first is a set of auction rules that curb incentives to manipulate the market and distort capacity prices. Only specified types of bids can set the auction's clearing price paid to auction winners and incorporated into the successive auctions' CONE.⁶³ Permanent De-list bids, import bids, export bids, and De-list bids may set the Capacity Clearing Price, but only subject to identified limitations.⁶⁴ In addition, specific market rules, such as the Insufficient Competition rule,⁶⁵ have been designed to address problems of market failure. The Insufficient Competition rule sets prices for capacity resources if the system (or zone) is short of capacity, the total amount of new capacity bid is small, and any of the new capacity bid is needed to meet ICR (or the local sourcing requirement, if applicable). If the Insufficient Competition rule is triggered, then new capacity resources are paid the Capacity Clearing Price and existing capacity resources are paid the lower of the Capacity Clearing Price or 1.1 CONE.⁶⁶

The second default rule provides for Market Monitor review of bids priced above or below specified price thresholds. *Id.* at § 11, Part III.E. The price thresholds are tied to percentages of CONE. For example, the Market Monitor will review and decide whether to

⁶³ *Id.* at § 11, Part III.F.

⁶⁴ *Id.* at § 11, Part III.G.H.2.

⁶⁵ *Id.* at § 11, Part III.L.2.

⁶⁶ *Id.*

accept into the auction a capacity resource that submits any type of de-list bid (*i.e.*, enabling it to exit the market temporarily or shut down permanently) that is higher than 0.8 CONE. If the Market Monitor determines that the value of the bid is consistent with the resource's net risk-adjusted going-forward and opportunity costs, then the bid is incorporated into the auction.⁶⁷ Similarly, a bid from new capacity or imported capacity that is below 0.75 CONE will be reviewed by the Market Monitor, who will determine whether the bid is consistent with the long run average costs of that new capacity resource or the opportunity cost (or another reasonable economic measure) for the import.⁶⁸

The third type of rule, discussed previously, is the three-year planning period that permits new entry to compete with existing capacity resources in the auction and that increases the elasticity of supply by allowing resources to respond to price signals. The fourth rule, also discussed above, assists to mitigate incentives to create price spikes in the energy market. The PER deduction applies similar concepts as the PER deduction proposed in the LICAP model.⁶⁹ As in the LICAP market, these revenues are subtracted from capacity payments. The result is that while it may be profitable to raise prices in the energy market, the PER mechanism will remove any profits so gained because the extra revenues earned in the energy market are deducted from capacity payments.

Finally, the FCM contains a mechanism that adjusts capacity payments made to Capacity Resources depending on whether they are available during designated periods of system stress (a

⁶⁷ *Id.* at § 11, Part III.D.2.

⁶⁸ *Id.* at § 11, Part H.1.

⁶⁹ *Id.* at § 11, Part V.B.

“Shortage Event”).⁷⁰ The purpose of the availability mechanism is, in the specific context of settling this case, to create a strong economic incentive for Capacity Resources to be available when their capacity is most valuable to load – during times of system stress.⁷¹ The FCM rewards responsive and highly available Capacity Resources and reduces capacity compensation to resources that are not available when called by the ISO. Capacity resources that perform poorly for an extended period are expelled from the market until their availability improves.⁷²

4. Finality

Several inputs into the auctions will require determinations by the ISO or its Market monitoring unit. These include: (1) determinations of zones (Part III.A.); (2) propriety of specified bids (Part III.D.); and (3) qualification of resources to participate in the auctions (Part II). In order to ensure that the auctions can be conducted with certainty, these inputs must be filed by the ISO as an informational filing no later than 90 days prior to the auction. Parties will have 15 days to file objections. Unless the Commission orders otherwise within 75 days, such determinations will be used in the auction and the results therefrom will be final and subject to the Mobile Sierra standard under Section 4.C.

5. Transition Provisions

Because the FCM construct cannot commence until development of market rules and related software, the initial FCA auction is not expected to be held until early in 2008 for a commitment period beginning June 1, 2010. Although the Commission previously anticipated

⁷⁰ *Id.* at § 11, Part V.C.

⁷¹ *Id.* at § 11, Part V.C.4 (defining availability).

⁷² *Id.* at § 11, Part V.C.7.

implementation of this new mechanism by “no later than June 1, 2004,”⁷³ in the absence of transition payment provisions, June 1, 2010, would be the first period for which suppliers would receive payments pursuant to the FCA auction mechanism. Due to the LICAP litigation, no new compensation mechanism has been implemented and, to date, little new generation has been constructed in New England.

Evidence in the record in this proceeding, supplemented by the attached affidavit of ISO Vice President of Markets Development David LaPlante, clearly shows that the transition payments are just and reasonable from the perspective of ratepayers as they are less than the prices that likely would have resulted from LICAP, which was found just and reasonable by Judge McCartney. The transition payments form a bridge to the implementation of the FCM and should help ensure reliable system operation during that time.

In his January 28, 2005 testimony in this proceeding, James Daly, on behalf of the Attorney General of Massachusetts, NSTAR and other parties, projected the following LICAP clearing prices for the 2007-2010 period:⁷⁴

Table 1
Daly’s Clearing Price in \$/kW-month
SWCT ROCT NEMA ROP Maine

⁷³ *Devon Power LLC, et al.*, 103 FERC ¶ 61,082 (2003) at P 33, *quoted in Devon Power LLC, et al.*, 107 FERC ¶ 61,240 (2004) at P 37.

⁷⁴ See Supplemental Answering Testimony of James G. Daly (Exh. No. Mass AG-17) Table 4 at p. 15. Suppliers do not agree with Mr. Daly’s price estimates, which the Initial Decision rejects (111 FERC ¶ 63,063 at P 282), but the estimates nevertheless may be used to illustrate the very large savings that the settlement offers as compared to at least some parties’ projected LICAP prices. For example, in spreadsheets provided with that testimony, it appears that Mr. Daly’s prices are gross prices and do not reflect a PER deduction. However, even if the \$.48 per KW-month PER deduction (which he escalates at 20% per year) that he describes (Exh. No. Mass AG -17, 13:8-11) is subtracted from the prices set forth on Table 1, the proposed settlement transition payment rates are still below his LICAP price projections.

| | | | | | |
|------|---------|---------|---------|---------|---------|
| 2007 | \$5.31 | \$5.32 | \$5.32 | \$5.32 | \$5.30 |
| 2008 | \$6.96 | \$6.96 | \$6.96 | \$6.96 | \$6.96 |
| 2009 | \$8.34 | \$8.35 | \$8.33 | \$8.34 | \$8.34 |
| 2010 | \$12.29 | \$12.29 | \$12.29 | \$12.29 | \$12.29 |

In Mr. LaPlante's Prepared Rebuttal Testimony in this proceeding,⁷⁵ he provided the following projected base case and no investment case LICAP clearing prices on a kW/month basis:

Table 2
2006/07-2010-2011 5-Year Average Zonal Prices

| | Base Case | No Investment Case |
|-----------------------|-----------|--------------------|
| Southwest Connecticut | \$6.15 | \$8.61 |
| Rest of Connecticut | \$5.71 | \$6.54 |
| NEMA/Boston | \$4.25 | \$5.80 |
| Rest of Pool | \$3.96 | \$5.13 |
| Maine | \$3.96 | \$5.13 |

For these projections, Mr. LaPlante assumed the then current levels of Installed Capacity Requirements, Local Sourcing Requirements, and existing Installed Capacity.⁷⁶ For the base case, Mr. LaPlante assumed the level of investment in new generation described in Mr. Karl's

⁷⁵ Prepared Rebuttal Testimony of David LaPlante, Exhibit No. ISO-23, Tables 3 and 4 at 60-61.

⁷⁶ These prices do not reflect a PER deduction.

testimony.⁷⁷ These low estimates of LICAP clearing prices are now out of date because of significant changes, especially increases in the projections of Installed Capacity Requirements to meet the reliability standard.

Along with his March 16, 2005 supplemental testimony, Mr. Daly provided the following revised clearing prices for the 2007-2010 period.⁷⁸ Mr. Daly based the revised projections, in part, on increased Installed Capacity Requirements levels for the 2005/2006 power year that at the time of his March 16 testimony, had recently been approved by the NEPOOL Participants Committee.⁷⁹

Table 3

| | Daly' Clearing Price in \$/kW-month | | | | |
|------|-------------------------------------|---------|---------|---------|---------|
| | SWCT | ROCT | NEMA | ROP | Maine |
| 2007 | \$7.63 | \$7.63 | \$7.63 | \$7.63 | \$7.63 |
| 2008 | \$10.21 | \$10.21 | \$10.21 | \$10.21 | \$10.21 |
| 2009 | \$14.28 | \$14.25 | \$14.26 | \$14.26 | \$14.26 |
| 2010 | \$16.14 | \$16.16 | \$16.16 | \$16.15 | \$16.16 |

In the attached affidavit, Mr. LaPlante,⁸⁰ provides the following current projection of LICAP prices based upon the LICAP demand curve adopted in the Initial Decision, and updated

⁷⁷ See Prepared Rebuttal Testimony of Mark Karl, Exh. ISO-39, 67:8-68:2.

⁷⁸ See workpaper for Exh. Mass AG-23.

⁷⁹ See Supplemental Answering Testimony of James G. Daly (Exh. No. Mass AG-23) at 2:8-9:2. Again, Suppliers do not agree with Mr. Daly's price estimates and the Initial Decision rejected them. 111 FERC at P 282.

⁸⁰ LaPlante Affidavit at P 11, included as Attachment 5 to this Statement.

data concerning, among other things, Installed Capacity Requirements, Local Sourcing Requirements, and existing installed capacity.⁸¹

Table 4
LICAP Clearing Price Less PER
(\$Kw-Month)

| Zone | 2006/07 | 2007/08 | 2008/09 | 2009/10 |
|--------------|---------|---------|---------|---------|
| Connecticut | \$4.13 | \$5.14 | \$6.39 | \$11.15 |
| NEMA/Boston | \$4.13 | \$5.14 | \$6.39 | \$7.84 |
| Rest of Pool | \$4.13 | \$5.14 | \$6.39 | \$7.84 |
| Maine | \$4.13 | \$5.14 | \$6.39 | \$7.84 |

Under the settlement, all listed ICAP Resources shall receive fixed payments, based on the following payment rates and the resources' seasonal UCAP ratings:

Table 5 – Settlement Interim Payment Rates

| | |
|----------------------------------|-----------------|
| December 1, 2006 to May 31, 2007 | \$3.05/kW-month |
| June 1, 2007 to May 31, 2008 | \$3.05/kW-month |
| June 1, 2008 to May 31, 2009 | \$3.75/kW-month |
| June 1, 2009 to May 31, 2010 | \$4.10/kW-month |

These numbers show that as the projections have become more recent and reflect more current data, the LICAP price estimates have increased such that the prices calculated pursuant to

⁸¹ *Id.* at PP 7-10. These are the ISO's numbers and not consensus numbers for the Settling Parties.

the LICAP demand curve adopted in the Initial Decision are higher than the proposed settlement transition payments for every zone for every year of the transition period. Although there is no consensus among the Settling Parties as to the precise level of savings to consumers from this Settlement Agreement when compared to LICAP, there is no question that the transition prices are lower than the prices under LICAP as approved by Judge McCartney.

In the context of the complex and interrelated provisions of the Settlement Agreement, it is appropriate for the transition payments to be the same for all zones in New England. Some have argued that ratepayers in import constrained zones should pay more for capacity than those in capacity surplus zones and that customers in export constrained zones should pay less than those in zones with surplus. This is of course true if the facts demonstrate that zones are actually constrained. However, the price projections described by Mr. LaPlante show nearly flat prices across zones and therefore support interim payments that do not vary on a \$/kW-month basis by zone. Nonetheless, as RSP 2005 makes clear, the region's import constrained zones, particularly Connecticut and Boston, have a stronger need for additional capacity than is the case in other regions. However, ratepayers in the constrained zones of Connecticut and NEMA/Boston are already paying substantially more than ratepayers in unconstrained zones such as Maine because of the RMR contracts that are currently required in those constrained regions. The transition period payments agreed to by the parties were negotiated at arms length.

The settlement transition mechanism also includes an availability metric. The Initial Decision recommended that EFORd continue to be used as the availability metric in New England, as requested by Suppliers. That recommendation was vigorously challenged by both the ISO and Load, who sought to measure availability only at times when the region was short of operating reserves or energy. *See, e.g.*, Initial Decision at PP 439-460. The Settlement

Agreement reflects a compromise between these two proposals, adopting for the transition period a modified EFORD that most heavily weights availability during times of greatest need.

As noted above, the Commission’s obligation is to determine based on the record whether the Settlement Agreement as a package should be approved. There may be many different calculations of the level of savings to consumers from this settlement when compared to LICAP. The transition payments under the Settlement are clearly lower, however, than the cost of LICAP, as shown here and in Mr. LaPlante’s affidavit.

6. Agreement Regarding Rights and Obligations

Part IV of the Settlement Agreement sets forth the rights and obligations of Listed, De-listed and Self-Supplied capacity under the FCM.

a. Listed Capacity

Listed Capacity is any resource participating, or “listed,” in the capacity market. Not all of a resource must be listed, and only the listed portion of a resource has the rights and obligations of Listed Capacity.

The key obligation imposed on Listed Capacity is that it must offer into both the Day-Ahead and Real-Time Energy Markets whenever available.⁸² In addition, Day-Ahead offers must have a start time plus minimum run time plus minimum down time less than or equal to 72 hours, or, failing that because of “physical design limits,” must bid in Day-Ahead at zero, or self-schedule.⁸³

Another key obligation imposed on Listed Capacity is that, consistent with good utility practice, the resource’s Day Ahead and Real Time offers must reflect the then-known unit-

⁸² Settlement Agreement, § 11, Part IV.A.1.

⁸³ *Id.* at § 11, Part IV.A.2.

specific operating characteristics of the resource.⁸⁴ Intentionally failing to do so exposes Listed Capacity to significant penalties under the Settlement Agreement. For a first violation, the ISO issues a warning. A second violation incurs a fine of up to the daily FCA payment, capped at \$150,000; a third violation incurs a fine of up to two times the daily FCA payment, capped at \$300,000; a fourth violation incurs a fine of up to four times the daily FCA payment, capped at \$600,000; any further violation permits all remedies under the Federal Power Act, without limitation.⁸⁵ Violations may be cumulative (*i.e.*, warning, second, third, and fourth violations) if they occur within a 90-day window, are similar to the original violation and are by the same or a similar unit.⁸⁶ If multiple similar units that have their bids submitted by the same entity and all commit the same violation, it will be treated as a single violation.⁸⁷ Listed Capacity has specific due process rights with respect to all such warnings and penalties, including timely notice from the ISO within 10 days of the observed behavior, an opportunity to confer, and petition rights at the FERC Office of Market Oversight and Investigations.⁸⁸

Another obligation of Listed Capacity is that it may not go on economic outages.⁸⁹ Special bid rules apply, however, in circumstances when “extraordinary fuel prices” prevent a resource from recovering its full operational cost in its bid.⁹⁰

⁸⁴ *Id.* at § 11, Part IV.A.3.
⁸⁵ *Id.* at § 11, Part IV.A.4.
⁸⁶ *Id.* at § 11, Part IV.A.4.b.
⁸⁷ *Id.* at § 11, Part IV.A.4.c.
⁸⁸ *Id.* at § 11, Part IV.A.4.d.
⁸⁹ *Id.* at § 11, Part IV.A.5.
⁹⁰ *Id.*

Finally, Listed Capacity has the right under specified circumstances to transfer its capacity market obligations to another resource.⁹¹ After the transfer, such capacity is treated as De-listed Capacity.

b. De-listed Capacity

The key distinction between Listed Capacity and De-listed Capacity is the latter has no obligation to bid into the Day-Ahead and Real-Time Energy Markets and does not have to honor the ISO's requests to reschedule maintenance.⁹² This applies to the portion of a Capacity Resource that (1) does not clear in a FCA, (2) has an accepted Permanent De-list Bid, (3) has an accepted De-list Bid, (4) has an accepted Export Capacity bid and has been de-listed, or (5) has transferred its capacity obligation and is not otherwise committed to provide capacity pursuant to a bilateral contract or reconfiguration auction.⁹³

De-listed Capacity may, however, offer into the Day-Ahead Energy Market and, if accepted, would have the same obligations as other resources in the Day-Ahead Market.⁹⁴ Further, if bid into the Day-Ahead Market, De-listed Capacity is not subject to the restrictions placed on bidding of unit characteristics for Listed Capacity. De-listed Capacity not offered or accepted in the Day-Ahead Market may only participate in the Real-Time Energy Market by self-scheduling. The ISO may request to commit such resources, but they are not obligated to

⁹¹ *Id.* at § 11, Part IV.A.6.
⁹² *Id.* at § 11, Part IV.B.2.
⁹³ *Id.*
⁹⁴ *Id.*, § 11, Part IV.B.3.

come on line, and are not subject to any performance or availability penalties if they do come on line.⁹⁵

Further, since their capacity has not been relied upon to meet the ICR, De-listed Resources are not required to reschedule their maintenance at the ISO's request and De-Listed Capacity may export its capacity. Capacity exports can be transacted either through an accepted Export Bid in the FCM or – subsequent to the FCM – through a bilateral export transaction from De-Listed Capacity.

c. Self-Supplied FCA Resource

Finally, Part IV of the Settlement Agreement establishes that self-supplied resources will have the same rights and obligations as other Capacity Resources accepted in the FCA.⁹⁶ The FCM will allow LSEs to use owned or contracted resources to self-supply all or part of their capacity obligations. Resources so designated (a "Self-Supplied Resource") are subject to the same performance obligations and qualification requirements as other Resources participating the FCM and the FCA. The total quantity of designated Self-Supplied Resources may not exceed the projected share of the ICR for the LSE designating that Resource pursuant to Market Rules. To be considered a Self-Supplied Resource, that Resource must be offered into the FCA. In order to qualify as a Self-Supplied Resource for purposes of fulfilling a Local Sourcing Requirement applicable to a load in an import-constrained region, the Self-Supplied Resource must be located in the same Capacity Zone as the associated load, unless the self-supplied

⁹⁵ *Id.* at § 11, Part IV.B.4.

⁹⁶ *Id.* at § 11, Part IV.C.

resource is a Pool-Planned Unit with a special allocation of CTRs up to the number of allocated Capacity Transfer Rights (“CTRs”).⁹⁷

Together, these provisions in Part IV establish rights and obligations of resources in or out of the FCM so that resources will know how to act. They should be accepted as part of the settlement package.

7. Agreements Regarding Gas Availability

Part VII of the Settlement Agreement addresses a specific problem in coordinating the schedules of the gas and electricity markets in winter months. Under current electric scheduling time frames, gas-fired resources may not have timely information to purchase gas in cold weather periods. They may be unsure of whether and to what extent they will be dispatched the following day. The choice is either to (1) purchase gas and speculatively bear the risk of lost opportunity costs in the event the associated generation is not dispatched and the gas resale market price is significantly lower, or (2) reduce the quantity of gas purchased in advance of the generation schedule. This introduces significant uncertainty for both the gas-fired generator and for the ISO in predicting the availability of gas resources.

Part VII thus provides that – starting in the first FCM and each December, January and February thereafter – the posting of Day-Ahead Market results and the initial Resource Adequacy Assessment will be rolled back to earlier time periods, by a “target completion time” of 10:30 a.m. of the day prior to the electric Operating Day.⁹⁸ Other specific scheduling clarifications and adjustments further accommodate gas pipeline nomination deadlines.

⁹⁷ Although the ISO will continue to model any such Pool-Planned Units in their actual location, the combination of the physical asset and the CTRs will offset the financial obligation of the self-supplier.

⁹⁸ Settlement Agreement, § 11, Part VII.A.

On days when the ISO forecasts a Cold Weather Warning or Cold Weather Event for the next Operating Day, Part VII also provides that the ISO shall procure an additional 1000 MW of Supplemental Reserves for peak load periods of the day exclusively for gas-fired resources.⁹⁹ Gas resources will be compensated for the gas reserved, purchased, and nominated for all such Supplemental Reserves, as set forth by formula.¹⁰⁰

Finally, on all such days when the ISO forecasts a Cold Weather Warning or Cold Weather Event sufficiently in advance of pipeline gas nominating deadlines, all gas-fired resources are required to confirm to the ISO that they will nominate sufficient fuel to be able to deliver energy and Supplemental Reserves scheduled for the Operating Day.¹⁰¹

VII. SERVICE OF THIS PLEADING

This Explanatory Statement, the Settlement Agreement and all attachments have been served on all persons required to be served under Commission rule or order or under law. Pursuant to the agreement of all Settling Parties, this Explanatory Statement, the Settlement Agreement and all attachments have been served on all participants to this proceeding by electronic mail pursuant to the listserv established in this proceeding. The foregoing has also been served on the NEPOOL Participants Committee members by electronic mail, pursuant to section 17.11(e) of the NEPOOL Participants Agreement.

VIII. CONCLUSION

⁹⁹ *Id.* at § 11, Part VII.B.
¹⁰⁰ *Id.*
¹⁰¹ *Id.* at § 11, Part VII.C.

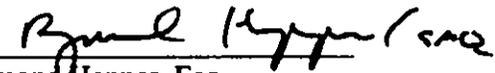
The Commission should approve the Settlement Agreement in its entirety without condition or change. The Settlement Agreement resolves issues that have caused intense controversy in the region for years. The long term market design accepts a forward procurement model for capacity that has been advocated by state regulators in all six New England states, and has now been accepted in settlement by virtually all of the generating resources in the region. It is designed to provide economic incentives for Resources to be available when most needed, and it supports participation by all types of Resources, including demand response and intermittent resources. During the transition, FCM is demonstrably less expensive to consumers than LICAP, which the Presiding Judge adopted in the Initial Decision.

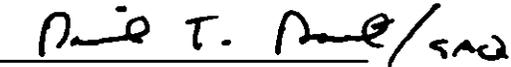
At this juncture, it is clear that no settlement is possible that will satisfy all interests. The settlement presented here is widely supported or not opposed by a supermajority of interests in the region. It achieves that support by carefully balancing many conflicting and competing interests. The voluminous record in this proceeding, as well as the supporting affidavits provided on behalf of certain parties by experts that were fully involved in this proceeding, demonstrate that, as a package, the Settlement Agreement is just and reasonable.

For the foregoing reasons, the Settling Parties urge the Commission to approve the Settlement Agreement by order issued on or before June 30, 2006, without any change, deletion or condition.

Respectfully Submitted
ON BEHALF OF THE SETTLING PARTIES,

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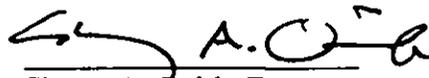
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CERTIFICATE OF SERVICE

I hereby certify that I have this day served in accordance with the applicable Rules of Practice and Procedure, the foregoing document upon each person designated on the official service list compiled by the Secretary in the captioned proceedings.

Dated at Washington, D.C., this 6th day of March, 2006.



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ATTACHMENT 1

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Devon Power LLC, et al.

)

Docket No. ER03-563-_____

**SETTLEMENT AGREEMENT
RESOLVING ALL ISSUES
(March 6, 2006)**

This settlement agreement (the "Settlement Agreement") is entered into by and among the following entities (individually a "Settling Party" and collectively the "Settling Parties"):

- American National Power, Inc.
- Associated Industries of Massachusetts
- Boston Generating, LLC
- Calpine Eastern Corporation
- Calpine Energy Services, L.P.
- Cape Wind Associates, LLC
- Central Vermont Public Service Corporation
- Connecticut Department of Public Utility Control
- The Connecticut Light and Power Company
- Connecticut Municipal Electric Energy Cooperative
- Connecticut Office of Consumer Counsel
- Conservation Services Group
- Consolidated Edison Energy, Inc.
- Dominion Energy Marketing, Inc.,
- Dominion Nuclear Connecticut, Inc.
- Dominion Resources, Inc.,
- Duke Energy North America, LLC
- Energy Management, Inc.
- EnerNOC, Inc.
- Entergy Nuclear Generation Company
- Entergy Nuclear Vermont Yankee, LLC
- Exelon Generation Company, LLC
- Exelon New England Holdings, LLC
- Fitchburg Gas & Electric Light Company
- FPL Energy, LLC
- Granite Ridge Energy, LLC
- HQ Energy Services (U.S.) Inc.
- ISO New England Inc.
- Lake Road Generating Company, LP
- Long Island Power Authority (LIPA)
- MASSPOWER
- Milford Power Company, LLC

Mirant Americas Energy Marketing, LP
Mirant Canal, LLC
Mirant Kendall, LLC
Mystic Development, LLC, Mystic I, LLC, and Fore River Development, LLC
National Grid USA (on behalf of itself and its subsidiaries that are intervenors in this proceeding)
NEPOOL Participants Committee
New Hampshire Electric Cooperative, Inc.
New Hampshire Office of Consumer Advocate
New Hampshire Public Utilities Commission
NRG (Devon Power, LLC, Middletown Power LLC, Montville Power LLC, Norwalk Harbor, LLC, and NRG Power Marketing)
Pinpoint Power
Public Service Company of New Hampshire
RI Division of Public Utilities and Carriers
RI Public Utilities Commission
Select Energy
Sempra Trading
TransCanada Power Marketing Limited
The United Illuminating Company
Vermont Department of Public Service
Vermont Public Power Supply Authority
Vermont Public Service Board

The Settling Parties hereby agree as follows:

1. **AGREEMENT REGARDING EFFECTIVENESS.** This Settlement Agreement shall become effective when the Federal Energy Regulatory Commission ("FERC") by order approves this Settlement Agreement in its entirety without modifications or conditions or with such modifications or changes as are agreed to by the Settling Parties in accordance with Section 2 below (the "Effective Date").
2. **AGREEMENT REGARDING TERMINATION.** If the FERC does not approve this Settlement Agreement by June 30, 2006, this Settlement Agreement shall terminate unless the Settling Parties agree to an extension. If the FERC by order approves this Settlement Agreement conditioned on the modification of any of the terms of this Settlement Agreement (a "Conditional Approval Order"), the Settling Parties shall confer and negotiate in good faith to restore the balance of risks and benefits reflected in this Settlement Agreement as executed. Any such renegotiated Settlement Agreement shall be filed with the FERC. If no agreement can be reached within thirty calendar days of the date of the issuance of the Conditional Approval Order and unless all of the Settling Parties agree to extend the time period for such negotiations, this Settlement Agreement shall terminate.
3. **AGREEMENTS REGARDING DEVELOPMENT AND FILING OF MARKET RULES.**
 - A. On or before October 1, 2006, the ISO New England Inc. ("ISO"), pursuant to its authority under Section 205 of the Federal Power Act ("FPA"), shall file with the FERC necessary changes to the ISO New England Inc. Transmission, Markets and Services Tariff, FERC Electric Tariff No. 3 (the "Tariff") to implement the Transition Period as defined in Section 11, Part VIII of this Settlement Agreement. On or before February 15, 2007, the ISO, pursuant to its authority under Section 205, shall file with the FERC necessary changes to the Tariff to implement the Forward Capacity Market as described in Section 11, Parts I through VII and Part IX of this Settlement Agreement.
 - B. The Market Rules shall be consistent with, and in furtherance of, all the terms contained in this Settlement Agreement as modified by the Settling Parties pursuant to Section 2 of this Settlement Agreement and approved by the FERC. Each Settling Party retains the right to challenge the provisions of the Market Rules that address the terms of this Settlement Agreement only on the basis that they contain provisions that are either inconsistent with or not required by this Settlement Agreement. The Settling Parties retain all rights under the FPA with respect to the provisions of the Market Rules that do not address the terms of this Settlement Agreement.

- C. The process for determining the Installed Capacity Requirement (“ICR”) for the first Commitment Period shall be reflected in a filing with the FERC in the fourth quarter of 2006 for FERC action, as appropriate, no later than the second quarter of 2007. Such filing shall reflect the understanding that this schedule is intended to enable a filing of the ICR values for use in the first Forward Capacity Auction (“FCA”) by early in the third quarter of 2007 for FERC acceptance or approval by October 2007. All Settling Parties retain their rights under the FPA to respond to any such filing.
- D. All filings pursuant to this Section 3 shall be subject to the stakeholder process for Market Rules that provides for consultation with state utility regulatory agencies.

4. AGREEMENTS REGARDING CHANGES TO THE SETTLEMENT AGREEMENT AND MARKET RULES.

- A. From March 6, 2006 through the earlier of September 5, 2008 or the date on which the prices from the second FCA become final (the “Waiver Period”), the Settling Parties waive their rights under Section 206 of the FPA to seek to modify the terms of this Settlement Agreement or, except as provided in Section 3.B, the Market Rules approved or accepted by the FERC to implement the Forward Capacity Market. Except as provided in Section 4.C, during the Waiver Period, the ISO shall retain its authority under Section 205 of the FPA to file modifications of the Market Rules that address the terms of the Settlement Agreement; where the ISO makes such a filing, the ISO must demonstrate to the FERC that failure to implement the proposed change in the Market Rule would have a negative effect on (1) system reliability or security, or (2) the competitiveness or efficiency of the Forward Capacity Market or forward reserve market. If the ISO makes such a filing, then the Settling Parties shall retain all rights to challenge the modification proposed by the ISO before the FERC.
- B. After the Waiver Period, the Settling Parties shall have the rights provided by law with respect to seeking to change this Settlement Agreement or the Market Rules that address the terms of the Settlement Agreement, except as provided in Section 4.C.
- C. From the Effective Date, absent the agreement of all Settling Parties to the proposed change, the standard of review for: (i) challenges to the Capacity Clearing Prices derived through the FCA and prices resulting from reconfiguration auctions provided for in the Settlement Agreement and in the Market Rules addressing the terms of the Settlement Agreement that are approved or accepted by the FERC pursuant to Section 3, and (ii) proposed changes to Section 11, Part VIII below (*Agreements Regarding Transition Period*) and the Market Rules implementing that part, shall be the “public interest” standard of review set forth in United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350

U.S. 332 (1956) and Federal Power Commission v. Sierra Pacific Power Co., 350 U.S. 348 (1956) (the "Mobile-Sierra" doctrine), whether the change is proposed by a Settling Party, a non-Settling Party, or the FERC acting *sua sponte*. This Settlement Agreement does not impose the Mobile-Sierra standard on any provision of this Settlement Agreement or the Market Rules that address the terms of the Settlement Agreement except as expressly provided in this Section 4.C.

5. **AGREEMENTS REGARDING ISO REPORTING.** No later than 180 days after the second FCA is conducted, the ISO's Internal Market Monitoring Unit ("Market Monitor") shall file with FERC and post to the ISO's website a full report analyzing the operations and effectiveness of the Forward Capacity Market. Thereafter, the Market Monitor shall report on the functioning of the Forward Capacity Market in its annual markets report submitted to FERC pursuant to Section 11.3 of Appendix A to Market Rule 1.
6. **AGREEMENTS AS TO SCOPE OF SETTLEMENT.** This Settlement Agreement resolves all of the issues raised in Docket Nos. ER03-563-030 and ER03-563-055 before the FERC by the Settling Parties.
7. **NO ADMISSIONS.** The Settling Parties are entering into this Settlement Agreement to resolve their disputes in Docket Nos. ER03-563-030 and ER03-563-055 before the FERC as specified herein and nothing in this Settlement Agreement, including the January 31, 2006 vote on the term sheet (the "Term Sheet"), is intended by a Settling Party to reflect an admission regarding the merits of its own case or arguments or of another Settling Party's case or arguments on any of the settled issues. Neither support for this Settlement Agreement, nor the Term Sheet relating hereto, nor the submission of this Settlement Agreement and the concurrence in, or failure to comment on, the described settlement, shall constitute an admission by any Settling Party that any allegations or contentions in Docket Nos. ER03-563-030 and ER03-563-055 were true or valid or that any Settling Party had acted consistent with, or contrary to, contract provisions, the FPA, or any other federal or state law or regulation.
8. **CONFIDENTIALITY.** The discussions among the parties related to this Settlement Agreement and the Term Sheet took place within the context of settlement discussions concerning matters covered herein. Discussions leading up to this Settlement Agreement and the Term Sheet, the finalization of this Settlement Agreement and the Term Sheet, and any drafts of those documents, and any other documentation that reflects the negotiation of this Settlement Agreement and the Term Sheet are privileged and confidential in accordance with the applicable sections of the FERC's Rules of Practice and Procedure, the Federal Rules of Evidence and any other applicable rules of evidence.
9. **ADDITIONAL AGREEMENTS.**

- A. FERC's approval of this Settlement Agreement shall not constitute approval of or precedent regarding any principle or issue in Docket Nos. ER03-563-030 and ER03-563-055 before the FERC.
 - B. This Settlement Agreement constitutes the Settling Parties' complete and exclusive statement of the terms of this Settlement Agreement. All prior written and oral understandings, offers or other communications of every kind pertaining to the subject matter of this Settlement Agreement, including without limitation the Term Sheet, are hereby superseded.
 - C. This Settlement Agreement may be executed in any number of counterparts, each having the same force and effect as the original.
 - D. The Table of Contents contained in this Settlement Agreement and the headings of the sections and parts of this Settlement Agreement are intended for convenience only and shall not be deemed to be part of or considered in construing this Settlement Agreement
10. **DEFINITIONS.** Attachment A to this Settlement Agreement contains a list of all capitalized terms as defined or referenced therein.
11. **AGREEMENTS REGARDING THE ESTABLISHMENT OF A FORWARD CAPACITY MARKET AND TRANSITION.** A Forward Capacity Market shall be established in New England as described in Parts I through VII and Part IX below, with a transition to that market as provided in Part VIII below.
- I. **Agreements Regarding the Establishment and Timing of the Forward Capacity Market.**
 - A. **Procurement by Forward Capacity Auction and Planning Period.** As set forth in and subject to Part I.C (Timing of First Auction) and Part III (Agreements Regarding Auction Mechanics), the ISO shall conduct an annual FCA to procure 100 percent of the ICR for the Power Year beginning three years later, with ICR calculated taking into account forecast error, as appropriate.
 - B. **Commitment Period.** Capacity clearing in an FCA shall be entitled to receive capacity payments and shall have the rights and obligations specified below, for a period of either one year in duration (corresponding to the Power Year for which the FCA is held) or up to five years in duration (beginning with the Power Year for which the FCA is held) (the "Commitment Period"), as described in more detail in Part II (Agreements Regarding Qualification).

- C. **Timing of First Auction.** The ISO shall use best efforts to conduct the first FCA no later than the end of the first quarter of 2008 for the first Commitment Period beginning June 1, 2010, and will provide reasonable notice of the first FCA.

II. Agreements Regarding Qualification.

- A. **Generally.** Each potential capacity Resource (Existing, New, or Imports) must submit qualification information to the ISO no later than the relevant bid qualification deadline, which shall be determined during the development of Market Rules. The bid qualification deadline for New Capacity and Imports shall be approximately six weeks after the ISO's posting of De-list Bids, Permanent De-list Bids and Export Bids from Existing Capacity in accordance with Part III (Agreements Regarding Auction Mechanics).

- B. **New Capacity.** New Capacity may, during the qualification process, select a Commitment Period of up to five years, in one-year increments, provided that the Resource meets the criteria in this Part II.B. New Capacity Resources shall have a Qualified Capacity equal to its bid MWs subject to demonstration of at least that capacity in the qualification process.

- 1. **Definition of New Capacity.** To be considered New Capacity, a Resource must: (i) never have been "listed" as a capacity Resource (i.e., counted as capacity) in the New England capacity markets; or (ii) meet one of the criteria in Part II.B.2 below.

- 2. **Thresholds for Previously Listed Capacity to be Considered New Capacity.** A Resource, which had previously been listed as a capacity Resource in the New England capacity markets, shall be considered New Capacity provided it meets at least one of the following conditions:

- a. where new investment in a unit that is Existing Capacity results in an increase in output greater than 20 percent of Summer Seasonal Claimed Capability or 40 MW, whichever is greater;
- b. at owner's election, i) investment in the Resource for the purposes of re-powering will be equal to or greater than \$200 (plus appropriate cost escalation) per net kilowatt installed project cost, or ii) investment in the Resource for the purpose of compliance with environmental regulations or permits will be equal to or greater than \$100 (plus appropriate cost escalation) per net kilowatt installed project cost.
- c. at owner's election, incremental output from an Existing Capacity Resource shall be considered New Capacity for the incremental

amount of output if the output increase is equal to or greater than two percent of the Resource's Summer Seasonal Claimed Capability, but less than the requirements in part a. above. Additionally, if Existing Capacity is derated for three or more years, any capacity over the derated amount that is re-established shall be considered New Capacity. Provided, however, that investment in the Resource for such purposes shall be equal to or greater than \$200 (plus appropriate cost escalation) per net kilowatt installed cost for the incremental output.

d. additional thresholds for New Capacity treatment may be addressed in the stakeholder process that provides for consultation with state utility regulatory agencies (e.g., new source environmental review and Resources with a new "placed in service date" for purposes of Section 45K (formerly Section 29) of the Internal Revenue Code of 1986).

3. **Eligibility Criteria.** In order for any Resource to be eligible to bid in the FCA as New Capacity, including to the extent applicable New Capacity under Parts II.B.2, it must meet the qualification requirements listed in a. through d. below to the satisfaction of the ISO. Qualification criteria may vary based on the size, technology, complexity, et cetera of the Resource. Such qualification requirements shall be further detailed as part of the development of Market Rules. A New Resource that intends to submit a New Capacity Bid below 0.75 the Cost of New Entry ("CONE") shall submit sufficient information for the Market Monitor to evaluate the reasonableness of the bid consistent with Part III.H.2.

a. **Site Control.** The project sponsor shall demonstrate that it has control over the site for its project over the term of the intended Commitment Period, by providing documentation to the ISO showing that (i) the project sponsor is the owner in fee simple of the real property on which the project will be located; (ii) the project sponsor holds a valid written leasehold interest in the real property on which the project will be located; (iii) the project sponsor holds a valid written option, exercisable solely by the project sponsor or its assignee, to purchase or lease property on which the project will be located; or (iv) the project sponsor holds a duly executed written contract to purchase or lease the real property on which the project will be located.

b. **Critical Path Schedule.** The project sponsor must provide a critical path schedule for their project with sufficient detail to allow the ISO to evaluate the feasibility of the project being built and the

feasibility that it will be put into service no later than the start of the Commitment Period, as set forth in Part II.B.4.

- c. **Interconnection Study.** If applicable for a specific Resource, while a full and complete System Impact Study is not a requirement to participate in the FCA, at a minimum, an initial interconnection analysis is required. The ISO and the Reliability Committee shall work out specifics with respect to the performance of such initial interconnection analysis and selection criteria (including auction details) for multiple projects when only a subset of such projects can be selected in the FCA due to overlapping interconnection impacts.
 - d. **Financial Assurance.** Bidders must satisfy the Financial Assurance requirements for New Capacity specified in Part II.G.
4. **Milestone Criteria.** For purposes of consideration as New Capacity in the FCA, several key milestone dates shall be included in a critical path schedule as a means of demonstrating that the Project will come on-line prior to the delivery date for the relevant Commitment Period. The ISO shall evaluate the milestone schedule for reasonableness in accordance with processes defined in development of the applicable FCA Market Rules. The key milestone dates may include:
- a. Site control achieved;
 - b. Major permits applied for;
 - c. Major permits obtained;
 - d. Construction financing closing;
 - e. Interconnection Study completed;
 - f. Equipment ordered;
 - g. Foundations laid;
 - h. Commencement date of operations.
5. **Timing.** A Resource intending to participate in an annual FCA as New Capacity must submit its qualification package before the start of the FCA at a time to be determined in the Market Rules.
- C. **Import and Export Capacity.** Import Capacity bids shall only be eligible for a one-year Commitment Period, and qualification requirements shall depend on whether the Import Capacity is committed under a multi-year contract prior to the qualification deadline. The qualification deadline for Import Capacity shall be the same as for New Capacity, and the qualifications deadline for an Export Bid shall be the same as for an Existing Capacity De-list Bid.

1. **Definitions of Import and Export Capacity.**

- a. **Existing Import Capacity.** Capacity that a party wishes to import in the FCA pursuant to a multi-year contract entered into before the qualification deadline to provide capacity Resources during the Commitment Period from outside the New England Control Area shall be Existing Import Capacity and shall be considered Existing Capacity for purposes of Part III.D. Provided, however, that during the first year of a multi-year contract such Existing Import Capacity in the FCA shall be considered New Import Capacity for purposes of Part III.D. Multi-year contracts existing as of the Effective Date will be treated as Existing Capacity for the purposes of the first FCA.
- b. **New Import Capacity.** Capacity that a party wishes to import in the FCA but without a multi-year contract before the qualification deadline to provide capacity Resources during the Commitment Period from outside the New England Control Area shall be New Import Capacity and shall be considered New Capacity offers for purposes of Part III.D.
- c. **Export Capacity.** Any Resource within the New England Control Area seeking to submit a bid to export all or part of its capacity in the FCA or selling its De-listed Capacity to a buyer outside the Control Area following the FCA shall be Export Capacity. Only the portion of the Resource seeking to export shall be Export Capacity.

2. **Eligibility Criteria.**

- a. In the qualification process, Existing Import Capacity bidders must submit to the ISO documentation of a multi-year contract to provide capacity Resources for the Commitment Period and must meet the same eligibility criteria specified in Part II.D.2.a., b., and e. for Existing Capacity, including the Financial Assurance Requirements for Existing Capacity in Part II.G.2.a.
- b. New Import Capacity Resources must meet the qualification requirements listed in i. and ii. below to the satisfaction of the ISO. Such qualification requirements shall be further detailed as part of the development of Market Rules. New Import Capacity that intends to submit a bid below 0.75 CONE must also submit sufficient information for the Market Monitor to evaluate the reasonableness of the bid consistent with Part III.H.2.

- a. A Resource that is not submitting Export, De-list, or Permanent De-list Bids shall submit documentation as required by the Market Rules.
 - b. A Resource that intends to submit an Export, De-list, or Permanent De-list Bid above 0.8 CONE in the FCA shall submit sufficient documentation for the Market Monitor to evaluate the bid pursuant to Part III.E.
 - c. A Resource that intends to submit a Permanent De-list bid in the FCA shall submit sufficient documentation for the Market Monitor to evaluate the bid pursuant to Part III.E., and for the ISO to evaluate the reliability impact of the permanent delisting.
 - d. A Resource seeking to qualify as New Capacity in accordance with Part II.B.2 above, for either an incremental amount or for the full output of the Resource, shall be required to submit documentation in support of its request for New Capacity treatment. The ISO shall evaluate this documentation in accordance with the Market Rule provisions to validate the request for New Capacity treatment.
 - e. **Financial Assurance.** Bidders must satisfy the Financial Assurance requirements for Existing Capacity specified in Part II.G.
3. **Timing.** An Existing Capacity Resource intending to submit any Export, De-list, Permanent De-list, or Administrative De-list Bid (other than a Dynamic De-list Bid) in the FCA as Existing Capacity must submit its qualification package before the start of the FCA, at a time to be determined in the Market Rules.
 4. **Partial Delisting.** An Existing Capacity Resource may submit De-list Bids for all or part of its Existing Capacity, provided that the portion of the unit which it chooses to "list" is at least equal to the EcoMin level of the unit.
 5. **Bids Composed of Separate Resources.** An annual bid can be composed of separate Resources in different months, if the Resources together, based on their monthly ratings, can meet or exceed the amount of the offer throughout the year, and subject to the following conditions in subparts 5.a through 5.f below. In the Winter Period, Resources may use Summer Seasonal Claimed Capability not taken in the annual FCA or the difference between their Winter and Summer Seasonal Claimed Capability, provided that under no circumstances can the same MWs be counted twice in the same FCA.

- a. If a bid is composed of separate Resources, and is intended to meet the "Local Sourcing Requirement" in an import-constrained Capacity Zone then each Resource comprising the bid must be located in that import-constrained Capacity Zone. Local Sourcing Requirement means the portion of the total capacity requirement of the load in a Capacity Zone that must be purchased from Resources located within that Capacity Zone after taking into account all of the capacity that can be reliably imported into the Capacity Zone.
- b. If a bid is composed of separate Resources, and is intended to meet the Local Sourcing Requirement in the Rest-of-Pool Capacity Zone, then each Resource comprising the bid must be located in a Capacity Zone that is not export-constrained.
- c. If a bid is composed of separate Resources, and is for capacity in an export-constrained Capacity Zone, then each Resource comprising the bid must be located inside the export-constrained Capacity Zone.
- d. Bids cannot be composed of separate Resources for the same month.
- e. A bid composed of separate Resources shall be treated for purposes of clearing in the FCA or a reconfiguration auction as New Capacity, Existing Capacity, or Import based on the Resource providing summer capacity.
- f. In instances where the export constraint for a Capacity Zone binds in the FCA, and such an offer is accepted within that Capacity Zone, Part V.C.4.c shall not apply to such capacity Resource.

E. Intermittent and Demand Resources.

1. Intermittent Resources.

- a. For the Forward Capacity Market, a distinct method shall be developed to determine the Qualified Capacity of wind, solar and run-of-river hydro resources ("Intermittent Resources") in a manner that recognizes contribution to system reliability over the Winter and Summer Periods. So that it can be appropriately considered in the ICR determinations for the Forward Capacity Market, such method shall be developed by the end of the fourth quarter of 2006 through the stakeholder process that provides for

consultation with state utility regulatory agencies. Intermittent technology resources other than wind, solar and run-of-river hydro resources may request to be considered in the definition of Intermittent Resources for purposes of this part provided that such resources remain subject to the same method for determining Qualified Capacity. Any such request shall also be subject to the stakeholder process that provides for consultation with state utility regulatory agencies.

- b. The process described above for developing a methodology for determining the Qualified Capacity of an Intermittent Resource shall also consider how to address poorly performing Intermittent Resources, since these types of Resources are not subject to availability penalties and/or poor performing Resource treatment as other Resources. The Market Rules will address how Intermittent Resources will be defined as New Capacity in the FCA.

2. Demand Resources.

- a. In the Forward Capacity Market, Real Time Demand Response shall remain as qualifying capacity Resources subject to Market Rule 1, Appendix E and the Load Response Manual. As such, the role of demand response Resources in the market shall continue to evolve as Market Rule 1, Appendix E and the Load Response Manual are revised.
- b. For the Forward Capacity Market, a distinct method shall be developed to allow energy efficiency and demand response resources (other than Real Time Demand Response) to be fully integrated as Qualified Capacity in the Forward Capacity Market. So that it can be appropriately considered in the ICR determination for the Forward Capacity Market, such method shall be developed by the end of the fourth quarter of 2006 through the stakeholder process that provides for consultation with state utility regulatory agencies. The method shall consider that some Resources may best be integrated by ensuring that price signals are correct. Such Qualified Capacity shall not be subject to the same availability penalties and/or poorly performing Resource treatment as other Resources, so the method shall also propose how to address poorly performing demand response and energy efficiency Resources. The Market Rules will address how demand Resources will be defined as New Capacity in the FCA.

F. Self-Supplied FCA Resources.

1. **Qualification.** Prior to each FCA, a Resource or a portion of a Resource may be designated by a Load-Serving Entity ("LSE") pursuant to Market Rules as a self-supplied FCA Resource ("Self-Supplied FCA Resource"). The Self-Supplied FCA Resource must meet the same qualification standards as any other Resource that is allowed to participate in the FCA. The total quantity of designated Self-Supplied FCA Resources may not exceed the projected share of the ICR for the LSE designating that Resource pursuant to Market Rules. To be considered a Self-Supplied FCA Resource, that Resource must be offered into the FCA. If designated as a Self-Supplied FCA Resource, the Resource will clear the FCA pursuant to Part III.O (Agreements Regarding Auction Mechanics – Self-Supply Option) and offset an equal number of megawatts of the projected share of ICR in the Commitment Period for the LSE designating that Resource.
2. **Locational Issues.** In order to qualify as a Self-Supplied FCA Resource for purposes of fulfilling a Local Sourcing Requirement applicable to a load in an import-constrained region, the Self-Supplied FCA Resource must be located in the same Capacity Zone as the associated load, unless the self-supplied resource is a Pool-Planned Unit with a special allocation of Capacity Transfer Rights ("CTRs") up to the number of allocated CTRs. Although the ISO will continue to model any such Pool-Planned Units in their actual location, the combination of the physical asset and the CTRs will offset the financial obligation of the self-supplier.

G. Financial Assurance. The following general requirements shall apply to the FCA and annual reconfiguration auctions. Except where noted, the retention and return of financial assurance and the types of acceptable financial assurance will be governed by the Financial Assurance Policy ("FAP"). Financial assurance requirements for Municipal Market Participants will be consistent with Section III of the FAP.

1. **Load-Serving Entity Obligation.** The financial assurance requirement for capacity payments for each month of the Commitment Period will be equal to the amount that represents the actual credit exposure of the LSE (e.g., the amount due from the LSE obligated to make those payments on the next invoice to be issued by the ISO).
2. **Supplier Obligation**
 - a. **Existing Capacity:** Existing Capacity generally shall be subject to the Financial Assurance requirements contained in the FAP. In

addition, except where the capacity obligation has been transferred to another Resource, Existing Capacity that has been allowed to retire under Section I.3.9 of the Tariff and will retire at the end of the relevant Commitment Period shall be required to provide additional financial assurance equal to two and one-half times the FCA Payment for a month. The financial assurance obligation under this part shall arise five business days before the start of the applicable Commitment Period, and the Financial Assurance shall be returned in accordance with the FAP.

b. **New Capacity:** In order to submit a bid in an FCA, New Capacity must be qualified pursuant to Part II.B.3 above and provide financial assurance at the time of its qualification (the "Deposit") equal to \$2/kW times the amount of kilowatts to be bid as New Capacity into the FCA. If that New Capacity's bid is accepted in the FCA, the Deposit will be applied toward the New Capacity's financial assurance obligation, described below. If that New Capacity bid is rejected, the Deposit will be returned to the New Capacity. New Capacity that receives an award in an FCA must provide financial assurance in the following amounts:

- i. Within five business days following announcement of the winning bidders: the CONE (on a \$/kW-month basis) for that FCA multiplied by the number of kW of capacity awarded (the "New Capacity FA Amount");
- ii. At least fifteen days prior to the next annual FCA after the FCA in which such award was made: an additional amount equal to the New Capacity FA Amount (for a total of two times the New Capacity FA Amount); and
- iii. At least fifteen days prior to the second annual FCA after the FCA in which such award was made: another additional amount equal to the New Capacity FA Amount (for a total of three times the New Capacity FA Amount).

The New Capacity FA Amount for the first FCA will be \$7.50 per kW, as provided in Part III.F and shall be updated annually before each FCA in accordance with Part III.F. Therefore, for example, a new 100 MW generating unit that has a bid accepted as New Capacity in the first FCA would have to provide \$750,000 of financial assurance within five days following announcement of the winning bidders. That unit would have to provide another \$750,000 of financial

assurance at least fifteen days prior to the FCA the following year (for a total financial assurance obligation of \$1,500,000). That unit would have to provide another \$750,000 at least fifteen days prior to the next FCA (for a total financial assurance obligation of \$2,250,000).

If New Capacity (i) fails to provide the required financial assurance on any required date for any reason or (ii) fails to meet a qualification milestone as set forth in Part II.B.4 and does not appropriately cure such failure within a period of time to be determined in the Market Rules, it shall lose its awarded capacity to the extent not provided (which will be placed in the next appropriate reconfiguration auction) and it shall forfeit any financial assurance previously provided by it with respect to that award. The ISO and the NEPOOL Budget and Finance Subcommittee shall reconsider these financial assurance requirements no later than five years after the first FCA.

- iv. Once the New Capacity is declared commercial and tested for its capacity rating, its financial assurance obligation shall be released and it shall have the same financial assurance requirements as Existing Capacity. If New Capacity is only capable of delivering less than the amount accepted in the FCA, then the portion of its financial assurance associated with the shortfall shall be forfeited.

- v. A default before the relevant Commitment Period or a failure to be declared commercial as of the Commitment Period, if not cured (including cover) shall result in a forfeiture of the financial assurance, and there shall be no further coverage for such default under the Billing Policy. Such forfeited amount shall be used to reduce capacity payments by load. Any shortfall in capacity resulting from a default shall be included in a subsequent reconfiguration auction. If New Capacity is not commercial as of the Commitment Period, it shall have the right to cover the default for a period of up to two years. After such a period, following consultation between the Resource and the ISO, the ISO shall have the right to terminate the Resource's award under the FCA for the remaining portion of the Commitment Period and, at the same time terminate the Interconnection Agreement. The ISO shall make a filing

with the FERC reflecting such terminations. Should New Capacity challenge such termination at FERC and also continue to cover its default, then it shall retain its place in the queue and forfeiture of its financial assurance shall be subject to a final FERC ruling

- c. Financial assurance requirements for imports will be covered in the Market Rules in a manner that is consistent with Part II.C.2 above and II.G.2.b. New Import Bids will meet New Capacity financial assurance requirements until the New Import Capacity is backed by a physical unit or an external control area, and thereafter it shall have the same financial assurance requirements as Existing Capacity.

3. Price and Payment Certainty and Finality.

- a. The capacity delivery obligations of suppliers, the payment obligations of LSEs and the FCA process and rules shall be documented in the Tariff. The Tariff shall include language stating that a change in the Tariff filed after FCA results have been accepted or approved by the FERC will not change those FCA results and also documenting terms and conditions consistent with this Settlement Agreement that apply to capacity clearing in the FCA for the Commitment Period of that FCA, including at a minimum the following: (i) payment terms (timing, immediately available funds, process for disputed payments); (ii) financial assurance requirements; (iii) events of default and other events that could lead to termination of the obligations or suspension of capacity payments; (iv) the right for New Capacity, or its lender(s) if applicable, to cure a default (including any default resulting from bankruptcy of the owner of New Capacity), which in the case of a lender cure would not require the lender to become the owner of the plant; (v) notice of any event of default to the owner of New Capacity and its lender(s); (vi) the capacity obligations imposed on the New Capacity and means for determining whether such obligations have been satisfied; (vii) damages to be paid in event of failure to perform and recourse for non-payment; and (viii) the right for the New Capacity owner to pledge moneys due to New Capacity to lenders and to direct payment of such moneys into a project revenue account and that other rights of New Capacity owners can be pledged. The Tariff shall also provide that an award in a FCA is binding upon, and accrues to the benefit of, successors and assigns owning that Resource.

- b. The ISO shall promptly file the FCA results including the detail of the awards and the price, together with appropriate documentation as to the competitiveness of the FCA, with the FERC under Section 205, or make such other filing as is necessary to establish the FCA results as filed rates. Any objection to those results must be filed with the FERC within 45 days after the ISO's filing. The filing of a timely objection at the FERC will be the exclusive means of challenging the FCA results.

"Appropriate documentation as to the competitiveness of the FCA" may include, but may not necessarily be limited to, the certification of the Auction Administrator (whether the ISO or a contractor engaged for that purpose), that (i) all bidders in the FCA have satisfied the qualification requirements established in the Tariff and applicable Market Rules and Manuals and business practices issued in accordance therewith, and (ii) that the FCA was conducted in accordance with the applicable rules and procedures. Further detail to be developed in the Market Rules.

4. **Default Allocation.** To the extent that any default is not cured (including in the reconfiguration auction), any resulting cash shortfall shall be allocated according to the Billing Policy.

III. Agreements Regarding Auction Mechanics.

A. Zonal Selection Criteria and Locational Pricing. Capacity Zones shall be defined in advance of each FCA.

1. Capacity Zones shall be determined before the FCA based on an identification of transmission limits that may bind in the FCA.
2. Transmission interface limits used in the process of selecting Capacity Zones shall include all existing transmission lines and proposed transmission lines that the ISO determines will be in service as of the relevant Commitment Period.
3. Before the start of each FCA, the then-forecasted capacity installed in a Capacity Zone, including Resources (Existing Capacity, New Capacity and Import Capacity accepted in prior FCAs or reconfiguration auctions and obligated for the relevant Commitment Period), less Permanent De-list Bids accepted in prior FCAs and Export Bids accepted in prior FCAs and obligated in the Commitment Period, shall be compared to the Zone's then-forecasted Local Sourcing Requirement in the first year of the Commitment Period.

For the first FCA, any entity that believes capacity under construction will be complete for the first Commitment Period and therefore should be included in the process of selecting Capacity Zones must satisfy the eligibility criteria, where applicable, of Part II.B.3.

4. For an import-constrained zone, if the then-forecasted capacity, including Resources (Existing Capacity, New Capacity and Import Capacity obligated for the relevant Commitment Period), less Permanent De-list Bids accepted in prior FCAs and Export Bids accepted in prior FCAs and obligated in the Commitment Period in the zone is greater than its then-forecasted Local Sourcing Requirement before the start of each FCA, the zone shall not be a separate zone in the FCA.
5. Export-constrained zones are modeled in the FCA.
6. Where zonal separation is determined to exist, CTRs shall be awarded as set forth in the Initial Decision, provided that any special allocation of CTRs to LSEs in the NEMA zone shall expire on December 31, 2040. In the event that the NEMA zone either is or is forecast to become a separate zone for FCA purposes, National Grid agrees to discuss with MMWEC and Wellesley, Reading and Concord ("WRC") any proposal by National Grid to develop cost effective transmission improvements that would mitigate or alleviate the import constraints and to work cooperatively and in good faith with MMWEC and WRC regarding any such proposal. MMWEC and WRC agree to support any proposals advanced by National Grid in the Regional System Planning ("RSP") process to construct any such transmission improvements, provided that MMWEC and WRC determine that the proposed improvements are cost effective (without regard to CTRs) and will mitigate or alleviate the import constraints.
7. Changes to the definition of zones shall be subject to the stakeholder process that provides for consultation with state utility regulatory agencies.
8. Where zonal separation is determined to exist, Market Rules shall specify a process for an Export both from or through the import-constrained zone over tie lines to external regions.

B. Installed Capacity Requirement. Subject to Section 3.C, each year, in advance of the FCA, the ISO shall submit to FERC for acceptance or approval the ICR for the New England system and the Local Sourcing Requirement for each year for each Capacity Zone, accounting for relevant transfer limits, through the Power Year beginning three years later. The ICR purchased shall be based on the Summer Seasonal Claimed Capability. Capacity to meet the ICR shall be based

on that Resources' Summer Seasonal Claimed Capability except for Resources specified in Parts II.D.4, II.E, and VI (regarding external Resources).

1. ICR will be calculated taking Resource availability into account. As experience permits, the availability metric in Part V.C. below will be incorporated.
2. If the ICR shows a consistent bias over time, either high or low, the ICR forecast process shall be adjusted to eliminate the bias.
3. The ICR shall be calculated assuming appropriate tie benefits, if any, from adjacent control areas.
 - a. The MW value of the tie benefits over the HQ Phase I/II tie will continue to be calculated in the manner that is currently used to determine the Hydro Quebec Interconnection Capability Credits ("HQICCs") and will also continue to be allocated to the Interconnection Rights Holders ("IRH") or their designees in proportion to their Use Rights, in the form of reduced capacity requirements. There shall be no double counting of the HQ Phase I/II tie benefits. This calculation and allocation methodology of the HQ Phase I/II tie benefits will continue unless and until a modification thereto is accepted by the FERC, provided that nothing in this Settlement Agreement, specifically including this section, Part III.D.4.a and Part VIII.K., will constitute precedent regarding the reasonableness of (i) such modification, or (ii) the manner of calculating or allocating the Phase I/II tie benefits. Nothing in this Settlement Agreement prejudices the rights of any party to seek to modify or challenge the calculation or allocation methodology of HQ Phase I/II tie benefits for the period beginning after the end of the Transition Period, as defined in Part VIII.A.
 - b. The total amount of accepted Import Bids over the Phase I/II tie plus approved HQICCs cannot exceed the approved Phase I/II transfer limit. If the accepted Import Bids exceed the difference between the approved Phase I/II transfer limit and the approved MW of HQICCs (the "HQI Excess"), the capacity requirement for those IRH or their designees that sold their transmission rights for the subject period will be increased by the difference between the total amount of accepted Import Bids and the HQI Excess. These capacity requirement increases will be allocated among the IRH or their designees in a manner to be determined by the IRH.

C. **Amount of Capacity Purchased.** One hundred percent of the ICR, taking into account forecast error, as appropriate, except in certain instances where capacity to replace Export Bids, Permanent De-list Bids and De-list Bids is deferred to the reconfiguration auction (see Part III.D.2-3, and D.5), will be purchased in the FCA at prices up to two times CONE, subject to Part III below.

D. **Forward Capacity Auction Offers.**

1. **New Capacity Offers.** All offerors of New Capacity must satisfy the applicable requirements of Part II.B. In order to receive capacity payments during the Commitment Period, New Capacity must have been declared commercial and tested for its capacity rating.

2. **Offers From Existing Capacity.** All Existing Capacity must submit appropriate information in the qualification process as described in Part II.D.2. All De-list Bids above 0.8 times CONE from Existing Capacity, all Export Bids, and all Permanent De-list Bids must be submitted to the ISO before the bid qualification deadline to be considered in the FCA. All Permanent De-list and De-list Bids from Existing Capacity that are above 0.8 times CONE must also be submitted to the Market Monitor before the bid qualification deadline to be considered in the FCA. Full information about Permanent De-list Bids will be posted one day after the bid qualification deadline.

The quantity, price and zone of each De-List Bid above 0.8 times CONE will also be posted one day after the bid qualification deadline; if the bid is approved by the Market Monitor, full information will be posted. Authorized Persons of Authorized Commissions, as defined in Section 3.3 of the ISO New England Information Policy, will be provided confidential access to full information about posted De-list Bids upon request pursuant to Section 3.3 of the Information Policy.

3. **Permanent De-list Bids.** A Permanent De-list Bid shall be accepted if the Capacity Clearing Price falls below the Permanent De-list Bid price. If a capacity Resource's Permanent De-list Bid is accepted, the Resource shall not be eligible to receive Capacity Payments in the Commitment Period associated with the FCA or any subsequent FCA or reconfiguration auction, until such time as the Resource may meet the qualifications for New Capacity for a subsequent FCA. If a capacity Resource's Permanent De-list Bid is accepted, that Resource may still participate in all other markets according to the rules of those markets.

a. **Capacity to Replace Permanent De-lists.** Capacity needed to replace the capacity associated with an accepted Permanent De-list

Bid shall not be purchased in the FCA if the Capacity Clearing Price equals or exceeds 1.5 times CONE. Instead, the full amount of capacity requirement resulting from such accepted Permanent De-list Bids shall be advanced into subsequent reconfiguration auctions.

- i. For prices between 1.25 times CONE and 1.5 times CONE, the quantity of capacity requirement associated with Permanent De-lists replaced in the FCA increases pro-rata. The amount of capacity needed to replace capacity of an accepted Permanent De-list Bid that is not purchased in the FCA shall be purchased in subsequent reconfiguration auctions.
- ii. Permanent De-list Bids below 1.25 times CONE shall be eligible to set the price in the FCA. If accepted, the capacity requirements shall be replaced in full in the FCA.

4. **Import and Export Bids.** Full information about Import and Export Bids (name of submitter, quantity and interface) shall be published the day after offers are submitted.

- a. **Imports.** The sum of the tie benefits plus imports over the New York interface cannot exceed the approved transfer limits of the interface for the Forward Capacity Market. Similarly, the sum of the tie benefits plus imports over the New Brunswick interface cannot exceed the approved transfer limits of the interface for the Forward Capacity Market. Imports treated as capacity must become physical (i.e., backed by a physical unit or an external control area) prior to the time of delivery and must meet the same or comparable performance requirements as other capacity Resources in order to receive capacity payments.

The current capacity treatment within NEPOOL of firm imports of New York Power Authority ("NYPA") hydroelectric power, which is set forth in Section 3.4 and Appendix A of NEPOOL Manual No. 20 for Installed Capacity, shall be continued, such that NYPA firm import allocation recipients will be able to continue to claim capacity credit for these firm imports during the transition, in as close as possible a manner to its treatment today.

Imports shall be allowed over interfaces until the sum of the tie benefits plus imports equals the approved transfer limits on the relevant interface or the descending clock stops.

b. **Exports.**

- i. Export Bids offered into the FCA will be treated the same as De-list Bids except that they must also indicate the interface over which the capacity will be exported (e.g., Cross Sound Cable, Rest of Pool to New York, HQ Phase I and II, HQ Highgate, and New Brunswick). In assessing the reasonableness of an Export Bid, the Market Monitor shall take appropriate consideration of contracts and the revenue opportunities of Resources bidding to export.
- ii. Capacity needed to replace the capacity associated with an accepted Export Bid shall be treated the same as capacity associated with an accepted De-List Bid under Part III.D.5.a below.
- iii. Exports shall be allowed over interfaces until the interface limit constraints bind or the descending clock stops.
- iv. Exporting capacity, which has been accepted in a prior FCA or contracted prior to the implementation of the FCA, may Administratively De-list in the qualification process by demonstrating a contractual obligation to sell capacity outside of the New England Control Area for the Commitment Period. This action will be reviewed by the Market Monitor pursuant to rules to be developed.
- v. Export Bids are subject to rationing to the extent the external interface binds.

5. **De-list Bids.** Existing Capacity wishing to opt out of the capacity market in the Commitment Period may submit a De-list Bid. Such Resources may offer capacity in reconfiguration FCAs. If a capacity Resource's De-list Bid is accepted, that Resource may still participate in all other markets according to the rules of those markets.

a. **Capacity to Replace De-lists.** Capacity needed to replace the capacity associated with an accepted De-list Bid above 1.2 times CONE shall not be purchased in the FCA. Instead, the capacity needed to replace the capacity associated with such De-list Bids shall be advanced into subsequent reconfiguration auctions. For prices from 0.8 times CONE to 1.2 times CONE, the quantity of replacement capacity for accepted De-list Bids purchased in the

FCA increase pro-rata. Any De-list Bids that were not purchased in the FCA shall be purchased in a reconfiguration auction.

b. **Dynamic De-list Bids.** During any round of the descending clock FCA, any existing Resource may offer to de-list all or a portion of its capacity (including a partial De-list Bid) if the De-list Bid is offered at or below 0.8 times CONE. Such an offer is eligible to set the Capacity Clearing Price. If more De-List Bids are submitted at a price than are needed to clear the market, the ISO shall accept these De-List Bids pro-rata.

6. **Rationing Rule.** Project-specific bids from New Capacity and unit-specific bids from Existing Capacity and Existing Import Capacity must be taken or rejected in whole unless the bidder has specified otherwise. Existing Capacity may structure bids to partially de-list or export all or a portion of a Resource. Market clearing shall be based on minimizing total FCA costs for the first year of the Commitment Period. Import Bids are subject to rationing, subject to technical limits on minimum delivery.

E. **Review by Market Monitor.** In reviewing bids from Existing Capacity that are subject to review as set forth in Part III.D above, the Market Monitor shall review that the proposed bid is consistent with the Resource's net risk-adjusted going-forward and opportunity costs, recognizing, among other things, infra-marginal rents, availability adjustments, and PER deductions. Provided, however, that Permanent De-list Bids below 1.25 times CONE shall be presumed competitive unless the Market Monitor determines that the bid is an attempt to manipulate the FCA. The details of this review shall be developed in the Market Rules.

The Market Monitor shall have the authority to review all offers below Summer Seasonal Claimed Capability to assure that they are not attempts to exercise physical withholding. The details of this review shall be developed in the Market Rules. The Market Monitor shall also have authority to review all Import Bids to assure that they are not attempts to manipulate the FCA, and the details of this review shall be developed in the Market Rules.

Where an entity submits both a New Capacity bid and a De-list Bid in the same FCA, the Market Monitor shall take appropriate steps to ensure that the unit de-listed in the FCA is not inappropriately substituted for the New Capacity Resource in subsequent reconfiguration actions.

New Capacity and New Import Bids below 0.75 times CONE are subject to Market Monitor review as described in Part III.H. below.

F. Starting Price and Determination of CONE. The first round of the descending clock FCA shall have a starting price of 2 x CONE, with CONE initially set at \$7.50/kW-month (therefore, the initial starting price will be \$15). Following the third FCA that has not been found to have Insufficient Competition or Inadequate Supply ("Successful FCA"), CONE will be based on the historical average capacity price using exponential smoothing with a parameter of 30 percent. That is,

$$\text{CONE in year } t+1 = (70\% \text{ of CONE in year } t) + (30\% \text{ of Capacity Clearing Price in year } t),$$

with the exception that if the FCA failed in year t (either due to Insufficient Competition or Inadequate Supply) or if no new entry is required, or if Imports set the Capacity Clearing Price, or if the New Capacity bids in Part II.B.2.c set the Capacity Clearing Price (incremental additional capacity that is treated as new) then

$$\text{CONE in year } t+1 = \text{CONE in year } t.$$

Approach to be applied to determine CONE before three Successful FCAs:

Year 1 (First FCA): \$7.50/kW-month.

Years following the first Successful FCA but prior to the second Successful FCA: \$3.75/kW-month (50% of \$7.50) plus 50% of the Successful FCA Capacity Clearing Price.

Years following the second Successful FCA but prior to the third Successful FCA: \$1.88/kW-month (25% of \$7.50) plus 75% of the average of the two previous Successful FCA Capacity Clearing Prices.

G. Capacity Clearing Price.

1. A single run of the descending clock FCA shall establish the Capacity Clearing Price for each Capacity Zone based on the amount of capacity procured as described above. Permanent De-list Bids, Import Bids, Export Bids, and De-list Bids shall be eligible to set the Capacity Clearing Price subject to the limitations described above. Permanent De-list Bids and De-list Bids that are rejected for reliability reasons are not eligible to set the Capacity Clearing Price.
2. For prices below 0.8 times CONE, the full ICR, including capacity associated with all cleared Permanent De-list and De-list Bids, shall be

covered in the FCA. For prices between 1.25 times CONE and 1.5 times CONE, the quantity of Permanent De-lists covered in the FCA shall increase linearly. At 1.5 times CONE, no Permanent De-list Bids above that level shall be covered in the FCA; at 1.25 times CONE, all Permanent De-list Bids shall be covered. Similarly, for prices from 0.8 times CONE to 1.2 times CONE, the quantity of De-list Bids covered in the FCA shall increase linearly. At 1.2 times CONE, no De-list Bids shall be covered; at 0.8 times CONE, all De-list Bids above that level shall be covered.

3. In an import-constrained Capacity Zone, the Capacity Clearing Price shall always be at least as high as the Capacity Clearing Price in the Rest of Pool Capacity Zone.
4. For the lesser of five FCAs or three Successful FCAs: (a) if the Capacity Clearing Price is above 1.4 times CONE, Existing Capacity shall be paid 1.4 times CONE, and New Capacity shall be paid the Capacity Clearing Price; and (b) the Capacity Clearing Price shall not fall below 0.6 times CONE. At 0.6 times CONE, any excess supply shall be prorated to procure no more than ICR, as follows: the total payment to all listed Resources shall be equal to 0.6 times CONE times ICR. Payments to listed individual Resources shall be prorated based on the total number of bid MWs of listed units. Suppliers wishing instead to prorate their bid MWs of participation in the capacity market can do so by partially de-listing one or more Resources in their portfolio (or an equivalent mechanism to be developed in the Market Rules) after the need for proration is identified.

H. New Capacity and New Import Bids below 0.75 CONE.

1. New Capacity and New Import Bids below 0.75 times CONE must be submitted to the Market Monitor before the bid qualification deadline to be considered in the FCA.
2. If the Market Monitor finds that the New Capacity Bid below 0.75 times CONE is consistent with the long run average costs of that Resource (absent contractual considerations), or for New Import Bids below 0.75 times CONE, the opportunity cost or another reasonable economic measure, then the bid can set the Capacity Clearing Price. Otherwise, the New Capacity Bid or the New Import Bid (considered an "Out of Market Bid") shall be entered into the FCA pursuant to the Alternative Price Rule of Part III.I below.
3. If an RFP from the ISO covers any part of capacity costs, that capacity will be subject to the Alternative Price Rule.

I. **Alternative Price Rule.** If system-wide or in any import-constrained Capacity Zone: (a) new capacity is needed in the relevant Commitment Period; (b) the FCA is: (i) a Successful FCA or (ii) the FCA has Insufficient Competition pursuant to Part III.L.2 below but not Inadequate Supply pursuant to Part III.L.1; and (c) at the Capacity Clearing Price the purchases from the Out of Market Bids exceeds the required new entry, then the Capacity Clearing Price for that Capacity Zone shall be the lesser of: (1) the price at which the last New Capacity Bid withdrew from the FCA (excluding Out of Market Bids and bids in export-constrained Capacity Zones) minus \$0.01, or (2) CONE; provided, however, that the price will be set to CONE in the event of Insufficient Competition if there are no withdrawn New Capacity Bids.

J. **Carry-forward rule.** If as a result of the rationing rule in Part III.D.6, the ISO purchases megawatts through an FCA in excess of the ICR for an import-constrained zone, these extra megawatts shall create "carry-forward" accounts for the particular zones in which the corresponding physical assets are located.

Going into an FCA, if there are positive carry-forward balances, these megawatts shall be treated as Out of Market Bids subject to the Alternative Price Rule; except that if no new capacity is required in the zone, the resulting price shall not be greater than the Capacity Clearing Price in the FCA in which this carry-forward capacity originally cleared. Consequently, this rule shall apply even if the subsequent year's FCA was not competitive, provided that the earlier FCA (which set the Capacity Clearing Price for these carry-forward megawatts) was competitive. The carry-forward provision can apply to any import-constrained zone.

K. **Bids Rejected for Reliability Reasons.** A capacity Resource having a Permanent De-list Bid, De-list Bid, or Export Bid that is rejected for reliability reasons shall be paid a just and reasonable price (as determined by FERC) from the beginning of the Commitment Period and, for Permanent De-list Bids, for each subsequent Commitment Period (unless the reliability concern is addressed before the start of the Commitment Period) until it can be released to de-list. In such cases, the ISO shall attempt to procure replacement capacity at each FCA and annual reconfiguration auctions in order to release the capacity Resource to de-list. Payments to such Resources shall continue only until the reliability concern is addressed (through procurement of replacement capacity or other means, such as a transmission enhancement).

L. **Inadequate Supply and Insufficient Competition.** In the case of either Inadequate Supply or Insufficient Competition, both of which are defined below, the FCA shall still be used to the extent possible; that is, the remedy for Inadequate Supply or Insufficient Competition shall be limited to the Capacity

Zones having Inadequate Supply or Insufficient Competition. In the event of FCA failure, the ISO shall try to identify the cause of the failure, and then take appropriate corrective action for future FCAs.

1. **Inadequate Supply.**

- a. **In a Capacity Zone.** A FCA will be considered to have Inadequate Supply in a Capacity Zone if at the Starting Price the amount of New Capacity (including imports) bid in the Capacity Zone is less than the amount of new capacity required in that Capacity Zone. In such an event, Existing Capacity in that Capacity Zone shall be paid 1.1 times CONE, New Capacity in that Capacity Zone shall be paid the Starting Price, and the deficiency shall be made up in subsequent reconfiguration auctions. Inadequate Supply in one or more Capacity Zones shall not affect the FCAs for Capacity Zones having adequate supply.
- b. **System-wide.** If the system-wide ICR cannot be satisfied at the Starting Price, then Existing Capacity shall be paid 1.1 times CONE, New Capacity will be paid the Starting Price, and the deficiency shall be made up in subsequent reconfiguration auctions. System-wide Inadequate Supply will not affect the FCAs for Capacity Zones having adequate supply, except that, in those Capacity Zones having adequate supply, New Capacity shall be paid the Capacity Clearing Price, and Existing Capacity will be paid the lower of (1) the Capacity Clearing Price, or (2) 1.1 times CONE. If there is inadequate capacity system-wide but sufficient competition in an export-constrained Capacity Zone, the ISO shall hold the FCA for the export-constrained Capacity Zone, and in that case the price in the Rest-of-Pool Capacity Zone shall be the higher of 1.1 times CONE or the price in the export-constrained Capacity Zone.

2. **Insufficient Competition.** The FCA shall be considered to have Insufficient Competition system-wide or in any Capacity Zone if the following two circumstances are both satisfied:

- a. the amount of Existing Capacity is less than the ICR or the Local Sourcing Requirement as applicable; and
- b. at the Starting Price, (1) less than 300 MW of New Capacity (to be reconsidered in the case of import-constrained Capacity Zones with a total requirement of less than 5000 MW) is bid; (2) the amount of New Capacity bid is more than the amount of new

capacity required but less than twice the amount of new capacity required; or (3) any Market Participant's New Capacity or New Import Capacity is pivotal unless such capacity is an Out of Market Bid. A Market Participant shall be considered pivotal if, at the Starting Price, some of that Market Participant's potential New Capacity is required to satisfy the ICR.

If the FCA has Insufficient Competition, New Capacity shall be paid the Capacity Clearing Price, and Existing Capacity shall be paid the lower of (1) the Capacity Clearing Price, or (2) 1.1 times CONE. For the purposes of determining whether there is Insufficient Competition, New Capacity shall not include Import Capacity.

M. Reconfiguration Auctions. The ISO shall conduct annual reconfiguration auctions and monthly reconfiguration auctions. Participation in reconfiguration auctions is voluntary.

1. **Product bought and sold.** Reconfiguration auctions allow: (i) the ISO to purchase capacity requirements deferred from the FCA because of Inadequate Supply or incomplete replacement of Permanent De-List or De-List Bids; (ii) the ISO to buy additional capacity if the ICR has increased; (iii) the ISO to release capacity if the ICR has decreased; and (iv) physical Resources to trade their capacity commitments. Capacity clearing in the reconfiguration auctions shall be entitled to receive capacity payments for the period sold in the reconfiguration auctions.
2. **Qualification.** Supply offers in the annual reconfiguration auctions must submit qualification materials through the same process as the FCA. Demand bids must be filed with the ISO prior to the reconfiguration auction, specifying a maximum price, quantity, and the capacity Resource seeking to de-list (in part or in full). Offers and bids shall not be subject to mitigation. However, the performance of the market shall be subject to the review of the Market Monitor.
3. **Rationing Rule.** All supply offers and demand bids shall be subject to rationing.
4. **ISO Demand Bids and Supply Offers.** The ISO may offer to buy capacity as described in Part III.M.1 above. If the ISO seeks to buy capacity under clause (i) of that Part and also sell for the same Commitment Period capacity under clause (iii), only the net quantity shall be satisfied or released in a reconfiguration auction. The ISO shall offer to buy or sell the full amount of any deficit or surplus, respectively, from the then-current forecast of ICR in every subsequent reconfiguration auction.

except as provided below. The ISO's demand bids shall be entered into the reconfiguration auction at a price of 2 times CONE. At prices above 0.75 times CONE, the ISO shall release all surplus capacity. Its sell offers shall follow a linear quantity rule that distributes the capacity for release between prices of 0.75 times CONE and 0.25 times CONE so that, if the price in a reconfiguration auction is below 0.25 times CONE, the ISO releases no surplus capacity.

5. **Locational Characteristics.** For any Commitment Period, capacity within any Capacity Zone that was in effect in the FCA, and for which there was price separation, shall be auctioned as distinct products in each subsequent reconfiguration auction for that period. Conversely, reconfiguration auctions shall not model any Capacity Zone that did not experience price separation in the primary FCA for that Commitment Period.
6. **Annual Auctions.** Annual reconfiguration auctions allow trading of whole-year commitments. Shortly after the FCA for year Y, the ISO shall conduct the annual reconfiguration auctions for year (Y-1), then for year (Y-2), and then for year (Y-3), which is the "prompt" year. Each annual reconfiguration auction shall be a static double auction to clear offers to buy and sell. (A static double auction is a uniform-price auction in which sellers submit offers and buyers submit bids simultaneously. The clearing price is determined by the balance of supply and demand. All sell offers that clear are paid the clearing price, and all buy bids that clear pay the clearing price.) If there are no supply offers or if there are no demand bids for a particular product, no reconfiguration auction is held for that product. If the quantity of unfilled Permanent De-list Bids and De-list Bids or the amount of unmet ICR is sufficiently large, the ISO may also accelerate the next annual reconfiguration auction by six months.
7. **Monthly and Seasonal Auctions.** Beginning with the first month of the first Commitment Period cleared under the FCA, the ISO shall conduct reconfiguration auctions prior to each month for commitments during that month. Like the annual reconfiguration auctions, the monthly reconfiguration auctions shall be static double auctions. If there are no supply offers or if there are no demand bids for a particular product, no monthly reconfiguration auction will be held for that product.

In addition to the monthly reconfiguration auctions described in the preceding paragraph, the ISO will conduct reconfiguration auctions prior to the months of June and October for a "seasonal strip" product to trade whole-season commitments. The seasonal strip reconfiguration auction

conducted prior to June will be for commitments covering the whole Summer Period of June through September, and the seasonal strip reconfiguration auction conducted prior to October will be for commitments covering the whole Winter Period of October through May. The seasonal strip reconfiguration auction for the Summer Period shall be conducted prior to the monthly reconfiguration auction for June, and the seasonal strip reconfiguration auction for the Winter Period shall be conducted prior to the monthly reconfiguration auction for October. Resources offering into monthly reconfiguration auctions may offer up to their capacity rating for that season or month, respectively.

8. Availability Penalties.

a. Availability penalties shall be calculated based on the Capacity Clearing Price in the FCA for the relevant Commitment Period, except for any Resource under a multi-year Commitment Period, in which case the penalties for such Resource shall be set according to multi-year Capacity Clearing Price applicable to the Resource for the particular Commitment Period.

b. Penalty Caps.

i. **Obligations covered bilaterally.** If a capacity Resource owner covers its capacity obligation for part of the year through a bilateral transaction, the availability penalty caps described in Part V.C.2.b and V.C.2.c shall apply to the sequence of Resources as though they were a single resource. It shall be the responsibility of the contracting parties to allocate the benefit of these caps among themselves.

ii. **Obligations covered through annual reconfiguration auctions.** If a capacity Resource owner sells its capacity obligation in an annual reconfiguration auction, the purchaser is subject to the same availability penalties and penalty caps that apply to a capacity Resource sold in the FCA for the relevant Commitment Period.

iii. **Obligations covered through Capacity seasonal or monthly reconfiguration auctions.** A capacity Resource that acquires a seasonal capacity obligation through a seasonal reconfiguration auction, or a one-month capacity obligation through a monthly reconfiguration auction cannot be charged availability penalties in excess of 2.5

times its monthly FCA Payment for any month in that Commitment Period, consistent with Part V.C.2.b. No capacity Resource on the system can be charged availability penalties in excess of its annual FCA Payment for that Commitment Period. If a capacity Resource is de-listed, in part or in full, for part of the year, the annual cap on availability penalties is not prorated, except to the extent that the capacity obligation was transferred bilaterally as described in subpart (i) above.

N. Interaction with Locational Forward Reserves Markets. The Locational Forward Reserves Market ("LFRM") jointly filed by the ISO and NEPOOL in Docket No. ER06-613-000 shall not be changed by the Settlement Agreement. Parties retain their rights to address LFRM in proceedings before the FERC and retain their rights to address the interaction between the LFRM and the Forward Capacity Market in the stakeholder process that provides for consultation with state utility regulatory agencies and in proceedings before the FERC. The Parties agree to work to identify in the appropriate Market Rules how the LFRM and capacity markets will function together efficiently in the long run.

O. Self-Supply Option. As provided in Part II.F above, the Forward Capacity Market shall include a "self supply option," pursuant to which a LSE may designate as its FCA Resources Self-Supplied Capacity Resources that it owns or to which it has contractual rights. The amount of MWs of Resources so designated for a Capacity Zone may not exceed the LSE's projected ICR obligation for the applicable Commitment Period in that Capacity Zone.

P. Bilateral Contracting. Bilateral contracts shall be allowed up to the applicable Seasonal Claimed Capability of the Resource for that applicable month. Any Resource accepting a capacity obligation pursuant to a bilateral contract shall be subject to the qualification requirements of Existing or New Capacity, as applicable.

IV. Agreements Regarding Rights and Obligations.

A. Listed Capacity. Listed Capacity shall have the following rights and obligations, effective the first Commitment Period of the Forward Capacity Market.

1. The listed portions of Resources must offer into both the Day-Ahead and Real-Time Energy Markets whenever available. The current Day-Ahead Energy Market obligations of Intermittent and demand Resources are not changed by this Settlement Agreement.
2. Day-Ahead Energy Market offers from capacity Resources must either:

- a. have a sum of start time plus minimum run time plus minimum down time that is less than or equal to 72 hours; or,
 - b. for Resources that due to physical design limits cannot meet the offer requirement in subpart IV.A.2.a., be bid in at zero in Day-Ahead or Self Scheduled on.
 - c. Capacity Resources that meet the offer requirement in subpart IV.A.2.a. may also Self Schedule.
3. For each day, Day Ahead and Real Time offers for the listed portion of a Resource must reflect the then-known unit-specific operating characteristics (taking into account, among other things, the physical design characteristics of the unit) consistent with good utility practice. Capacity Resources must re-declare to the ISO any changes to the offer parameters that occur in real time to reflect the known capability of the Resource.
4. Appendix B of Market Rule 1 will be modified as necessary and consistent with Part VIII of this Settlement Agreement to apply to listed portions of Resources during the Transition Period. Following the Transition Period, Appendix B will be revised to reflect the following economic penalties, which shall be in addition to any availability penalties pursuant to Part V.C.2 resulting from a failure to perform during a Shortage Event:
- a. Intentional violations of Part IV.A.3 shall be subject to the following penalty structure:
 - i. For the first violation: warning.
 - ii. For the second violation: up to daily FCA Payment (\$\$/kW-day) for affected (kW), capped at \$150,000.
 - iii. For the third violation: up to 2 times daily FCA Payment (\$\$/kW-day) for affected (kW), capped at \$300,000.
 - iv. For the fourth violation: up to 4 times daily FCA Payment (\$\$/kW-day) for affected (kW), capped at \$600,000.
 - v. For any violations after the fourth violation: all remedies available under the FPA, without limitation.
 - b. For purposes of establishing penalties pursuant to Part IV.A.4.a above, violations must occur in a 90 day period in order to be

cumulative. In order to constitute a violation following a warning or prior violation, the violations must (i) be similar in nature and relate to either the same unit or a unit with similar operating characteristics that is owned directly or indirectly by the same entity and has its bid parameters submitted by the same entity, and is alleged to have committed the same violation of Part IV.A.3; and (ii) the entity subject to potential penalty must have had an opportunity to confer with the ISO following receipt of the notice of the warning or prior violation as described in Part IV.A.4.d below.

- c. If multiple units with similar operating characteristics that are owned directly or indirectly by the same entity and have their bid parameters submitted by the same entity are alleged to have committed the same violation of Part IV.A.3 during the same bidding days, the violation shall be counted as a single violation for the similar units.
- d. Assessment of Penalties for violations shall be subject to the following general due process rights:
 - i. **Timely Notice.** The ISO must give a warning or notice within 10 days of the observed behavior (in order to ensure that the generator has relevant information regarding the rationale behind the bid).
 - ii. **Opportunity to Confer with the ISO.** A generator must be given the opportunity to respond within 3 business days of the warning/notice with its rationale supporting its bid parameter(s), including relevant documentation, if any. If the ISO concludes that the observed behavior was not an intentional failure to bid in accordance with Section IV.A.3, the warning or notice will not count for purposes of applying a penalty.
 - iii. **Imposition of Penalty.** A Resource shall have the ability within 5 business days after conferring with the ISO pursuant to Part IV.A.4.d.ii to petition the FERC Office of Market Oversight and Investigations ("OMOI") to address any disagreements with the ISO as to whether the particular behavior constituted an intentional failure to bid in accordance with Part IV.A.3. If OMOI concludes that the behavior that is the subject of the warning is not an intentional failure to bid in accordance with Section

IV.A.3, the warning will not count for purposes of applying a penalty. The issuance of the warning by the ISO and the petition to the OMOI shall be conducted on a confidential basis without notice to any other party; provided however, that the issuance of a warning that is not petitioned to the OMOI may be made public by the ISO. Any penalties imposed pursuant to this section shall be filed publicly at FERC and shall be imposed only by FERC order.

- 5. Economic outages are not permitted for capacity Resources. If due to extraordinary fuel prices, a Market Participant cannot submit a bid which would recover its full operational cost, it may then submit a Supply Offer in the Day-Ahead Energy Market or in the Real Time Energy Market at the Offer Cap (or highest level allowed by the software) and contemporaneously advise the ISO that the Supply Offer would have been equal to or greater than the Offer Cap but for the Supply Offer Cap specified in Market Rule 1, Section III.1.10.1A(d)(viii) (the "Offer Cap") and provide the ISO with a statement of what the Supply Offer would have been but for the Offer Cap (the "Offer"). If the capacity Resource is subsequently dispatched for the period covered by the Offer, the Market Participant shall be paid its Offer for each MWh of Energy produced from the applicable generating Resource through the payment of the Locational Marginal Price and, appropriate Net Commitment Period Compensation ("NCPC") Credits, provided that such payment shall not exceed the capacity Resource's fuel costs, including commodity cost, transportation applicable to transporting cost related to the generation in the bid, and imbalance charges or other penalties applicable to such generation. NCPC Credits and Charges will be allocated in accordance with Appendix F of Market Rule 1.
- 6. A Resource that transfers its capacity market obligations to another Resource either through a reconfiguration auction or a bilateral contract pursuant to Part III.P and as applicable subject to Part III.M.8 will be relieved of its capacity Resource obligations and shall be de-listed pursuant to the de-listing process to be developed in the Market Rules and the contracting entity will assume those obligations.

B. De-listed Capacity. De-listed Capacity shall have the following rights and obligations, effective the first Commitment Period of the Forward Capacity Market.

- 1. Rules with respect to De-listed units, including Permanent De-listed units and Export Capacity units, shall apply only with respect to the De-listed

portion of a unit, and obligations with respect to listed portions shall be unaffected.

- 2. All or a portion of a capacity Resource that does not clear in a FCA, and any portion of such Resource for which a Permanent De-list Bid, De-list Bid, or Export Capacity (as an accepted Export Bid or bilaterally sold pursuant to Part III.P) has been accepted, was de-listed pursuant to Part III.D, or has transferred its obligation pursuant to Part IV.A.6 is not otherwise committed to provide capacity pursuant to a bilateral contract or reconfiguration auction ("De-listed Capacity"), is not required to offer the De-listed Capacity into the Day-Ahead or Real-Time Energy Market or honor the ISO's requests to reschedule maintenance during the Commitment Period for that FCA.
- 3. De-listed Capacity may be offered into the Day-Ahead Energy Market and, if accepted, shall be subject to the same rules as all other Resources in that Market (including the obligation to follow the ISO dispatch instructions). Such De-listed Capacity may be self-scheduled for portions of units not accepted into the Day-Ahead Energy Market.
- 4. De-listed Capacity not offered into the Day-Ahead Energy Market must Self-Schedule in order to participate in the Real-Time Energy Market. Any De-listed Capacity, including any portion of a de-listed unit, that is offered into the Day-Ahead Energy Market but accepted neither in whole nor in part must also Self-Schedule to participate in the Real-Time Energy Market. The ISO may request that such a Resource provide Energy, but the Resource shall not be obligated to come on line and shall not suffer any performance or availability penalties if it does not come on line.

C. **Self-Supplied FCA Resource.** A Self-Supplied FCA Resource shall be subject to the same "Rights and Obligations" as any other capacity Resource that is accepted in the FCA.

V. **Agreements Regarding Payments and Charges.**

A. **Capacity Clearing Prices.** Capacity Clearing Prices shall be determined for each Capacity Zone in the FCA. Each capacity Resource clearing in the FCA, or otherwise covered by a multi-year commitment, but not a Self-Supplied FCA Resource, shall be entitled to monthly payments based on the product of its MWs of capacity cleared in the relevant FCA and the Capacity Clearing Price in the appropriate location in the New England Control Area (the "FCA Payment"); provided that FCA Payments to New Capacity shall be limited to the capability demonstrated as contemplated by either Part III.D.1 or Part III.D.4.a, as necessary. The FCA Payment shall be decreased for PER pursuant to Part V.B.

below and adjusted for availability penalties or credits pursuant to Part V.C. below.

1. **Capacity with a one-year Commitment Period.** Capacity with a one-year Commitment Period (that is, Existing Capacity, Import Capacity and New Capacity electing a one-year Commitment Period) shall receive monthly capacity payments based on the FCA Capacity Clearing Price for the one-year Commitment Period.
2. **Capacity with a multi-year Commitment Period.** New Capacity with a multi-year Commitment Period (that is, New Capacity electing a Commitment Period of anywhere from two to five years, in one-year increments) shall receive monthly capacity payments based on the FCA Capacity Clearing Price that is associated with the first year of the Commitment Period for each of the years of its Commitment Period. After the first year of the Commitment Period, the price paid to that New Capacity shall be adjusted to account for inflation using an agreed-upon index to be determined in the Market Rules. (In other words, the FCA Capacity Clearing Price that applies in the first year of the Commitment Period for that New Capacity shall also apply, adjusted for inflation, in each year of the remainder of the multi-year Commitment Period.)
3. **Capacity in the Reconfiguration Auction.** Capacity clearing in a reconfiguration auction shall receive monthly capacity payments based on the reconfiguration auction clearing price for the relevant portion of the Commitment Period.

B. Peak Energy Rents (“PER”). Payments to capacity Resources shall be decreased by PER as provided in this Section V.B.

1. **Hourly PER Calculations.**
 - a. For hours with a positive difference between the energy price and a “strike price” equal to the deemed incremental cost of a marginal “proxy unit”, the ISO shall compute a PER for each hour (“Hourly PER”) equal to this positive difference in accordance with the following formula, which includes scaling adjustments as described in Part V.B.1.c and V.B.1.d.iv below:

$$\text{Hourly PER} = [(\text{LMP} - \text{strike price}) * (\text{scaling factor “50/50”})] * [\text{the Availability Factor (0.95)}]$$

This Hourly PER shall be summed for the month to determine the total PER for the month ("Monthly PER"). The ISO shall then calculate the average Monthly PER earned by the proxy unit for the most recent 12 months. This Monthly PER shall be deducted from the payment due to the listed portion of each capacity Resource in the month.

- b. The PER calculation shall utilize hourly integrated Real-Time LMPs.
 - i. If there is zonal price separation in the FCA, PER shall be computed based on Real-Time LMPs for each Capacity Zone (using the Real-Time Hub price for the Rest-of-Pool Zone).
 - ii. If there is no price separation in the FCA, PER shall be computed based on the Real-Time Hub price.
- c. The PER calculation shall be scaled hourly based on the ratio of actual hourly integrated system load and the "50/50" predicted peak system load used in establishing ICR, capped at an hourly ratio of 1.0.
- d. PER "proxy unit" characteristics shall be as follows:
 - i. The PER "proxy unit" shall be indexed to the marginal fuel, with additional detail to define how to determine the marginal fuel to be reflected in a Market Rule;
 - ii. The PER "proxy unit" shall be assumed to have no start-up, ramp rate or minimum run time constraints;
 - iii. For at least the first Commitment Period, the PER "proxy unit" shall be deemed to have a 22,000 BTU/kWh heat rate. This assumption shall be periodically reviewed after the first Commitment Period by the ISO to ensure that the heat rate continues to reflect a level slightly higher than the marginal generating unit in the region that would be dispatched as the system enters a scarcity condition. Any changes to the heat rate of the PER "proxy unit" shall be considered in the stakeholder process in consultation with the state utility regulatory agencies, shall be filed pursuant to Section 205 of that FPA, and shall be applied prospectively only to future FCAs.

- iv. The PER "proxy unit" availability is deemed to be 95%. The PER shall be scaled by this availability factor.

2. Monthly PER Application.

- a. FCA Payment shall be reduced by a 12-month rolling average PER adjustment calculated prior to the prompt month.
- b. The rolling 12-month average PER calculations for Capacity Zones that become either constrained or unconstrained (import or export), shall include a locationally determined PER in each month that the constraint binds in the FCA.
- c. PER tracks energy revenues and therefore shall be deducted from capacity payments independently of availability adjustments.
- d. FCA Payment minus PER cannot be negative for any month.

- 3. Self-Supplied FCA Resources.** Self-Supplied FCA Resources shall not pay a PER adjustment. LSEs satisfying their ICR obligations by a Self-Supplied FCA Resource shall not receive a credit for any PER payment for their ICR obligations so satisfied.

C. Availability Metric: Modified Shortage Hours. Payments to capacity Resources shall be adjusted to reflect the performance of those Resources during Shortage Events as provided in this Part V.C.

1. Definition of "Shortage Events":

- a. System-wide Reserve Constraint Penalty Factors ("RCPFs") shall trigger a Shortage Event.
- b. A Shortage Event may also be triggered solely in an import-constrained region if there is price separation for the applicable Capacity Zone in the FCA and an OP4 Action 6, OP4 Action 12, OP4 Action 13, or OP7 event in that Capacity Zone has been declared solely in the import-constrained zone, where such declaration is based on adequacy (versus security).
- c. An export-constrained region shall be exempt from a Shortage Event if there is price separation for the applicable Capacity Zone in the FCA and an OP4 Action 6, OP4 Action 11, OP4 Action 12, OP4 Action 13, or OP7 event has been declared for the Rest-of-

Pool Capacity Zone but not for that export-constrained Capacity Zone.

- d. A discrete Shortage Event is defined as any contiguous period of RCPF activation with a minimum duration of 30 minutes, or, in an import or export-constrained region, an OP4 action or OP7 event identified in Parts V.C.1.b and V.C.1.c above with a minimum duration of 30 minutes. Such activations, actions and events must be separated by at least 2.5 hours to be considered discrete Shortage Events. There may be a maximum of two Shortage Events per day.

2. Availability Penalties.

- a. For Resources that are unavailable during a Shortage Event:
 - i. Penalties shall be determined and assessed on a Resource-specific basis.
 - ii. The penalty per Resource for each event shall be 5% of its FCA Payment for that year, subject to sub-Parts V.C.2.a.iii. through V.C.2.a.v. below.
 - iii. The penalty for the portion of the Shortage Event during which the Resource was unavailable shall be prorated based on the number of hours (or fractions of hours) that the Resource was available in such Event.
 - iv. The penalty shall be further prorated based on the hourly ratio of available MW, as determined below, to the Summer Seasonal Claimed Capability of the unit (or amount sold in the FCA if less).
 - v. For discrete Shortage Events that exceed five hours, the penalty shall be increased by 1% per hour.
 - vi. In no case shall the total penalties for all Shortage Events in an operating day exceed 10% of the Resources' FCA Payment for that year.
- b. The total of a Resource's penalties arising from unavailability during a calendar month cannot exceed two and one-half times the total FCA Payment for that calendar month. The total of a Resource's penalties arising from unavailability due to a single

outage of four days or less but spanning two calendar months cannot exceed two and one-half times the average of the total FCA payments for both months.

- c. The total of a Resource's annual penalties cannot exceed its total FCA Payment less PER adjustments for that year.
3. **Availability Credits.** On a monthly basis, penalties received from unavailable Resources shall be redistributed to listed Resources that were available in the respective hour(s) using the following distribution method: For each Shortage Event in a month, the penalties assessed for that event will be credited to those Resources that were available, in whole or in part, during that event, pro-rata by hourly available MW in the relevant Capacity Zone(s).
4. **Definition of "Available."** A Resource shall be deemed available: (i) if it is on line and following the ISO dispatch instructions, to the extent of its available EcoMax; or (ii) if it has a notification plus start-up time of 30 minutes or less, to the extent of its available EcoMax; or (iii) if it meets the requirements of any of the following sub-parts V.C.4.a. through V.C.4.d:
- a. A Resource with notification plus start-up times less than or equal to 12 hours that was competitively bid but was not committed by the ISO because it was not needed to satisfy the market's anticipated energy and reserve needs and is consequently unavailable within 30 minutes, provided the Resource shall not be considered available if it fails to come on line in accordance with its verified unit characteristics when called by the ISO either in its Resource Adequacy Assessment process or otherwise prior to or during the delivery day. For the duration of the first five annual FCA Commitment Periods, existing Resources with notification plus start-up times greater than 12 hours, as of the date of the Settlement Agreement, will be subject to a notification and start-up time criteria of 16 hours rather than 12 hours (subject to Part IV.A.3. above regarding offer parameters). Thereafter, all existing and new Resources will be subject to the 12-hour criterion.
 - b. A Resource not committed due to a transmission outage, or derate in New England other than an outage or derate of such transmission equipment (i) controlled by the internal Resource; or (ii) constituting a radial lead to a internal Resource (other than radial leads to Wyman 4 and Stony Brook). In addition, a Resource in a Capacity Zone that was export-constrained in the

FCA shall not be subject to a Shortage Event in the circumstances described in Part V.C.1.c. Unless otherwise provided for in a separate settlement provision, Maine Independence Station shall not be deemed to be unavailable for capacity purposes when derated or not committed because of a constraint on the Orrington South, Surowiec South or Maine – New Hampshire interfaces.

- c. Import Capacity that has been properly offered in the Day-Ahead Energy Market that cannot make Real-Time deliveries because the relevant transmission element is fully loaded in Real Time;
 - d. A Resource that is on maintenance approved in the ISO's annual maintenance scheduling process, provided that:
 - i. The Resource has not scheduled such maintenance in December through January or June through mid-September, unless the ISO requests the Resource to schedule its annual maintenance during one of those periods; and
 - ii. The Resource has not exceeded the maximum allowable days of annual maintenance as established by the ISO standards, which standards shall be subject to the stakeholder process in consultation with state utility regulatory agencies and consistent with good utility practice.
5. If a capacity Resource temporarily does not meet the requirements of either subparts IV.A.2.a. or IV.A.2.b. above, the Resource must declare itself to be unavailable.
6. A capacity supplier can supplement the shortage hour availability performance of its unavailable "listed" Resource in a Shortage Event by purchase of a Resource that is not listed, provided that the substitute Resource accepts all of the associated capacity obligations of a "listed" Resource.
7. **Poorly Performing Units.** The availability score of a Resource in a given year shall be calculated as the number of hours of availability during Shortage Events divided by the total number of Shortage Event hours during a year. In the event that there are no Shortage Event hours during a year, the availability score is 100 percent. Prior to qualifying a Resource to participate in the FCA, the ISO shall determine whether a Resource meets the following two criteria: (a) if, in any four year period, a

Resource received three availability scores of less than or equal to 40 percent; and (b) the Resource has failed to be available during at least ten Shortage Events during that same four-year period. If both of these criteria are met, the Resource shall be considered a Poorly Performing Unit and shall not be eligible to participate in the FCA or be designated as a capacity Resource until (as a non-capacity Resource) it either achieves an availability score of 60 percent or higher in three consecutive years or has demonstrated to the satisfaction of the ISO that the source of the inadequate availability score has been remedied. For the purposes of determining whether a Resource is a poorly performing unit, its availability score while it is de-listed shall not be considered. For the purposes of returning from poorly performing status, the ISO, at the request of the Resource owner, may consider performance while de-listed. The ability to request consideration of performance while de-listed in support of returning from poor performing status shall not be construed as to imply an ability to choose non-consecutive years for evaluation.

- 8. **Intermittent Resources and Demand Resources.** Intermittent Resources and demand Resources shall be exempt from the availability penalties and credits of this Part V.C.
- 9. **Self-Supplied FCA Resources.** Self-Supplied FCA Resources are subject to the same availability penalties and credits as other Resources participating in the FCA. If a Self-Supplied FCA Resource is unavailable during a Shortage Event, the LSE designating that Resource shall be responsible for paying the associated availability penalty based upon the Capacity Clearing Price for that Commitment Period. Self-Supplied FCA Resources shall be eligible to receive their pro-rata share of availability penalties paid by other capacity Resources.

VI. Agreements Regarding External Resources.

Market Rules, operating procedures and manuals shall be changed to allow External Resources to participate in the Forward Capacity Market and Transition Period on a basis comparable to internal generation Resources. Among the changes that are required are that the timing for Real Time contract submittals be modified to allow them to be made after the Day Ahead Energy Market closes and as soon as one hour before an operating hour in order to allow for the purchase of required transmission.

VII. Agreements Regarding Gas Availability. For the winter season of the first Commitment Period under the FCA and for each subsequent winter season, the following provisions shall apply:

- A. **Adjustment of Deadlines.** The normal times for the Day-Ahead Energy Market bid and offer deadlines, the posting of Day-Ahead Energy Market results and the initial Resource Adequacy Assessment ("RAA") process shall be rolled back to earlier time periods during the peak winter months of December, January and February such that the results of the Day-Ahead Energy Market and initial RAA are available by a target completion time of 10:30 a.m. of the day prior to the electric Operating Day. The Day-Ahead Energy Market will normally be cleared and posted within four hours of the deadline for submitting Day-Ahead Energy Market bids and offers. The initial RAA will be run after the posting of the Day-Ahead Energy Market results with a scheduled completion of at 10:30 a.m. The start of the Re-offer period shall be open immediately after the initial RAA run.

- B. **Procurement of Supplement Reserves and Payments.** For days that the ISO forecasts a Cold Weather Warning or Cold Weather Event (as currently described in Appendix H of Market Rule 1) for the next Operating Day, the ISO shall include in the initial RAA process the procurement of an additional 1000 MW per hour of Supplemental Reserves for peak load periods of the day from gas fired resources that are required to rely exclusively on gas for their operations that Operating Day and not already participating in the Forward Reserve Market. At the completion of the initial RAA, the ISO shall notify Resources of the expected energy schedule incremental to the Day-Ahead Energy Market results, if any, plus the applicable reserve MWHs, for the respective unit. For such Cold Weather operating conditions, the outcome of this initial RAA shall be financially binding for the incremental gas fired generation (i.e., gas-fired generation beyond that gas-fired generation scheduled in the Day-Ahead Energy Market) scheduled in the initial RAA. In addition, the MWHs of Supplemental Reserves scheduled from gas-fired generation scheduled for these Cold Weather Warning periods in accordance with the understandings in this part will be compensated pursuant to the formula below (or similar method) for resale of gas reserved, purchased and nominated for such Supplemental Reserves. The natural gas volume (Scheduled Volume) obtained by Resources eligible for such compensation shall be based upon the particulars of the noticed schedule: (the total hours of requested service, total MWs per hour and the unit's applicable heat rate). If the ISO does not dispatch energy from the scheduled Supplemental Reserves to the full extent committed pursuant to this understanding, then those generators will be compensated for the portion of the Supplemental Reserves not dispatched for energy in accordance with the following formula:

(Daily Gas Index for Gas Day scheduled flow date - Daily Gas Index for first Gas Day for which flow orders have been removed to allow the sale of the gas that was held for reserve service) x (Undispatched reserved gas volume).

The Daily Gas Index applicable to each gas-fired Resource shall be based on the index used by the Market Monitor for establishing Reference Levels for that Resource under Section III.A.5.6.1(b)(i) of Appendix A of Market Rule 1. The ISO shall establish a methodology for determining applicable prices from the appropriate index that are reasonably designed to reflect the difference between (1) prices on the scheduled flow date and (2) prices for the resale of gas scheduled to meet that Resource's binding obligations but not burned to generate electricity at the location of the affected Resource during Cold Weather Warnings and Cold Weather Events. The ISO shall communicate that methodology for determining prices from the applicable index to the Governance Participants for consideration pursuant to the stakeholder process for considering Market Rules and changes, and shall file the methodology with FERC pursuant to Section 205 of the FPA.

- C. **Confirmations.** For days that the ISO forecasts Cold Weather Warnings and Cold Weather Events, sufficiently in advance of pipeline gas nominating deadlines, all gas-fired Resources shall confirm to the ISO that they will nominate sufficient fuel to be able to deliver the energy and Supplemental Reserves scheduled in the Day-Ahead Energy Market and initial RAA results respectively. Following the Initial RAA but no later than 6:00 p.m. of the day preceding the electric Operating Day, each gas-fired Resource shall provide to the ISO confirmation and evidence of gas volume nomination of sufficient fuel to be able to deliver the energy scheduled for such Resource in the Day-Ahead Energy Market and the Supplemental Reserves that were identified for that Resource in the initial RAA.

VIII. Agreements Regarding Transition Period.

- A. The current UCAP products shall be retained for the period commencing on December 1, 2006 and ending on May 30, 2010 (the "Transition Period") as provided for in Part VIII.I. Payments will be made to UCAP entitlement holders, and made by UCAP obligation holders including wholesale standard offer suppliers in Rhode Island as under the current Market Rules and tariffs; it being understood that the agreement of wholesale standard offer suppliers in Rhode Island to make UCAP payments is contingent upon the agreement of the state of Rhode Island utility regulatory authorities to support the settlement.
- B. All listed ICAP Resources shall receive the following fixed payments, based on their seasonal UCAP ratings:

| | |
|----------------------------------|-----------------|
| December 1, 2006 to May 31, 2007 | \$3.05/kW-month |
| June 1, 2007 to May 31, 2008 | \$3.05/kW-month |
| June 1, 2008 to May 31, 2009 | \$3.75/kW-month |
| June 1, 2009 to May 31, 2010 | \$4.10/kW-month |

These payments are fixed and shall not be adjusted for changes in UCAP quantity.

- C. There shall be no PER adjustments to any of the above payments.
- D. Availability shall be measured by a weighted EFORD approach, as follows:

| Outage Period | Weighting Factor |
|----------------------|-------------------------|
| Off-Peak Hour | 0.0 |
| On-Peak Hour | 1.0 |
| Seasonal Peak Hour | 20.0 |
| Shortage Hour | 40.0 |

Outage Period definitions:

On-Peak Hours-ending 8:00 a.m. through 11:00 p.m. on all non-NERC holiday weekdays.

Off-Peak All hours that are not On-Peak hours.

Seasonal Peak The 200 hours pertaining to the highest 100 hourly system loads during the Summer Period (for this purpose, June through September) and the highest 100 hourly system loads during the Winter Period (for this purpose, October through May).

Shortage Hour Periods of system-wide OP4, Action 6 or 11 or OP7 implementation.

Weighting factor shall not be additive (i.e., a Shortage Hour does not have a weighting factor equal to 61). A Resource's availability factor for purposes of UCAP ratings (i.e., UCAP settlement credit) in settlement shall be a rolling average of the unit's seasonal weighted EFORD, with seasons as defined in the Seasonal Peak provision above. In months in which the Resource is de-listed, the unweighted EFORD shall apply. Weighted EFORD shall be phased-in over the first two seasons of the Transition Period. For the first six calendar months of the Transition Period, corresponding to the remaining portion of the 2006/2007 winter season, the ISO will gather the data necessary to calculate weighted EFORD for this season. However, for payment purposes during this time, the availability score will be based on twelve-month rolling unweighted EFORD.

During the 2007 summer season, the availability score will be calculated as 50 percent weighted EFORD from the 2006/2007 Winter Period (i.e., October 2006 through May 2007) and 50 percent unweighted EFORD, calculated using six months of data prior to transition (i.e., April 2006 through September 2006). At the conclusion of the 2007 summer season, a weighted EFORD score shall be calculated for that season, and that score shall replace the unweighted EFORD score in the calculation above. For the remainder of the Transition Period, the weighted EFORD score of each Resource shall be updated coincident with each new winter and summer season, using the process described above.

The method for converting the ICRs in Section 1.4 of Manual 20 shall continue to be based on the EFORD determined under the current equal weighting of all hours.

If additional measures need to be taken by the ISO to protect reliability during the Transition Period, the ISO retains its right to make filings pursuant to Section 205 of the FPA as appropriate, subject to stakeholder process.

- E. Unless otherwise agreed in a FERC-approved settlement, transition payments shall be netted against RMR payments. Transition payments shall be considered capacity payments for purposes of netting in the LFRM markets.
- F. For the purpose of any RMR agreements that have provisions that terminate such RMR agreements upon the implementation or effectiveness of a locational ICAP mechanism, the Transition Period shall not be considered to be the implementation or effectiveness of a locational ICAP mechanism and the beginning of the first Commitment Period of the FCA shall be considered to be the implementation or effectiveness of a locational ICAP mechanism. Notwithstanding the foregoing, and absent an FERC-approved settlement, nothing herein prejudices the rights of any party to challenge, seek to terminate or support an RMR agreement on any other grounds or restrict any party's rights to seek, agree to or oppose any RMR modifications.
- G. Suppliers shall be permitted to partially delist or export their units.
- H. Commitment periods shall be seasonal, summer (May - October) and winter (November - April). For 2006, the Winter Commitment Period shall begin on December 1, 2006. Imports qualify with a minimum 2-month commitment (consecutive months in the same season). Exports do not receive payment.
- I. **2010/2011 Commitment Period Special Pricing Rule.** If the ISO conducts the first FCA in the first quarter of 2008 for the Commitment Period beginning June 1, 2010, and the FCA fails either the Inadequate Supply or Insufficient Competition test, then any New Capacity Resources selected in the FCA shall be

paid the FCA starting price or FCA Capacity Clearing Price, as appropriate, in the 2010/2011 Commitment Period and Existing Capacity shall be paid the average of all Successful FCAs held prior to the 2010/2011 Commitment Period. If subsequent FCAs also fail, or if the 2010/2011 FCA cannot be held, all existing listed ICAP Resources in the 2010/2011 Commitment Period shall be paid \$4.70 per kW-month in accordance with the provisions of this Part VIII.

J. Intermittent and Demand Resources.

1. **Intermittent Resources.** During the Transition Period, Intermittent Resources shall continue to receive the treatment for determining capacity and availability in effect under the current Market Rules, Tariffs and Manuals.

2. **Demand Resources.**

a. Real Time Demand Response during the Transition Period shall remain as qualifying capacity Resources subject to Market Rule 1 Appendix E and the Load Response Manual. As such, the role of demand response resources in the market will continue to evolve as Market Rule 1 Appendix E and the Load Response Manual are revised.

b. During the Transition Period, new (as of the Effective Date) demand side management installations (both energy efficiency and demand response, other than Real Time Demand Response) undertaken as part of merchant, utility, or state sponsored programs will be considered as qualified capacity and subject to the ISO review of the verification process. Details concerning how these programs qualify as capacity Resources will be reflected in the Market Rules.

K. Phase I/II HQ Interconnection. During the Transition Period, the total transfer limit of the HQ Phase I/II interconnection with Hydro-Quebec shall be fixed at 1800 MW for UCAP purposes, as set forth below. Except as set forth below in this subsection, the total MWs of HQICCs shall be fixed at 1200 MW March through November and zero MW December through February, shall receive payment in the non-zero months under Part VIII.B and I, and otherwise continue to receive the treatment for determining capacity and availability in effect under the Market Rules (Market Rule 1 Section III 8.3.2 (a) (v)), Tariffs and Manuals as of March 6, 2006. The remaining 600 MW of transmission may be used for UCAP over the Phase I/II interconnection by any supplier that arranges for transmission over the interconnection without reductions in the HQICCs. UCAP above 600 MW may be transmitted only in those months when the HQICCs are

1,200 MW and will result in reductions in HQICCs as provided for under current procedures. Only the remaining HQICCs will receive UCAP payments under Part VIII.B and I. UCAP delivered over the Phase I/II facilities shall receive payment under this Part VIII.B and I. Non-HQICC UCAP delivered over the Phase I/II facilities shall continue to receive the treatment for determining capacity and availability in effect under the Market Rules as they may be modified pursuant to Part VI of this agreement.

IX. Consideration of Expedited Treatment for Challenges to Certain ISO Determinations that Must Be Final Prior to the FCA. Not later than 90 calendar days prior to the conduct of each FCA, the ISO shall make an informational filing at the FERC in which the ISO shall identify the *determinations listed below in Part IX.A through C and provide supporting documentation* for each such determination. Interested entities will have 15 days thereafter to file comments on or challenges to the determinations in that informational filing. Unless the FERC issues an order to the contrary within 75 calendar days following that informational filing, such determinations contained in the filing shall be used by the ISO in the next FCA, and the Capacity Clearing Price derived through that FCA shall be subject to the finality provisions of Section 4.C. If the FERC does issue an order to the contrary, absent further direction from the FERC, the ISO shall use the revised determinations reflected in that order in the ensuing FCA, which shall be conducted no earlier than 15 days following that order. Once the ISO has used such a revised determination in the FCA in accordance with the provisions of this Part IX, the Capacity Clearing Price derived through the applicable FCA shall be subject to the finality provisions of Section 4.C.

- A. The ISO's determinations pursuant to Part III.A.
- B. Resources that satisfy the qualifications in this Settlement Agreement and the Market Rules that address the terms of this Settlement Agreement to participate in an FCA or reconfiguration auction specifically.
- C. Market Monitor conclusions concerning acceptability of Bids in any FCA.

ATTACHMENT 1-A

ATTACHMENT A SETTLEMENT AGREEMENT RESOLVING ALL ISSUES

Definitions. This Attachment A consolidates, references and summarizes capitalized terms that are used in the Settlement Agreement. This Attachment is for convenience only and should not be considered a part the Settlement Agreement itself. Except as specifically defined within the Settlement Agreement, the capitalized terms are from the ISO Transmission, Markets and Services Tariff or other operative documents, and the definitions below are to definitions as they now appear in those documents, and are subject to change from time to time pursuant to those documents.

“Alternative Price Rule” is defined in Section 11, Part III.I of the Settlement Agreement.

“Billing Policy” is Exhibit ID to Section I of the Tariff.

“Capacity Clearing Price” is the clearing price in the FCA for each Capacity Zone determined in accordance with Section 11, Part III.G of the Settlement Agreement and as more fully described in Section 11, Part III of the Settlement Agreement.

“Capacity Zone” is the geographic sub-region in the New England Control Area that is determined by the ISO in accordance with Section 11, Part III.A of the Settlement Agreement based on an identification of transmission limits that may bind in the FCA.

“Cold Weather Condition” is the existence of Effective Temperatures ≤ 0 degrees Fahrenheit (on peak hours) and Effective Heating Degree Days ≥ 65 .

“Cold Weather Event” is a day when Cold Weather Conditions are forecast to exist and the ISO forecasts a system wide capacity deficiency requiring the implementation of OP-4 actions (i.e., the 7-day capacity margin forecast ≤ 0 MW for an Operating day).

“Cold Weather Warning” is a day when Cold Weather Conditions is forecast to exist and the ISO forecasts tight capacity conditions (i.e., the 7-day capacity margin forecast > 0 MW and $< 1,000$ MW).

“Commitment Period” is as a period of either one year in duration (corresponding to the Power Year for which the FCA is held) or, for New Capacity, up to five years in duration (beginning with the Power Year for which the FCA is held), as described in more detail in Section 11, Part II of the Settlement Agreement.

“Conditional Approval Order” is a FERC order accepting or approving the Settlement Agreement conditioned on the modification of any of the terms of the Settlement Agreement.

“Cost of New Entry” or **“CONE”** is determined in accordance with Section 11, Part III.F of the Settlement Agreement.

“Day-Ahead” is the calendar day immediately preceding the Operating Day.

“Day-Ahead Energy Market” is the schedule of commitments for the purchase or sale of energy, payment of Congestion Costs, and payment for losses developed by the ISO as a result of the offers and specifications submitted in accordance with Section III.1.10 of Market Rule 1.

“De-list Bid” is a bid from Existing Capacity submitted in an FCA to be removed from the Forward Capacity Market, as described in more detail in Section 11, Part III.D.5 of the Settlement Agreement.

“De-listed Capacity” is all or a portion of a Capacity Resources that does not clear in a FCA, and any portion of such Resource for which a Permanent De-list Bid or De-list Bid has been accepted or has transferred its obligation pursuant to Section 11, Part IV.A.6 of the Settlement Agreement is not otherwise committed to provide capacity pursuant to a bilateral contract or reconfiguration auction.

“Deposit” is the financial assurance provided by New Capacity in order to submit a bid in a FCA for which it has been qualified pursuant to Section 11, Part II.B.3 of the Settlement Agreement.

“Economic Minimum Limit” or **“EcoMin”** is the maximum of the following values: (i) the minimum generation amount, in MWs, that a generating unit can deliver for a limited period of time without exceeding specified limits of equipment stability and operating permits; (ii) a level supported by environmental and/or operating permit restrictions; or (iii) a level that addresses any significant economic penalties associated with operating at lower levels that can not be adequately represented by three-part bidding. In no event shall the Economic Minimum Limit submitted as part of a generating unit’s Offer Data be higher than the generation level at which a generating unit’s incremental heat rate is minimized (i.e., transitioning from decreasing as output increases to increasing as output increases) except that a Self-Scheduled Resource may modify its Economic Minimum Limit on an hourly basis, as part of its Supply Offer, in order to indicate the desired level of Self-Scheduled MWs.

“Effective Date” is the date that the FERC approves the Settlement Agreement in its entirety without modifications or conditions or with such modifications or changes as are agreed to by the Settling Parties in accordance with Section 2 of the Settlement Agreement.

“Effective Heating Degree Days” is equal to: $68 - (\text{average of max and min Effective Temperature of the day})$.

“Effective Temperature” is equal to: $\text{dry bulb temperature} - [\text{windspeed} \times (65 - \text{dry bulb temp}) / 100]$.

“Existing Capacity” is any Resource that does not meet any of the eligibility criteria for New Capacity as provided in Section 11, Part II.B.3 of the Settlement Agreement or Import Capacity as provided in Section 11, Part II.C.2.a or b of the Settlement Agreement or any Resource that, subject to ISO evaluation, for the purposes of the first FCA, is under construction and within twelve months of its expected commercial operations date as described in Section 11, Part II.D.1 of the Settlement Agreement.

“Existing Import Capacity” is capacity that a party wishes to import in the FCA pursuant to a multi-year contract entered into before the qualification deadline to provide Capacity Resources during the Commitment Period from outside the New England Control Area as described more fully in Section 11, Part II.C.1.a of the Settlement Agreement.

“Export Bid” is a bid submitted in the FCA to export capacity from a Resource.

“Export Capacity” is any Resource within the New England Control Area seeking to submit a bid to export all or part of its capacity in the FCA or selling its De-listed Capacity to a buyer outside the Control Area following the FCA as described in Section 11, Part II.C.1.c of the Settlement Agreement.

“External Resource” is a generation resource located outside the metered boundaries of the New England Control Area.

“FCA Payment” is the payment for which each capacity Resource clearing in the FCA, or otherwise covered by a multi-year commitment, but not a Self-Supplied FCA Resource, shall be entitled to monthly based on the product of its MWs of capacity cleared in the relevant FCA and the Capacity Clearing Price in the appropriate location in the New England Control Area, as described in more detail in Section 11, Part V.A of the Settlement Agreement.

“Financial Assurance Policy” or **“FAP”** is Exhibit 1A, Exhibit IB, or Exhibit IC to Section I of the Tariff, as applicable.

“FERC” or **“Commission”** is the Federal Energy Regulatory Commission.

“Forward Capacity Auction” or **“FCA”** is the descending clock auction that is to be held annually each year in accordance with the Forward Capacity Market as described more fully in Section 11, Part III of the Settlement Agreement.

“Governance Participants” are the parties to the Participants Agreement and the NEPOOL Participants.

“HQI Excess” is the amount by which accepted Import Bids exceed the difference between the approved Phase I/II transfer limit and the approved MW of HQICCs.

“Hydro Quebec Interconnection Capability Credits” or **“HQICCs”** are credits that are granted to a Market Participant or group of Market Participants in accordance with the ISO System Rules, which may be used to satisfy the Market Participant’s UCAP requirement as determined in accordance with Section III.8.2 of Market Rule 1, where the value of such credits is determined in accordance with the ISO New England Manuals.

“Import Bid” is a bid in the FCA to import capacity from outside the New England Control Area, as described in more detail in Section 11, Parts II.C and III.D.4 of the Settlement Agreement.

“Inadequate Supply” is defined in Section 11, Part III.L.2 of the Settlement Agreement.

“Information Policy” is the policy on file with the Commission as part of the Tariff establishing guidelines regarding the information received, created and distributed by Participants and the ISO in connection with the New England Markets and the New England Transmission System.

“Intermittent Resources” are wind, solar and run-of-river hydro Resources, or such other Resources as determined from time to time pursuant to the Participant Processes that provides for consultation with state utility regulatory agencies as described in Section 11, Part II.E.1 of the Settlement Agreement.

“Installed Capacity Requirement” or **“ICR”** is the level of capacity required to meet the reliability requirements defined for the New England Control Area and calculated in accordance with Section III.8 of Market Rule 1. The Installed Capacity Requirement is used to determine an Unforced Capacity Requirement for the New England Control Area and individual Market Participants.

“Insufficient Competition” is defined in Section 11, Part III.L.2 of the Settlement Agreement.

“Internal Market Monitoring Unit” is the staff of the ISO designated to implement the mitigation measures set forth in Appendix A to Market Rule 1 for mitigation of market power.

“Local Sourcing Requirement” is the portion of the total capacity requirement of the load in a Capacity Zone that must be purchased from Resources located within that Capacity Zone after taking into account all of the capacity that can be reliably imported into the Capacity Zone.

“Load Serving Entity” or **“LSE”** is an entity that serves load in the New England Control Area.

“Locational Forward Reserves Market” or **“LFRM”** is the Locational Forward Reserves Market jointly filed by the ISO and NEPOOL in FERC Docket No. ER06-613-000.

“Locational Marginal Price” or **“LMP”** is as calculated in accordance with Section III.2 of Market Rule 1. The LMP for a Node (as defined in Market Rule 1) is the nodal price at that Node; the LMP for an External Node (as defined in Market Rule 1) is the nodal price at that External Node; the LMP for a Load Zone or Reliability Region (each as defined in Market Rule 1) is the Zonal Price for that Load Zone or Reliability Region, respectively; and the LMP for a Hub (as defined in Market Rule 1) is the Hub Price for that Hub.

“Market Monitor” is ISO’s Internal Market Monitoring Unit.

“Market Participant” is a participant in the New England Markets that has executed a Market Participant Service Agreement, or on whose behalf an unexecuted Market Participant Service Agreement has been filed with and accepted or approved by the Commission.

“Market Rule 1” is ISO New England Market Rule 1 and the appendices and attachments thereto set out in Section III of the Tariff, as modified and amended from time to time.

“Market Rules” are the rules for the administration of the New England Markets filed with the Commission in accordance with the Participants Agreement and accepted by the Commission.

“Municipal Market Participant” is a Market Participant that is either a municipality or an agency thereof, or a body politic and public corporation created under the authority of one of the New England states, authorized to own, lease and operate electric generation, transmission or distribution facilities, or an electric cooperative, or an organization of any such entities.

“NCPC Charge” is the charge to a Market Participant as provided in Section III.3.2.3, Section III.6.4, and Appendix F of Market Rule 1.

“NCPC Credit” is the payment made to a Resource as provided in Section III.3.2.3, Section III.6.4 and Appendix F of Market Rule 1.

“New Capacity” is a Resource which has never been listed as a Capacity Resource (i.e., counted as capacity) in the New England capacity markets or a Resource that meets one of the four criteria listed in Section 11, Part II.B.2 of the Settlement Agreement.

“New Capacity FA Amount” is the financial assurance obligation of New Capacity whose bid has been accepted in the FCA equal to CONE (on a \$/kw-month basis) for that FCA multiplied by the number of kw of capacity awarded, as described in Section 11, Part II.G.2.b of the Settlement Agreement.

“New England Control Area” is the Control Area (as defined in Section II.1.11 of the Tariff) for New England, which includes PTF, Non-PTF, MTF and OTF. The New England Control Area covers Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont, and part of Maine (i.e., excluding the portions of Northern Maine and the northern portion of Eastern Maine which are in the Maritimes Control Area).

“New England Markets” are the markets for the purchase of energy, capacity, ancillary services, demand response services, or other related products or services (including financial transmission rights) within the New England Control Area, as set forth in the Market Rule 1.

“New Import Capacity” is capacity that a party wishes to import in the FCA but without a multi-year contract before the qualification deadline to provide Capacity Resources during the Commitment Period from outside the New England Control Area as described in Section 11, Part II.C.1.b of the Settlement Agreement.

“Offer” is the amount a Supply Offer would have been but for the Offer Cap as set forth in Section 11, Part IV.A.5 of the Settlement Agreement.

“Offer Cap” is the amount defined in Section 1.10.1A(d)(viii) of Market Rule 1 above which an energy offer price may not be specified.

“Operating Day” is a calendar day period beginning at midnight for which transactions in the New England Markets are scheduled.

“Out of Market Bid” is a New Capacity Bid or a New Import Bid that, pursuant to Section 11, Part III.H.2 of the Settlement Agreement, is not allowed by the Market Monitor to set the Capacity Clearing Price.

“Participant Processes” shall mean those processes for Governance Participants outlined in Section 7.1.1 of the Participants Agreement.

“Peak Energy Rent” or **“PER”** is the amount determined in accordance with Section 11, Part V.B of the Settlement Agreement.

“Permanent De-list Bid” is a bid from Existing Capacity submitted in the FCA to be permanently removed from the Forward Capacity Market, as described in more detail in Section 11, Part III.D.3 of the Settlement Agreement.

“Pool-Planned Unit” is one of the following units: New Haven Harbor Unit 1 (Coke Works), Mystic Unit 7, Canal Unit 2, Potter Unit 2, Wyman Unit 4, Stony Brook Units 1, 1A, 1B, 1C, 2A and 2B, Millstone Unit 3, Seabrook Unit 1 and Waters River Unit 2 (to the extent of 7 MWs of its Summer Capability and 12 MWs of its Winter Capability).

“Poorly Performing Unit” is a Resource which, for purposes of qualifying to participate in the FCA, in any four-year period (a) receives three availability scores of less than or equal to forty percent (40 percent), and (b) fails to be available during at least ten (10) Shortage Events, as described in more detail in Section 11, Part V.C.7 of the Settlement Agreement.

“Power Year” is a period of twelve (12) months commencing on June 1 of each year and ending on May 31 of the next calendar year.

“Qualified Capacity” for the FCA and annual reconfiguration actions: (a) for New Capacity, is an amount in MWs equal to such New Capacity’s bid MWs, subject to demonstrations of at least that capacity in the qualification process; (b) for Existing Capacity, except as provided in Section 11, Part II.D.5 of the Settlement Agreement, is an amount in MWs equal to its Summer Seasonal Claimed Capability as adjusted pursuant to Section II.D.4 of the Settlement Agreement; (c) for Intermittent Resources and Demand Resources is the amount in MWs to be determined pursuant to the distinct method to be developed by the end of the fourth quarter of 2006 pursuant to the Participant Processes that includes consultation with state utility regulatory agencies.

“Real-Time” is a period in the current Operating Day for which the ISO dispatches Resources for energy and Regulation (as defined in Market Rule 1), designates Resources for Regulation and, if necessary, commits additional Resources.

“Real-Time Energy Market” is the purchase or sale of energy, payment of congestion costs, and payment for losses for quantity deviations from the Day-Ahead Energy Market in the Operating Day.

“Reserve Constraint Penalty Factors” or **“RCPFs”** are rates, in \$/MWh, that are used within the Real-Time dispatch and pricing algorithm to reflect the value of operating reserve shortages and are defined in Section III.2.8 of Market Rule 1.

“Resource” is a generating unit, a Dispatchable Load, an External Resource, or an External Transaction as defined in Market Rule 1.

“Resource Adequacy Assessment” or **“RAA”** is the assessment performed periodically by the ISO for each hour of each day in connection with system operations, as referred to in Section 11, Part VII.A of the Settlement Agreement.

“Seasonal Claimed Capability” is the maximum dependable load-carrying ability in kilowatts of a generating unit (or ISO-approved combination of units, as per OP 14) being rated, excluding capacity required for station use, for the Summer Period or Winter Period, as applicable.

“Self-Schedule” is the action of a Market Participant in committing and/or scheduling its Resource, in accordance with applicable ISO New England Manuals, to provide service in an hour, whether or not in the absence of that action the Resource would have been scheduled or dispatched by the ISO to provide the service.

“Self-Supplied FCA Resource” is defined in Section 11, Part II.F.1 of the Settlement Agreement.

“Self-Supply Option” is defined in Section 11, Part II.F of the Settlement Agreement.

“Settlement Agreement” is the Settlement Agreement Resolving all Issues dated March 6, 2006 in Docket No ER03-563-_____.

“Settling Party” a party to the Settlement Agreement.

“Shortage Event” is defined in Section 11, Part V.C.1.d of the Settlement Agreement.

“Successful FCA” is a FCA that has not been found to have Insufficient Competition or Inadequate Supply.

“Summer Period” is for each Power Year the four-month period from June through September.

“Supplemental Reserves” are the additional 1,000 MW of NCPC scheduled in accordance with Section 11, Part VII.D of the Settlement Agreement by the ISO if and as needed.

“Tariff” is the ISO New England Transmission, Markets and Services Tariff, FERC Electric Tariff No. 3.

“Term Sheet” is the confidential document voted upon by the settling parties dated January 31, 2006 that was referenced in the Report filed by the Settlement Judge with the FERC on January 31, 2006 in Docket No. ER03-563-055.

“Transition Period” is the period of time commencing on December 1, 2006 and ending May 30, 2010, or as provided in Section 11, Part VIII.I.

“Unforced Capacity” or **“UCAP”** is the measure by which: (1) Installed Capacity suppliers will be rated, in accordance with the formulae set forth in the ISO New England Manuals, to quantify the extent of their contribution to satisfy the ISO Installed Capacity Requirement, and (2) the measure to determine if a Market Participant has met its procurement obligations relating to the Installed Capacity Requirement.

“Waiver Period” is the period of time from March 6, 2006 through the earlier of September 5, 2006, or the date on which the second FCA is successfully completed.

“Winter Period” is for each Power Year the eight-month period from October through May.

TABLE OF ABBREVIATIONS AND ACRONYMS

This Table provides definitions for abbreviations and acronyms used throughout the Settlement Agreement and related materials.

| | |
|---------------|---|
| 2d RNA | Second Restated NEPOOL Agreement |
| AGC | Automatic Generation Control |
| ARRs | Auction Revenue Rights |
| CONE | Cost of New Entry |
| CTRs | Capacity Transfer Rights |
| DCAs | Designated Congestion Areas |
| EcoMin | Economic Minimum Limit |
| EFORd | Demand Estimated Forced Outage Rate |
| FAP | Financial Assurance Policy |
| FCA | Forward Capacity Auction |
| FCM | Forward Capacity Market |
| FERC | Federal Energy Regulatory Commission |
| FPA | Federal Power Act |
| HQICCs | Hydro Quebec Interconnection Capability Credits |
| ICR | Installed Capacity Requirement |
| IRH | Interconnection Rights Holders |
| ISO | ISO New England Inc. |
| kW | Kilowatt |
| LFRM | Locational Forward Reserves Market |
| LICAP | Locational Installed Capacity |
| LMP | Locational Marginal Price |
| LSE | Load Serving Entity |
| MMWEC | Massachusetts Municipal Wholesale Electric Company |
| Mobile-Sierra | "public interest" standard of review (set forth in <i>United Gas Pipe Line Co. v. Mobile Gas Service Corp.</i> , 350 U.S. 332 (1956) and <i>Federal Power Commission v. Sierra Pacific Power Co.</i> , 350 U.S. 348 (1956)) |
| MTF | Merchant Transmission Facilities |
| MW | Megawatt |
| NCPC | Net Commitment Period Compensation |
| NEMA | Northeast Massachusetts |
| NEPOOL | New England Power Pool |
| NYPA | New York Power Authority |
| OMOI | FERC Office of Market Oversight and Investigations |
| OP | Operating Procedure |
| OP-4 | Operating Procedure 4, entitled "Action During a Capacity Deficiency" |
| OP-7 | Operating Procedure 7, entitled "Action in an Emergency" |

| | |
|-------|------------------------------------|
| OTF | Other Transmission Facility |
| PER | Peak Energy Rent |
| PTF | Pool Transmission Facilities |
| RAA | Resource Adequacy Assessment |
| RCPFs | Reserve Constraint Penalty Factors |
| RFP | Request for Proposal |
| RMR | Reliability Must Run |
| RNA | Restated NEPOOL Agreement |
| ROCT | Rest of Connecticut |
| ROP | Rest of Pool |
| RSP | Regional System Plan |
| SWCT | Southwest Connecticut |
| UCAP | Unforced Capacity |
| WRC | Wellesley, Reading and Concord |

ATTACHMENT 2

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Devon Power LLC, et al

Docket No. EL03-563-055

AFFIDAVIT OF ROBERT B. STODDARD IN SUPPORT OF SETTLEMENT AGREEMENT

Commonwealth of Massachusetts

ss.

County of Suffolk

1 I, Robert B. Stoddard, being duly sworn, depose and say:

2 1. My name is Robert B. Stoddard. I am a Vice President of CRA International ("CRA") in
3 its offices at 200 Clarendon Street, T-33, Boston, Massachusetts 02116. I have previously
4 offered testimony in this docket on behalf of FPL Energy, LLC, Entergy Nuclear Generation
5 Company, LLC, Entergy Nuclear Vermont Yankee, LLC, Mirant Americas Energy Marketing,
6 LP, Mirant New England, LLC, Mirant Kendall, LLC, Mirant Canal, LLC, Mystic I, LLC,
7 Mystic Development, LLC and Fore River Development, LLC (collectively, the "Capacity
8 Suppliers"). That testimony presented my professional and educational credentials.

9 2. I have represented the Capacity Suppliers, Dominion Resources, Inc., Dominion Nuclear
10 Connecticut, Inc., and Dominion Energy Marketing, Inc. (collectively, "Dominion") throughout
11 the settlement process. In this capacity, I participated fully in nearly all the settlement meetings,
12 and I had extensive personal involvement in the development of the proposed market design and
13 in the negotiations of the detailed auction mechanics and other economic aspects of the proposed
14 settlement. I have carefully reviewed the Settlement Agreement and the explanatory statement
15 as they pertain to the economics of the long-run market design and the transition period.

16 3. I render this affidavit in the context of supporting the filed settlement. As with all
17 settlements, the proposed Forward Capacity Market (the "FCM") market design reflects a
18 number of compromises necessary to resolve this case without litigation. With this background
19 in mind, it is my professional opinion that it is sound and should work as intended to create

Supplemental Affidavit of Robert B. Stoddard

Page 2 of 2

1 correct economic incentives for new resources to serve the New England market and to retain
2 existing units when economic. It is not necessarily the only market design that could work to
3 accomplish these goals, but it is a workable design that reflects a widely-supported compromise
4 of supply, load and regulators. Given the settlement posture of this case, however, my opinion
5 should not be construed out of context as my support or the support of my clients for specific
6 individual components, or for any aspect of the market design as it might be implicated in other
7 proceedings.

8 4. Although the market design does not include a demand curve, the price volatility and
9 uncertainty that plagues the current market is mitigated by other factors. The FCM is a forward
10 procurement, which allows flexibility of supply both to enter and exit the market. In addition,
11 other measures were included to provide appropriate stability to prices. Capacity prices,
12 therefore, should stay within a fairly narrow band around the actual Cost of New Entry (the
13 "CONE"), as determined by bids from new resources entering the market. Prices above CONE
14 should attract new, competitively priced entry in subsequent years; prices below CONE will
15 deter new entry and may lead to retirement of uneconomic units.

16 5. The comprehensive FCM market design described in the Settlement Agreement
17 collectively defines a capacity market for New England that should result in total compensation,
18 through the capacity and energy markets, sufficient for new and existing resources to earn a
19 competitive rate of return on their investments and to provide for the reliability needs of the
20 region.

21 6. The Settlement Agreement includes nearly four years of interim Transition Payments
22 beginning in December, 2006. Interim payments are necessary to retain those existing resources
23 that are needed for system resource adequacy and to attract imports from other markets, such as
24 New York and Canada, that have historically been important in maintaining the region's
25 reliability. These interim Transition Payments serve as a bridge from the current market, which
26 fails entirely to compensate adequately generators providing such benefits to the system, to the
27 FCM, which is designed to provide such compensation. In the specific context of settling this
28 proceeding, adopting these interim Transition Payments is in the public interest.

29 7. This concludes my affidavit.

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Devon Power LLC, et al

Docket No. EL03-563-030

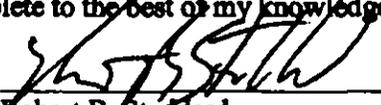
AFFIDAVIT OF ROBERT B. STODDARD

Commonwealth of Massachusetts

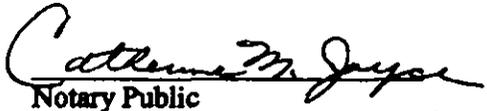
ss.

County of Suffolk

I, Robert B. Stoddard, being duly sworn, depose and state that the contents of the foregoing Affidavit In Support Of Settlement Agreement on behalf of the Capacity Suppliers and Dominion is true, correct, accurate and complete to the best of my knowledge, information, and belief:


Robert B. Stoddard

SUBSCRIBED AND SWORN to
before me this 6th day of March, 2006


Notary Public
My commission expires: April 3, 2009

 **CATHERINE M. JOYCE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
April 3, 2009**

ATTACHMENT 3

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Devon Power LLC, et al.

)

**Docket Nos. ER03-563-000
ER03-563-030
ER03-563-055**

AFFIDAVIT OF

MILES O. BIDWELL, JR., Ph.D.,

ON BEHALF OF

THE CONNECTICUT DEPARTMENT OF PUBLIC UTILITY CONTROL

MARCH 2, 2006

AFFIDAVIT

- 1 1. My name is Miles O. Bidwell. My business address is 24 Raintree Lane, Hilton Head
2 Island, South Carolina 29926. I am a Principal of Power Economics, Inc. and President of
3 Bidwell Associates, Inc. I hold B.A., M.A., and Ph.D. degrees in Economics from Columbia
4 University, where I specialized in applied microeconomic theory and econometrics. I
5 previously offered testimony in this proceeding on behalf of the Connecticut Department of
6 Public Utility Control ("CT DPUC"), Exhibits CT-1 and CT-22. My curriculum vitae,
7 summarizing my experience in electricity and regulated markets, is attached.
- 8 2. On behalf of the CT DPUC, I participated fully in the development and negotiation of the
9 capacity market design, the Forward Capacity Market ("FCM"), that is included in the
10 proposed settlement agreement filed in *Devon Power, LLC* (FERC Docket No. ER03-
11 563-030) on March 6, 2006. I am offering this affidavit in support of this filed
12 settlement. Should any part of this market design be implicated in other Commission
13 proceedings, my opinion should not be construed out of the context of this filed
14 settlement.
- 15 3. I have also reviewed the document entitled, "Settlement Agreement Resolving All
16 Issues" dated March 1, 2006, and Section VI.B of the Explanatory Statement in Support
17 of Settlement Agreement, Compliance Filing of the Settling Parties and Request for
18 Expedited Consideration, which describes the FCM and the Forward Capacity Auction
19 ("FCA") mechanism.
- 20 4. Based on my personal involvement in developing the FCA during the settlement and
21 these documents, it is my opinion that the FCA is a competitive market design based on

1 sound economic principles. The FCA is intended to procure appropriate levels of
2 capacity resources for resource adequacy and reliability in New England at a reasonable
3 cost to New England's electricity ratepayers by using competitive market economics.

4 The FCA's design endeavors to promote vigorous competition between all types of new
5 and existing capacity resources, including traditional generation, import, intermittent, and
6 load response capacity resources. It is my opinion that competition in such a properly
7 designed capacity market should achieve appropriate investment in the least-cost mix of
8 resource technologies, correctly price the cost of efficient new entry and the locational
9 value of capacity resources, and provide appropriate levels of compensation to capacity
10 resource suppliers.

11 5. This correctly-designed competitive market will also provide the proper incentives for
12 capacity resources to flexibly respond to system needs and to be available when the
13 system is stressed. The FCA includes an availability metric that financially penalizes
14 nonperforming capacity resources and financially rewards resources that provide capacity
15 when capacity is most valuable to load – *i.e.*, when the system is stressed. If the
16 availability metric works as intended, I believe that capacity resources will respond to
17 system needs efficiently and quickly.

18 6. Importantly, the FCA contains safeguards necessary to protect ratepayers from paying
19 unjust and unreasonable prices. These safeguards include (i) a mechanism to stabilize
20 the market in the early years of its operation that is designed to imitate the principles of a
21 price collar often used on trading floors of large financial markets; (ii) obligatory review
22 by New England's market monitor of specified types of bids priced above or below
23 clearly articulated price thresholds; (iii) default rules setting the clearing price for

1 capacity if the auction has insufficient competition or supply; and (iv) a mechanism to
2 deduct Peak Energy Rents that coordinates energy market revenues and capacity
3 revenues for the purpose of mitigating incentives to manipulate the energy market and
4 raise energy prices.

5 7. This concludes my affidavit.

AFFIDAVIT

Miles Bidwell, being duly sworn, deposes and says: that he is the witness in the foregoing Affidavit and is familiar with its contents. He states further that the facts contained in said Affidavit are true to the best of his knowledge and belief.



Subscribed and sworn to before me,
This 2nd day of March, 2006

Notary Public Angela D. Moore

My Commission Expires 8/19/07



POWER ECONOMICS

MILES O. BIDWELL, Ph.D.

BUSINESS ADDRESS

24 Raintree Lane
Hilton Head, SC 29926
843 342-6070
fax 843 342-9016

Dr. Bidwell is a Principal of Power Economics, Inc. and President of Bidwell Associates, Inc. Both firms provide advice and expert testimony on matters pertaining to the electricity industry, its regulation, and its movement toward a more competitive and efficient industry structure. Dr. Bidwell holds B.A., M.A. and Ph.D. degrees in Economics from Columbia University, where he specialized in applied microeconomic theory and econometrics.

Until 1996, Dr. Bidwell was a Vice President of National Economic Research Associates, Inc. (NERA). At NERA, Dr. Bidwell directed projects, conducted studies and presented testimony on behalf of Independent Power Producers of electricity, of electric, gas and telephone utilities and on behalf of the customers of regulated utilities. He also performed market and cost studies in antitrust and merger cases and frequently advised clients on topics such as analyzing the implications of different industrial structures and alternative forms of regulation. For the last twenty years, Dr. Bidwell has been conducting research and advising clients on issues related to the electricity industry's transformation from regulation to competition. He was an early proponent of the market type structure that became the basis for the electricity industry in England and Wales, worked extensively on a new industry structure in California (not the one adopted), and has participated in each of the industry restructuring proceedings in New York State. As part of his work in California, he developed a method for including demand side bidding in a day ahead and spot electricity market. Since 1999, he has been working with economists at Power Economics, Inc. on cases and reports in New York and California. In 2002, as part of a project for the California ISO, Dr. Bidwell developed a new approach for ensuring market stability and resource adequacy along with optimal reliability by using a new instrument, Reliability Options. He is currently working on electricity market structures using Reliability Options in several European countries and has just completed a major study for a consortium of European Union Electricity Regulators.

Before joining NERA, Dr. Bidwell served as Chief of Regulatory Research for the New York Public Service Commission. During this period he was responsible for the further application of economic theory to regulation and to ratemaking involving the areas of electric utilities, telecommunications, water and gas, including developing a method for using NYPP data to estimate the time varying marginal cost of electricity. At the same time, Dr. Bidwell designed and directed the Graduate Program in Regulatory Economics at the State University of New York at Albany, where he was an adjunct professor. Earlier in his career, he served on the economics faculty at Wake Forest University.

As an expert witness, Dr. Bidwell has appeared before Federal and State courts and in hearings before numerous State regulatory Commissions, the U.S. Nuclear Regulatory Commission, the Federal Energy Regulatory Commission, the Federal Communications Commission, and the House of Lords.

POWER ECONOMICS

EDUCATION

COLUMBIA UNIVERSITY

Ph.D. Economics, 1973

COLUMBIA UNIVERSITY

M.A. Economics, 1969

COLUMBIA UNIVERSITY

B.A. Economics, 1966 (with honors)

EMPLOYMENT

1999 POWER ECONOMICS, INC.

Principal. Dr. Bidwell has worked with various members of Power Economics for more than 25 years. Since 1999, Dr. Bidwell has focused on projects that he could do in collaboration with the economists at Power Economics. These include: assistance to the California State Legislature, litigation on prices during the California Energy Crisis, various projects involving cost allocation and rate strategy, and the structure of the Capacity Market in New England.

1996- BIDWELL ASSOCIATES, INC.

President. At Bidwell Associates, Inc., Dr. Bidwell provides advice and expert testimony on matters pertaining to the electricity industry, its regulation, and its movement toward a more competitive industry structure.

1985-1996 NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC.

Vice President. At NERA, Dr. Bidwell directed projects, conducted studies and presented testimony on behalf of Independent Power Producers, electric and telephone utilities and on behalf of customers of regulated utilities. He performed market and cost studies in merger and antitrust cases and advised clients on issues pertaining to the privatization and alternative industrial structures in the US and in the UK.

1978-1985 NEW YORK STATE PUBLIC SERVICE COMMISSION.

Chief of Regulatory Research. During his more than seven years on the staff of the New York State Public Service Commission, Dr. Bidwell developed methods for measuring and analyzing economic costs and marginal costs, which are now used in rate setting. He has been responsible for the further application of economic theory to regulation and to ratemaking involving the areas of electric utilities, telecommunications, water and gas.

POWER ECONOMICS

1981-1985 STATE UNIVERSITY OF NEW YORK AT ALBANY

Adjunct Professor. Dr. Bidwell designed and directed the Graduate Program in Regulatory Economics at the State University of New York at Albany where he was an Adjunct Professor of Economics.

1973-1978 WAKE FOREST UNIVERSITY

Assistant Professor. Dr. Bidwell taught courses in microeconomic theory, economic growth and development, international trade, and industrial organization.

1970-1973 COLUMBIA UNIVERSITY

Preceptor in Economics

PROFESSIONAL ACTIVITIES

The American Economic Association

The Royal Economic Society

The International Association for Energy Economics

The American Bar Association

POWER ECONOMICS

RECENT ACTIVITIES (Publications)

“Will NETA Ensure Generation Adequacy?” with Alex Henney. *Platts Power UK*, Issue 122, April 2004, McGraw Hill, London. This article is the first part of the study listed next.

“Will NETA Ensure Generation Adequacy?” with Alex Henney. This study was supported by various organisations including Energywatch. April 29, 2004. The first third of this study has been published in *Power UK*.

“Reliability Options: A Market-Oriented Approach to Long-Term Adequacy.” *The Electricity Journal*, Vol. 18, Issue 5, June 2005.

RECENT ACTIVITIES (Reports and presentations)

“Assuring Resource Adequacy.” Report and presentation to the Amsterdam Power Exchange. Amsterdam, September, 2003.

“Assuring Resource Adequacy.” Report and presentation to the Ministry of Energy, the Hague, October, 2003.

“Assuring Resource Adequacy and Market Stability.” Presentation to NordPool, Helsinki, November, 2003.

“Report on Power Sector Reform Alternatives in Thailand,” with Carl Pechman, prepared for Probe International, December 7, 2003.

“Generation Adequacy Study for European Regulators,” with Alex Henney. This confidential study consists of three reports, Report 1: A Review of Practices and Proposals in Various Jurisdictions; Report 2: The Behaviour of Energy-Only Markets: Will They Ensure Generation Adequacy? Report 3: The RO Method of Assuring Adequacy. August 2005

RECENT ACTIVITIES (Testimony)

FERC

FERC 95 Rebuttal Testimony (with Carl Pechman) on behalf of The California Parties before the Federal Energy Regulatory Commission in San Diego Gas & Electric Company, Complainant v. Sellers of Energy and Ancillary Services into Markets Operated by the California Independent System

POWER ECONOMICS

- Operator Corporation and the California Power Exchange
(Dockets EL00-95-045, EL00-98-042) February 2002
- FERC Rebuttal Testimony on behalf of Public Utility District No. 1 of
Snohomish County, WA, and Southern California Water
Company. FERC Docket Nos. EL02-26-000, et al. September
2002.
- FERC Prepared Direct Testimony on behalf of PacifiCorp. Docket
Nos. EL02-80-000, et al. October 2002.
- FERC Prepared Rebuttal Testimony on behalf of PacifiCorp. Docket
Nos. EL02-80-000, et al. November 2002.
- FERC Prepared Direct Testimony of Miles O. Bidwell, Ph.D. on behalf
of the City of Tacoma and the Port of Seattle, Washington.
Docket No. EL01-10-005. March 2003
- FERC Prepared Direct and Answering Testimony of Carl Pechman and
Miles Bidwell on behalf of the Connecticut Department of
Public Utility Control, *et al.* Docket No. ER03-563-030.
November 4, 2004
- FERC Prepared Cross Answering Testimony of Miles Bidwell and Carl
Pechman on behalf of the Connecticut Department of Public
Utility Control, *et al.* Docket No. ER03-563-030. January 10,
2005

POWER ECONOMICS

SELECTED SPEECHES

"Using Marginal Costs in Electric Rate Design." Presented at the Second NARUC Biennial Regulatory Information Conference, Ohio State University, Columbus, Ohio, September 1980.

"Optimal Rate Structure: An Empirical Examination." Presented at the Workshop on Regulatory Economics, Rutgers University, Newark, New Jersey, March 1981.

"Efficiency and Equity of Kilowatt and Kilowatt Hour Charges: An Empirical Examination." Presented at the Annual Conference of the Advanced Workshop in Regulation and Public Utility Economics, Mohonk Mountain House, New Paltz, New York, June 3-4, 1982.

"Deriving an Appropriate Capital Carrying Charge in a Time of Inflation." Presented at the Third NARUC Biennial Regulatory Information Conference, Ohio State University, Columbus, Ohio, September 1982.

"Efficient Pricing for Cogenerators: Marginal Energy Cost and Power Pool Contracts." *Proceedings of the Third NARUC Biennial Regulatory Information Conference*, with Mark Reeder, Ohio State University, Ohio, September 1982.

"Marginal Cost Analysis and Rate Base Allocation Under Suboptimal Inflationary Conditions." Presented at the 1983 Rate Symposium on Problems of Regulated Industries, Kansas City, Missouri, February 6-9, 1983.

"Optimal Prices, Economic Depreciation, and Regulated Utilities." Presented at the 23rd Annual Iowa State Regulatory Conference, Ames, Iowa, May 1984.

"Avoiding Rate Shock: The Search for Optimal Intertemporal Cost Allocation." Presented at the Institute of Public Utilities Fifteenth Annual Conference, 1984.

"Regulatory Guidelines for Pricing Electricity in Times of Excess Capacity." Presented at the Michigan State University Public Utility Papers, 1985.

"The Significance of Economic Depreciation for the Future Viability of the Bell Operating Companies." Talk given at the Touche Ross Conference on Capital Recovery in Telecommunications, Washington, D.C. October 24-25, 1985.

"Indexing Electric Utility Rates." Presented at the February 18-19, 1987, Energy Research Group Meeting.

POWER ECONOMICS

"Depreciation Policy in a Competitive Environment." Presented at a conference sponsored by NERA at Camelback Inn, Scottsdale, Arizona, March 4-7, 1987.

"U.S. Economic Regulation of Electricity." Presented in London, England, June 26, 1987.

"Equity Versus Efficiency." Presented at Innovative Pricing Conference, Syracuse, New York, September, 1988.

"Marginal Cost and Bad Fish." Presented at the conference of Industrial Energy Bulletin, New York, New York, 1989.

"From Revenue Requirements To Rates: An Economist's Perspective." Continuing Education Lecture sponsored by the Ohio Bar Association, May 15, 1989.

"Regulatory Scrutiny of Marketing Expenses: Competitive Necessity vs. Regulatory Hang Ups." Presented at NERA Telecommunications Seminar, Scottsdale, Arizona, April 12-14, 1989.

"Are New York's Demand Side Management Programs Economic?" Presented at the Multiple Intervenors' Annual Meeting, Syracuse, November 1-2, 1989.

"Measuring The Value Of Unserved Energy." Presented at the March 13-14, 1990, Energy Research Group Meeting in Washington, D.C.

"Price Discrimination Is Not Hazardous To Your Health." Presented at the Conference on "Problems of Mixed Competitive and Regulated Markets: The Issue Of Undue Price Discrimination" in Windsor, England, May 19, 1990.

"Estimating Customer Preferences." Presented at NERA, U.K., May 21, 1990.

"The Value of Unserved Energy—Revealed." Presented at the June 26-27, 1990 Energy Research Group Meeting in Washington, D.C.

"An Analysis of New Rate Design Techniques." Presented at the Multiple Intervenors' 1990 Annual Meeting, Syracuse, New York.

"The Value of Reliability and Least Cost Planning." Presented at the 1991 Electric Utility Business Environment Conference & Exhibition, Denver, CO, March 20-22, 1991.

"Measuring the Value of Reliability." Presented at the 1991 Marginal Cost Working Group Seminar, Seattle, WA, April 25, 1991.

POWER ECONOMICS

"Less is More." Presented at the 1991 Annual Multiple Intervenors' Meeting in Syracuse, New York, October 30, 1991.

"Accurate Depreciation Rates And Rapid Amortization Benefit Customers (Or Everything You Always Wanted To Know About Depreciation But Were Afraid To Ask)." Presented at the Minnesota Public Utilities Commission, March 9, 1992.

"Is Environmentalism Good for Business?" A talk at the Economic Recovery & Environmental Responsibility Conference. Presented by Sound Waters & SACIA, The Southwestern Area Commerce & Industry Association, May 13, 1992.

"Green Economics." A speech presented at the Green & Clean 6th Annual Corporate Breakfast Forum, Greenwich, Connecticut, October 28, 1992.

"Opportunities and Challenges in Privatization." A talk presented at the 2nd Annual European Business Conference, Chicago, IL, May 1, 1993.

"Rockets & Feathers: The Asymmetry of Response to Telephone Price Change." Presented at the Advanced Workshop in Regulation and Public Utility Economics Twelfth Annual Conference, Cape Cod, Massachusetts, May 26-28, 1993.

"Opening the Flood Gates of Competition—Industrial Customers and Independent Power Producers' Stake in Competitive Electricity Supply." Presented at the IPPNY Annual Membership Meeting and Conference, Albany, October 6, 1993.

"Issues In Incentive Regulation: Theory Versus Practice." Presented at the Rutgers Research Seminar, "Incentive Regulation for Public Utilities," in Newark, New Jersey, October 22, 1993.

"Retail Wheeling and the Future US Electricity Industry." Presented at the National Independent Energy Producers Winter Quarterly Meeting, in Washington, DC, January 25, 1994.

"Measuring the Value of Unserved Energy." Presented at the Advanced Workshop in Regulation and Public Utility Economics at Rutgers University in Newark, New Jersey, April 15, 1994.

"Restructuring the Electricity Industry." Presented at "Markets in Motion." Independent Power Producers of New York's Annual Spring Legislative Conference in Albany, May 18, 1994.

POWER ECONOMICS

"Rockets & Feathers II: Empirical Estimation of Asymmetric Response and Reconciliation of Asymmetric Behavior with Classical Utility Theory." Presented at the Advanced Workshop in Regulation and Public Utility Economics Thirteenth Annual Conference, Newport, Rhode Island, May 25-27, 1994.

"International Lessons for Electricity Restructuring." Presented to the Economic Planning Institute, Government of Japan, Tokyo, Japan, March 1995.

"Reduce Stranded Cost – Restructure Rates." Presented before Parties to the New York Public Service Commission Competitive Opportunities Docket, Albany, New York, May 3, 1995.

"Rules For A Speedy And (Less) Painful Transformation To Competition," presented at the Advanced Workshop in Regulation and Public Utility Economics 14th Annual Conference, Newport, Rhode Island, May 26, 1995.

"Accommodation of the System to IPPs with Open Access." Presented at the III Workshop on Independent Power Production in Brazil, Belo Horizonte, Brazil, June 30, 1995.

"Promoting Electricity Consumption to Ease the Transition into Competition." Presented at the 107th Annual Convention, Regulatory, Symposium, National Association of Regulatory Utility Commissioners, New Orleans, Louisiana, November 13, 1995.

"Stranded Costs: There is a Solution." Presented at the Rutgers University Advanced Workshop in Regulation and Public Utility Economics, Newark, New Jersey, November 17, 1995.

"Update on Electricity Restructuring Across the Northeast." Presented at the New Jersey Business & Industry Association, Business to Business Seminar, Shrinking Your Electric Bill: How Your Business Can Save Money on Electric Bills, Jamesburg, New Jersey, December 12, 1995.

"How to Minimize Stranded Costs Through Rate Restructuring." Presented before a conference of the Parties to the New York Public Service Commission, Competitive Opportunities Docket, Albany, New York, February 14, 1996.

"Structuring Markets--Finding the Optimal Amount of Regulation." Presented at the Rutgers Research Seminar, Pricing and Regulatory Innovations Under Increasing Competition, in Newark, New Jersey, May 3, 1996.

POWER ECONOMICS

"Market Clearing Prices on Peak Days," with Mark Reeder, presented at the Advanced Workshop in Regulation and Public Utility Economics, 15th Annual Conference, Lake George, New York, May 30, 1996.

"Market Power Issues." Presented at the Independent Power Producers of New York's 11th Annual Fall Conference, Albany, New York, September 25, 1996.

"Norway and England Have Very Different Electricity Market Structures: We Can Learn From Both." Presented at the 1996 Multiple Intervenors Annual Membership Meeting, Syracuse, New York, October 1996.

"Creating New Markets: The Role of ISO's, Power Exchanges, and Reliability." Presented at the Rutgers University Advanced Workshop in Regulation and Competition, Newark, New Jersey, April 1997.

"Transmission System Planning and Investment: Can a Private Market Determine and Provide the Investments That Minimize System Costs?" Presented at the IBC Group's Reliability for Competitive Power Conference, San Francisco, California, September 29-30, 1997.

"Driving on the Same Side of the Road—Avoiding Collisions on the Road to Competition." Presented at the Independent Power Producers of New York's 12th Annual Fall Conference, Albany, New York, October 8, 1997.

"Marginal Cost Methods for Electric Utilities." Co-taught NERA Course with Dr. Hethie Parmesano, Redondo Beach, California, October 20-22, 1997.

PUBLICATIONS AND CONSULTING REPORTS

"The Family Labor Supply Decision: A Trade Model." Ph.D. dissertation, Columbia University, 1973.

"The Price of Children and Factor Reversals." *Atlantic Economic Journal*, Vol. II, Number 2, November 1974.

"Family Structure, The Marriage Market, and Time Allocation." *Atlantic Economic Journal*, Vol. III, Number 2, November 1975.

"Comments on the Economic Impact of Damming the New River." United States Department of the Interior, Bureau of Outdoor Recreation, Washington, D.C. *Final*

POWER ECONOMICS

Environmental Statement Proposed South Fork New River National Wild and Scenic River, pages 500-503, 1976.

"Comment on Interactions Between Population and Environment." *Atlantic Economic Journal*, Vol. IV, 1976.

"A Peak Load Pricing Policy for North Carolina Utilities." *Carolina Planning*, Vol. III, Number 1, pages 16-22, Winter 1977.

"Some Thoughts on Social Responsibility and Scientists." *Spring*, Vol. I, Winston-Salem, North Carolina, November 1977.

"Efficient Pricing for Cogenerators: Marginal Energy Cost and Power Pool Contracts." *Proceedings of the Third NARUC Biennial Regulatory Information Conference*, with Mark Reeder, Ohio State University, Ohio, September 1982.

"Avoiding Rate Shock: The Search for Optimal Intertemporal Cost Allocation." *Changing Patterns in Regulation, Markets, and Technology: The Effect on Public Utility Pricing*. Proceedings of the Institute of Public Utilities Fifteenth Annual Conference, Michigan State University Public Utilities Papers, 1984, P.C. Mann and H.M. Trebing, eds., pages 481-507.

"Regulatory Guidelines for Pricing Electricity in Times of Excess Capacity." *The Impact of Deregulation and Market Forces on Public Utilities: The Future Role of Regulation*. Michigan State University Public Utility Papers, 1985, P.C. Mann and H.M. Trebing, eds., pages 455-470.

"The Shortage Cost of Electricity Supply." Report for the Long Island Lighting Company, August 1986.

"Is Shoreham's Operation Economic?" Report for the Long Island Lighting Company, 1986.

"Indexing Electric Utility Rates." Proceeding of the February 18-19, 1987, Energy Research Group Meeting.

"Depreciation Policy in a Competitive Environment." *Proceedings of NERA Seminar Telecommunications in a Competitive Environment* (March 1987).

"U.S. Economic Regulation of Electricity." Proceeding of Seminar in London, England, June 26, 1987.

"Report to Oglethorpe Power Corporation on the Optimal Generation Expansion Plan." Report to Oglethorpe Power Corporation, 1987.

POWER ECONOMICS

"Will a Government Takeover of LILCO Save Money for Consumers: An Update." Report for the Long Island Lighting Company, 1987.

"Methods for Measuring the Costs of Service Interruptions and the Demand for Interruptible Rates." Study Proposal for Long Island Lighting Company, 1987.

"Economic Impact of a Premature Shutdown of the Vermont Yankee Nuclear Plant." Report for the Vermont Yankee Nuclear Power Corporation, May, 1988.

Report to Dayton Power & Light Company on DP&L's avoided costs and the optimal amount and pricing of cogeneration, June, 1988.

"Need For The Halfmoon Cogeneration Project." Report for Inter-Power of New York, Inc., on the economic value of and "need" for the Halfmoon Cogeneration Project, September, 1988.

"Equity Versus Efficiency," Proceeding of Innovative Pricing Conference, Syracuse, New York, September, 1988.

"Marginal Cost and Bad Fish," Proceedings of Conference, Industrial Utilities: Redefining The Relationship. *Industrial Energy Bulletin*, New York, New York 1989.

"New Directions In Telecommunications Planning" (Confidential Report) April, 1989.

"Regulatory Scrutiny of Marketing Expenses Competitive Necessity vs. Regulatory Hang Ups," proceeding of NERA Seminar *Telecommunications In A Competitive Environment*, April 1989.

"Comments on the Energy Efficiency Options Study Prepared for the Iowa State Utilities Board by Morgan Systems Corporation." Report for Iowa Electric Light & Power Company, November 16, 1989.

"Evaluating a Public Utility's Investments," *Public Utilities Fortnightly*, May 10, 1990.

"The Value of Reliability and Least Cost Planning," proceedings of *1991 Electric Utility Business Environment Conference & Exhibition*, Denver, CO, March 20-22, 1991.

"Optimal Pricing of Water," report for Long Island Water Company, March 4, 1991.

"Illuminating Externalities," Letter to the Editor, *Public Utilities Fortnightly*, April 1, 1991.

"Measuring the Value of Reliability," proceedings of *1991 Marginal Cost Working Group Seminar*, Seattle, WA, April 25, 1991.

POWER ECONOMICS

"Public Disclosure of Bids and Bidders," report prepared for New York Telephone, June, 1991. (Confidential)

"An Overview of Public Utility Regulation in the United States," prepared for NERA London as part of a paper for the Sydney, Australia Water Board, July 1991.

"The Price Elasticity of Demand for Touchtone," a report for New York Telephone Company, July, 1991. (Confidential)

"The Privatization of Pakistan's Telephone Services: Outline of Economic Issues," prepared for the Government of Pakistan, August 13, 1991.

"The Time-Differentiated Marginal Costs of New York State Electric and Gas Corporation," prepared for New York State Electric and Gas Corporation, August 27, 1991.

"A Study of Demand for Optional New York Telephone Residence Services," prepared for New York Telephone Company and Telesector Resources Group, Inc., August, 1993

"Efficient Imputation and Transfer Pricing: Past, Present, and Future." Prepared for NYNEX Corporation, October 21, 1993.

"The Value of Unserved Energy." Prepared for the Los Angeles Department of Water and Power, April 8, 1994.

"The Indexation of Shipping Costs." Prepared for Burmah Gas Transport LTD, November 17, 1994.

"Issues In Incentive Regulation: TFP in State Regulatory Reform—Theory Versus Practice," *Incentive Regulation for Public Utilities*, pages 185-213, Michael A. Crew, Ed., Kluwer Academic Publishers, Boston, 1994.

"An Analysis of Asymmetric Demand Response to Price Changes: The Case of Local Telephone Calls," with Bruce X. Wang and J. Douglas Zona, *Journal of Regulatory Economics*, pages 285-298, Michael A. Crew, Ed., Kluwer Academic Publishers, Boston, 1995.

"How to Reduce Stranded Costs?" Prepared for Southern California Edison, April, 1995.

"Survey Of Studies On The Elasticity Of Demand For Electricity," with P. Della Valle. Prepared for Southern California Edison, August 1, 1995.

POWER ECONOMICS

“Transmission Congestion and Pricing.” Appendix to the New York Public Service Commission’s Final Report on Electricity Competition, September 1995.

“Report on Preliminary Evaluation of Purchased Electricity Pass Through Cost Issue in Connection with GDRRA/MWE Litigation and Proposed Study Plan,” with L. Guth, December 14, 1995

“Restructure Rates to Cut Stranded Costs,” with P. Della Valle, *The Electricity Journal*, December 1995.

“Structuring Markets--Finding the Optimal Amount of Regulation,” in, *Pricing and Regulatory Innovations Under Increasing Competition*, Michael A. Crew, Ed., Kluwer Academic Publishers, Boston, 1996

Report on the Electricity Industry Structure in the United States and the UK, prepared for the Queensland Electricity Reform Unit, Brisbane, Australia, August 1997.

“Reforming the Pool of England & Wales,” with Alex Henney. Report for the Minister for Energy, Science & Industry and Pool Members, November 1997.

“A Demand Response Will Lower Peak Prices,” with Carl Pechman, Duane Chapman, Tim Mount, prepared for Multiple Interveners for presentation to the New York Independent System Operator, January 18, 2001.

“The California Electricity Crisis: A Report To the Building Owners And Managers Association (BOMA) of California,” with Carl Pechman, prepared for BOMA California, March 19, 2001.

“Assuring Resource Adequacy.” Report and presentation to the Amsterdam Power Exchange. Amsterdam, September, 2003.

“Assuring Resource Adequacy.” Report and presentation to the Ministry of Energy, the Hague, October, 2003.

“Assuring Resource Adequacy and Market Stability.” Presentation to NordPool, Helsinki, November, 2003.

“Report on Power Sector Reform Alternatives in Thailand,” with Carl Pechman, prepared for Probe International, December 7, 2003.

POWER ECONOMICS

“Will NETA Ensure Generation Adequacy?” with Alex Henney. Platts *Power UK*, Issue 122, April 2004, McGraw Hill, London. This article is the first part of the study listed next.

“Will NETA Ensure Generation Adequacy?” with Alex Henny. This study was supported by various organisations including Energywatch. April 29, 2004. The first third of this study has been published in *Power UK*.

“Reliability Options: A Market-Oriented Approach to Long-Term Adequacy.” *The Electricity Journal*, Vol 18, issue 5, June 2005

“Generation Adequacy Study for European Regulators,” with Alex Henney. This confidential study consists of three reports, Report 1: A Review of Practices and Proposals in Various Jurisdictions; Report 2: The Behaviour of Energy-Only Markets: Will They Ensure Generation Adequacy? Report 3: The RO Method of Assuring Adequacy. August 2005

POWER ECONOMICS

TESTIMONY

N.C. Utilities Commission "Electricity Pricing." Expert witness testimony before the North Carolina Utilities Commission, Raleigh, North Carolina, December 18, 1975.

N.C. Utilities Commission "Rebuttal Testimony to Duke Power Testimony of Forecasting Future Electricity Demand." Expert witness testimony before the North Carolina Utilities Commission, Raleigh, North Carolina, January 27, 1976.

U.S. Nuclear Regulatory Commission "Projecting Future Demand for Electricity." Expert witness testimony before United States Nuclear Regulatory Commission hearings on the proposed Duke Power Company Perkins Station (includes original econometric analysis of electricity demand in North Carolina). Mocksville, North Carolina, April 27, 1976.

U.S. Nuclear Regulatory Commission Additional expert testimony on econometric models and applications, United States Nuclear Regulatory Commission hearings, Mocksville, North Carolina, April 29, 1976.

N.C. Utilities Commission "The Use of Econometrics in Forecasting Electricity Demand." Expert witness testimony presented before the North Carolina Utilities Commission in hearings on the Investigation, Analysis and Estimation of Future Growth in the Use of Electricity, Raleigh, North Carolina, January 25, 1977.

U.S. Nuclear Regulatory Commission "The Future Demand for Electricity and the Misuse of Forecasting Methodology." Expert witness testimony presented before the United States Nuclear Regulatory Commission, Charlotte, North Carolina, March 10, 1977.

NYPSC Case 27350 New York Telephone—1978.

NYPSC Case 27344 Orange & Rockland Utilities—1979.

POWER ECONOMICS

| | |
|---|--|
| NYPSC Case 27215-16 | Niagara Mohawk Power Corporation—1979. |
| NYPSC Case 27353 | Consolidated Edison Company—1980. |
| NYPSC Case 27353 | Consolidated Edison Company—1980 (Rebuttal). |
| NYPSC Case 27626 | Central Hudson Gas & Electric Corporation—1980. |
| NYPSC Case 27909 | Orange & Rockland Utilities—1981. |
| NYPSC Case 27986 | Niagara Mohawk Power Corporation—1981. |
| NYPSC Case 27774 | Long Island Lighting Company—1982. |
| NYPSC Case 28525 | Long Island Lighting Company—Shoreham 1983. |
| NYPSC Case 28470 | Central Hudson Gas & Electric Corporation—1983. |
| NYPSC Case 28598 | Niagara Mohawk—Imprudence 1984. |
| NYPSC Case 29069 | Niagara Mohawk 1985—Nine Mile II Phase In. |
| NYPSC Case 29433 | Central Hudson Gas and Electric Corporation—1987. |
| NYPSC Case 29541-42 | New York State Electric & Gas Corporation—1987. |
| NYPSC Case 29541-42 | New York State Electric & Gas Corporation—1987 (Rebuttal). |
| NYPSC Case 29469 | New York Telephone—1987 (Reply). |
| Minnesota PUC Docket P-421/CI-86-354 | Northwestern Bell—1987 (Rebuttal). |
| NYPSC Case 29674-76 | Rochester Gas & Electric—1987. |
| NYPSC Case 29674-76 | Rochester Gas & Electric—1988 (Surrebuttal). |
| NYPSC Case 29670-71 | Niagara Mohawk Power Corporation—1988 (Rebuttal). |
| Federal Court | Expert's Report and Deposition Testimony in the United States District Court for the Eastern District of New York, In Re: LILCO Securities Litigation, on materiality and causation, 1988. |

POWER ECONOMICS

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|--|---|
| Federal Court | Expert's Report and Deposition Testimony in the United States District Court for the Eastern District of New York, In Re: LILCO RICO litigation, on materiality, 1988. |
| New York State Board on Electric Generation Siting | Testimony on Certificate of Environmental Compatibility and Public Need—1988. |
| NYPSC Case 88-E-077 | Central Hudson Gas & Electric Corporation—1988. |
| NYPSC Case 88-E-077 | Central Hudson Gas & Electric Corporation—1988 (Rebuttal). |
| PSC Article VIII Application | Halfmoon Cogeneration Project—9/88. |
| Federal Court | Long Island Lighting Company: Testimony and Expert Report before the U.S. District Court for the Eastern District of New York, County of Suffolk v. LILCO, et al., concerning the materiality of charges against LILCO in a RICO action, November 1988. |
| NYPSC Case 28860 | New York Telephone Company—1988 |
| Federal Court | Long Island Lighting Company: Testimony and Expert Report before the U.S. District Court for the Eastern District of New York, Suffolk County, et. al. v. Long Island Lighting Company, et. al., concerning the expected time required for a nuclear power plant to go from fuel load to commercial operation, January, 1989. |
| Case No.: 88-T-132 | Pursuant to Article VII of the Public Service Law, New York Public Service Commission. Testified on behalf of Empire State Pipeline before the New York Public Service Commission on "Need," competition, economically efficient rate structures and depreciation, March, 1989. |
| FERC, Case ER88-630-000, ER88-631-000, and ER89-38-000 | New England Power Company—4/89 (Rebuttal). Testimony on the economic efficiency of marginal cost pricing of electricity. |

POWER ECONOMICS

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| | This testimony supported the first successful FERC decision allowing marginal cost pricing of wholesale electricity. |
| NYPSC Case 89-F-107 | Central Hudson Gas & Electric Company—October 6, 1989. |
| NYPSC Case 89-F-107 | Central Hudson Gas & Electric Company—October 19, 1989 (Additional Direct). |
| NYPSC Case 89-E-166 | Rochester Gas & Electric Corporation on behalf of Multiple Intervenors—December 15, 1989. |
| Missouri Case TR-89-196 | Contel of Missouri, Inc.—December 29, 1989 (Surrebuttal). |
| VT PSC Docket No. 5372 | Central Vermont Public Service Corporation—February 8, 1990 (Rebuttal). |
| Iowa Docket No. RPU-89-9 | Iowa Electric Light and Power Company—March 8, 1990 (Rebuttal). |
| NYPSC Case No. 80010 | Inter-Power of New York, Incorporated—April 13, 1990 (Rebuttal). |
| NYPSC Case 89-E-175, 89-E-176 | Orange & Rockland Utilities, Inc. on behalf of Multiple Intervenors—April 19, 1990. |
| NYPSC Case No. 80010 | Inter-Power of New York, Incorporated—April 27, 1990 (Supplemental). |
| NYPSC Case No. 90-C-0191 | New York Telephone Company—July 24, 1990 (Rebuttal). |
| NYPSC Case No. 80010 | Inter-Power of New York, Incorporated—July 30, 1990 (Rebuttal). |
| NYPSC Case No. 90-C-0191 | New York Telephone Company—August 3, 1990 (Rejoinder). |
| NYPSC Case 90-E-0647, 90-E-1648 & 90-G-0649 | Rochester Gas & Electric Corporation on behalf of Multiple Intervenors—December 3, 1990. |
| NYPSC Case 90-E-0647, | |

POWER ECONOMICS

- 90-E-1648 & 90-G-0649 Rochester Gas & Electric Corporation on behalf of Multiple Intervenor—December 3, 1990 (Rebuttal).
- NYPSC Case 91-W-0505 Long Island Water Corporation—May 15, 1991 (Direct).
- NYPSC Case 91-W-0505 Long Island Water Corporation—August 26, 1991 (Supplemental Direct).
- NYPSC Case 91-E-0506 Central Hudson Gas & Electric Corporation on behalf of Multiple Intervenor—September 20, 1991 (Direct Testimony).
- NYPSC Case 91-W-0505 Long Island Water Corporation—October 10, 1991 (Rebuttal).
- NYPSC Case Nos. 91-E-0785, 91-E-0766 & 91-G-0767 Rochester Gas & Electric Corporation—December, 1991 (Rebuttal).
- NYS Regulatory Filing A section of a filing before the New York State Regulatory Commission. The section presents and explains the cost and demand models used to calculate the effects of the rate restructuring and explains why the restructuring will increase the economic welfare of New York Telephone customers—June 5, 1992
- NYPSC Case Nos. 92-T-0114 & 92-T-0252 Independence Station-Clay 345kV Transmission Line Project—November 4, 1992 (Rebuttal Testimony).
- NYPSC Case Nos. 92-T-0114 & 92-T-0252 Independence Station-Clay 345kV Transmission Line Project—November 4, 1992 (Additional Rebuttal Testimony).
- NYPSC Case Nos. 92-E-0814 & 88-E-082 Niagara Mohawk Power Corporation Petition for Approval of Curtailment Procedures and Proceeding on Motion of the Commission to Establish Conditions Governing Curtailment Clauses in Contracts for On-site Generation—February 24, 1993 (Direct Testimony on behalf of Falcon Seaboard Power Corporation.)

POWER ECONOMICS

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| NYPSC Case Nos. 92-E-0814 & 88-E-082 | Niagara Mohawk Power Corporation Petition for Approval of Curtailment Procedures and Proceeding on Motion of the Commission to Establish Conditions Governing Curtailment Clauses in Contracts for On-site Generation—March 19, 1993 (Rebuttal Testimony on behalf of Falcon Seaboard Power Corporation.) |
| NYPSC Case Nos. 92-E-1055 & 92-G-1056 | Central Hudson Gas & Electric Corporation on behalf of Multiple Intervenors—March, 1993 (Direct Testimony) |
| NYPSC Case Nos. 92-E-1055 & 92-G-1056 | Central Hudson Gas & Electric Corporation on behalf of Multiple Intervenors—April, 1993 (Rebuttal Testimony) |
| NYPSC Case Nos. 92-E-1055 & 92-G-1056 | Central Hudson Gas & Electric Corporation on behalf of Multiple Intervenors—April, 1993 (Additional Rebuttal Testimony) |
| Georgia PSC Docket No. 4451-U | Atlanta Gas Light Company—September 2, 1993 (Rebuttal Testimony) |
| FCC Case No. ENF-93-44 | BellSouth Corporation, BellSouth Telecommunications, Inc. & BellSouth Enterprises, Inc.—November 1, 1993—Petition to Impose Conditional Grant to Create a Competitive Market, or Deny as Filed (Affidavit) |
| Georgia PSC Docket No. 4132-U | Atlanta Gas Light Company—December 30, 1993 (Direct Testimony) |
| NYPSC Case No. 94-E-0136 | Sithe Independence Station—May 20, 1994—Petition for Original Certificates of Public Convenience and Necessity Under Public Service Law ¶ 68 to Provide Electric Service to Alcan Rolled Products Company and Liberty Paperboard, L.P. (Direct Testimony) |

POWER ECONOMICS

NYPSC Case
No. 94-E-0136

Sithe Independence Station—June 24, 1994—Petition for Original Certificates of Public Convenience and Necessity Under Public Service Law ¶ 68 to Provide Electric Service to Alcan Rolled Products Company and Liberty Paperboard, L.P. (Rebuttal Testimony)

Vermont Public Service
Board - Docket No. 5744

Green Mountain Power Corporation on behalf of International Business Machines Corporation (IBM)—August 1, 1994—Petition of Green Mountain Power Corporation for a change in rates. (Direct Testimony)

NYPSC Case Nos. 94-E-0098,
94-E-0099 and 94-G-0100

Niagara Mohawk—August 31, 1994—Regarding Competition Issues on behalf of Independent Power Producers of New York, Inc. (Direct Testimony)

NYPSC Case Nos. 94-E-0098,
94-E-0099 and 94-G-0100

Niagara Mohawk—September 21, 1994—Regarding Competition Issues on behalf of Independent Power Producers of New York, Inc. (Rebuttal Testimony).

Iowa Docket RPU-94-2

IES Industries, Inc.—December 12, 1994—Examine IES Industries' proposed price changes and explore the consequences of equalizing electricity prices throughout the IES service territory (Direct Testimony).

NYPSC Case Nos. 95-E-0673
and 95-G-0674

Rochester Gas & Electric Corporation on behalf of Multiple Intervenors—January, 1996 (Direct Testimony).

NYPSC Case Nos. 95-E-0673
and 95-G-0674

Rochester Gas & Electric Corporation on behalf of Multiple Intervenors—January, 1996 (Rebuttal Testimony).

NYPSC Case No. 95-C-0341

Pole Attachment Proceedings—Policy Issues, on behalf of Seven Investor Owned Electric Utilities—October 28th 1996.

NYPSC Case No. 95-C-0341

Pole Attachment Proceedings—Fact Issues, on behalf of Seven Investor Owned Electric Utilities—January 27th 1997.

NYPSC Case Nos. 96-E-0134

POWER ECONOMICS

- and 96-E-0135 Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of the Niagara Mohawk Power Corporation for Electric Service on behalf of IPPNY—January, 1997.

- State of New York Supreme Court, County of Warren Seventeen Independent Hydro Power Producers vs. Niagara Mohawk Power Corporation re: contract issues—January 28th 1997.

- NYPSC Case No. 96-E-0897 In the Matter of Consolidated Edison Company of New York, Inc.'s plans for electric rate/restructuring pursuant to Opinion No. 96-12, Direct Testimony on behalf of IPPNY and ENRON—February 12, 1997.

- NYPSC Case No. 96-E-0897 In the Matter of Consolidated Edison Company of New York, Inc.'s plans for electric rate/restructuring pursuant to Opinion No. 96-12, Direct Testimony re: the Proposed Settlement, on behalf of IPPNY and ENRON—April 8th 1997.

- NYPSC Case No. 96-E-0891 In the Matter of New York State Electric & Gas Corporation's plans for electric rate/restructuring pursuant to Opinion No. 96-12. Direct testimony on behalf of IPPNY and ENRON—February 12th 1997.

- NYPSC Case No. 96-E-0909 In the Matter of Central Hudson Company of New York, Inc.'s plans for electric rate/restructuring pursuant to Opinion No. 96-12. Direct testimony on behalf of IPPNY and ENRON—April 11th 1997.

- NYPSC Case No 96-E-0900 In the Matter of Orange & Rockland Utilities, Inc. Direct testimony on behalf of IPPNY and ENRON. April 24th 1997.

POWER ECONOMICS

- NYPSC Case No. 96-E-0891 In the Matter of New York State Electric & Gas Corporation's plans for electric rate/restructuring pursuant to Opinion No. 96-12. Rebuttal testimony on behalf of IPPNY and ENRON—May 5th 1997.

- NYPSC Case No. 96-E-0898 In the Matter of Rochester Gas and Electric Corporation plans for electric rate/restructuring pursuant to Opinion No. 96-12. Direct testimony on behalf of IPPNY and ENRON. May 6th 1997.

- FERC Docket Nos. ER97-1523-000
and OA97-470-000 Direct testimony on behalf of Enron Power Marketing, Inc. in opposition to the request for market based authority by Central Hudson Gas & Electric Corp., et al and New York Power Pool. October 31st 1997.

- NYPSC Case Nos. 94-E-0098
and 94-E-0099 In the Matter of Niagara Mohawk Power Corporation PowerChoice Settlement. Direct testimony on behalf of Enron Capital & Trade Resources Corp. November 3rd 1997.

- NYPSC Case In the Matter of New York State Electric & Gas Corporation. Affidavit on behalf of New York State Electric & Gas Corporation, regarding measurement of customer costs and introducing competitive billing and metering. April 2001.

- FERC FERC 95 Rebuttal Testimony (with Carl Pechman) on behalf of The California Parties before the Federal Energy Regulatory Commission in San Diego Gas & Electric Company, Complainant v. Sellers of Energy and Ancillary Services into Markets Operated by the California Independent System Operator Corporation and the California Power Exchange (Dockets EL00-95-045, EL00-98-042) February 2002

- FERC Rebuttal Testimony on behalf of Public Utility District No. 1 of Snohomish County, WA, and Southern California Water Company. FERC Docket Nos. EL02-26-000, et al. September 2002.

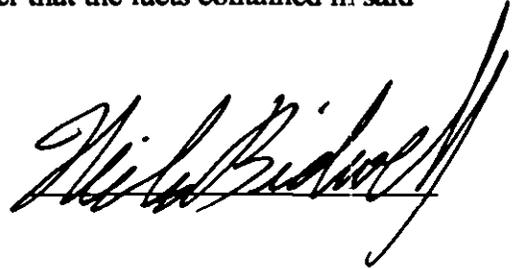
POWER ECONOMICS

- FERC Prepared Direct Testimony on behalf of PacifiCorp. Docket Nos. EL02-80-000, et al. October 2002.
- FERC Prepared Rebuttal Testimony on behalf of PacifiCorp. Docket Nos. EL02-80-000, et al. November 2002.
- FERC Prepared Direct Testimony of Miles O. Bidwell, Ph.D. on behalf of the City of Tacoma and the Port of Seattle, Washington. Docket No. EL01-10-005. March 2003
- FERC Prepared Direct and Answering Testimony of Carl Pechman and Miles Bidwell on behalf of the Connecticut Department of Public Utility Control, et al. Docket No. ER03-563-030. November 4, 2004
- FERC Cross Answering Testimony of Carl Pechman and Miles Bidwell on behalf of the Connecticut Department of Public Utility Control, et al. Docket No. ER03-563-030. January 10, 2005

February, 2006

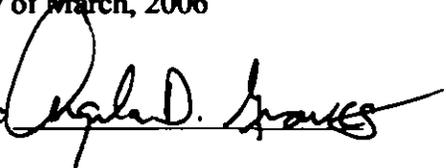
AFFIDAVIT

Miles Bidwell, being duly sworn, deposes and says: that he is the witness in the foregoing Affidavit and is familiar with its contents. He states further that the facts contained in said Affidavit are true to the best of his knowledge and belief.



A handwritten signature in cursive script, reading "Miles Bidwell", written over a horizontal line.

Subscribed and sworn to before me,
This 2nd day of March, 2006

Notary Public 

A handwritten signature in cursive script, appearing to read "Richard D. Jones", written over a horizontal line.

My Commission Expires 8/19/07

ATTACHMENT 4

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Devon Power LLC, et al.

)

Docket No. ER03-563-030

AFFIDAVIT OF

**PETER CRAMTON., Ph.D.,
on behalf of ISO New England, Inc.,**

5 March 2006

Qualifications

1. My name is Peter Cramton. I am Professor of Economics at the University of Maryland and Chairman of Market Design Inc. Over the last 20 years, I have published research on auction theory and practice in the leading peer-reviewed economics journals. During the last 12 years, I have applied this research in the design and implementation of auction markets worldwide, especially in North America and Europe. I have led the design and implementation of dozens of high-stake electricity auctions in the United States, France, and Belgium, using the simultaneous clock format, as well as gas auctions in France and Germany. I have advised several energy companies on auction strategy in major energy and capacity auctions in the United States and Canada. I have advised several countries in the design and implementation of spectrum auctions. I have advised telecommunications firms on bidding strategy in more than 25 spectrum auctions (all simultaneous ascending auctions). Since 1998, I have advised ISO New England on electricity market design, and I am one of two lead experts, with Steven Stoft, retained by the ISO for the proposed forward capacity market in New England. I received my B.S. in Engineering from Cornell University and my Ph.D. in Business from Stanford University. My vita, which includes a list of my publications and other experience, is attached.

Introduction

2. I have participated fully in the development and negotiation of the capacity market design that is included in the proposed settlement agreement filed in *Devon Power, LLC* (FERC Docket No. ER03-563-030) on 6 March 2006.

3. I have reviewed the document entitled, "Settlement Agreement Resolving All Issues" dated 6 March 2006, and Section VI of the "Explanatory Statement," which describes the Forward Capacity Market ("FCM").
4. The FCM provides a sound framework for a successful capacity market. The design in the settlement contains the essential ingredients, such as robust price formation, protections against monopoly and monopsony market power, and strong performance incentives. Market participants, and ultimately the electricity consumers of New England, will benefit from the important innovations in New England's forward capacity market.
5. The framework laid out in the settlement agreement appears sound. However, great care and attention to the details will be required to assure a successful implementation.

Price Formation

6. The FCM adopts an approach consistent with my underlying philosophy of a good capacity market—that it rely on the unmitigated bids of new entry for price formation.
7. A major challenge of the auction design is assuring that the clearing price is determined from competitive forces, rather than the exercise of market power. The challenge is great, because in every year the quantity of existing capacity dwarfs the quantity of new capacity, the concentration of ownership is high, and the elasticity of demand is zero resulting in a vertical demand curve. For much of the existing capacity, going forward costs are small relative to the cost of new entry (CONE), as a result of substantial sunk costs. Thus, it is tempting for existing capacity to withhold, either physically or economically, to achieve a high clearing price. The FCM does a good job of mitigating this possibility without distorting the competitive price-setting forces. It does this in two ways.

8. First, at qualification, existing suppliers must enter all import/export, Permanent De-list, and De-list bids that are above .8 CONE. For transparency, these bids are posted one day after the qualification bid deadline. If a unit's Permanent De-list bid is accepted in the auction, the unit is not eligible to receive capacity payments in this or any future commitment period. Permanent De-list bids above 1.25 CONE and De-list bids above .8 CONE must be reviewed and qualified by the ISO's Internal Market Monitoring Unit before the bids are entered into the forward capacity auction.
9. Second, the ISO conducts a descending clock auction for the required new capacity, recognizing bids from existing supply. The descending clock auction determines the clearing price paid to all capacity procured in the primary auction. Since the bids from existing supply are submitted at qualification, the ISO knows the quantity of new capacity required to reach the installed capability requirement as a function of price, recognizing any accepted bids from existing supply. Bids from existing supply (import/export, Permanent De-list, and De-list bids) at or below .8 CONE can be directly entered into the descending clock. These bids do not require approval of the market monitor and are eligible to set the price. De-list bids at or below .8 CONE may be rationed, if so designated by the supplier.
10. I support this approach to price formation. It mitigates both monopoly and monopsony market power without interfering with the competitive process.

Protections in the Event of Auction Failure

11. The forward auction approach presumes that potential new projects will produce a competitive auction. Nonetheless, it is important to have rules that address what happens if the presumption is not realized. The failures can take two forms: inadequate supply and

insufficient competition. Inadequate supply occurs when too little new capacity participates in the auction to cover demand at any price; insufficient competition occurs when there is adequate supply, but not enough new entry to presume a competitive auction.

12. The FCM has important remedies in the event of either inadequate supply or insufficient competition. In each case, an auction is used to the extent possible; that is, the remedy is limited to the zones with inadequate supply or insufficient competition. In addition, the remedy is chosen so as to encourage the development of new projects, since it is the absence of new projects that has created the auction failure.

Performance Incentives

13. The final key element of New England's forward capacity market is performance incentives. Performance incentives are needed to motivate (1) efficient investment in the right mix of resource technologies and characteristics, and (2) efficient operation of resources.
14. The absence of the demand side and concerns about market power have led most electricity markets to adopt an energy price cap. This capping of the energy spot price takes money from the energy market, resulting in: (1) the wrong quantity of resources, (2) the wrong mix of resources, and (3) the wrong operating incentives. The forward capacity auction gets the quantity right, but performance incentives are needed to induce (1) the right mix of resources, and (2) the efficient operation of resources.
15. The FCM relies on two instruments for performance incentives: Shortage Hour Availability (SHA) and a Peak Energy Rent (PER) hedge. SHA restores some of the incentives for resource mix and better operation that have been lost to price capping. Of

at least equal importance, the PER hedge, though it provides no performance incentives beyond the spot energy market, mitigates market power in the energy market and reduces risk for both load and supply by shifting a large portion of compensation during times of scarcity from the spot energy market to the FCM.

16. I fully support the SHA approach and PER hedge. Together they will send the correct price signals at times of system stress and will provide a large reduction in spot market power and a large reduction in risk premiums passed through to consumers.

Conclusion

17. The Forward Capacity Market presented in the proposed settlement agreement provides a sound basis for a successful capacity market. Indeed, the auction design includes numerous innovations that should be adopted in other regions. Market participants and ultimately the electricity consumers of New England will benefit from the chosen auction design.
18. With respect to price formation, the design adequately addresses market power concerns on both the buy side and sell side of the market. The market should enjoy robust price formation based on the cost of new entry. The design also includes the necessary safeguards in the event of either inadequate supply or insufficient competition.
19. With respect to performance incentives, the proposed settlement has the essential features of a good capacity market. I support the performance incentive approach adopted in settlement. It provides performance incentives that are adequate and stronger than the performance incentives seen in any other US electricity market.



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Peter Cramton is Professor of Economics at the University of Maryland, Chairman of Market Design Inc. and Spectrum Exchange, and President of Criterion Auctions. His research focuses on auctions, bargaining, and market exchange. Most of his recent work has addressed design and incentive questions in auctions and bargaining. He has served as an auction expert for numerous companies in spectrum auctions and electricity auctions. He has advised the FCC and several foreign governments on the design and implementation of spectrum auctions. Cramton has designed electricity auctions in New England, California, France, and Belgium. In e-commerce, he has led the design effort for several market makers developing business-to-business trading applications. Before joining the Maryland faculty in 1993, he was an Associate Professor at Yale University and a National Fellow at the Hoover Institution at Stanford University. He has published numerous articles on auction theory, auction practice, and bargaining in major journals. Cramton received his B.S. in Engineering from Cornell University and his Ph.D. in Business from Stanford University.

Academic Positions

Professor of Economics—Department of Economics, University of Maryland, August 1996 to present.

Associate Professor of Economics—Department of Economics, University of Maryland, August 1993 to June 1996.

National Fellow—Hoover Institution, Stanford University, September 1992 to August 1993.

Associate Professor of Economics and Management—Yale School of Management, Yale University, July 1988 to August 1993.

Assistant Professor of Decision Theory—Yale School of Management, Yale University, July 1984 to June 1988.

Education

Stanford University, Doctor of Philosophy, June 1984, Graduate School of Business.
Dissertation: The Role of Time and Information in Bargaining.

Cornell University, Bachelor of Science with distinction, May 1980, School of Operations Research and Industrial Engineering. Graduated first in class.

Courses Taught

Advanced Microeconomics. Doctoral course in the foundations of game theory.

Game Theory. Undergraduate introduction to modern game theory.

Market Design. An advanced undergraduate course on auction and market design.

Intermediate Microeconomics.

Negotiation and Competitive Decisions. Developed for management program.

Economic Analysis. Taught in management program.

Quantitative Analysis for Management Decisions. Taught in management program.

Theory of Choice II: Game Theory. Doctoral course in game theory with emphasis on information and dynamics.

Research Interests

Auction theory and practice, bargaining theory, dispute resolution, incentives, contract theory, game theory, decision theory, labor economics, industrial organization, experimental economics, information economics, and law and economics.

Honors

Departmental Undergraduate Teaching Award, Spring 1996 (2), Spring 1997 and Spring 2002.

Departmental Graduate Teaching Award, Fall 1994 and Fall 1998.

Hoover National Fellow, Hoover Institution, Stanford University, 1992-93.

Winner of the *1984 Leonard J. Savage Thesis Award* for an outstanding dissertation in Bayesian Economics.

American Assembly of Collegiate Schools of Business Doctoral Fellowship, 1983-84.

National Association of Purchasing Management Scholarship, 1983-84.

Dean's Award for Service to Stanford University, 1983-84.

Two-time recipient of *Stanford Merit Fellowship*, 1981-83.

Elected by the Operations Research faculty as outstanding senior, 1980.

Affiliations

Econometric Society, American Economic Association, Society for Economic Analysis, and Society for the Promotion of Economic Theory.

Research on Auctions

"The Convergence of Market Designs for Adequate Generating Capacity," (with Steven Stoft), Working Paper, University of Maryland, March 2006.

Combinatorial Auctions, (with Yoav Shoham and Richard Steinberg) MIT Press, 2006.

"Introduction to Combinatorial Auctions," (with Yoav Shoham and Richard Steinberg) in Peter Cramton, Yoav Shoham, and Richard Steinberg (eds.), Combinatorial Auctions, 1-13, MIT Press, 2006.

"The Clock-Proxy Auction: A Practical Combinatorial Auction Design," (with Lawrence M. Ausubel and Paul Milgrom) in Peter Cramton, Yoav Shoham, and Richard Steinberg (eds.), Combinatorial Auctions, Chapter 5, 115-138, MIT Press, 2006.

"Simultaneous Ascending Auctions," in Peter Cramton, Yoav Shoham, and Richard Steinberg (eds.), Combinatorial Auctions, Chapter 4, 99-114, MIT Press, 2006.

"Dynamic Auctions in Procurement," (with Lawrence M. Ausubel) in Nicola Dimitri, Gustavo Piga, and Giancarlo Spagnolo (eds.) Handbook of Procurement, Cambridge, England: Cambridge University Press, 2006.

"How Best to Auction Oil Rights," in Macartan Humphreys, Jeffrey Sachs, Joseph Stiglitz (eds.), Escaping the Resource Curse, forthcoming 2006.

"A Capacity Market that Makes Sense," (with Steven Stoft) Electricity Journal, 18, 43-54, August/September 2005.

"Review of the Proposed Reserve Markets in New England," (with Hung-po Chao and Robert Wilson) White Paper, Market Design Inc., January 2005.

"Auctioning Many Divisible Goods," (with Lawrence M. Ausubel) Journal of the European Economic Association, 2, 480-493, April-May 2004.

"Competitive Bidding Behavior in Uniform-Price Auction Markets," Proceedings of the Hawaii International Conference on System Sciences, January 2004.

"Vickrey Auctions with Reserve Pricing," (with Lawrence M. Ausubel) Economic Theory, 23, 493-505, April 2004. Reprinted in Charalambos Aliprantis, et al. (eds.), Assets, Beliefs, and Equilibria in Economic Dynamics, Berlin: Springer-Verlag, 355-368, 2003.

"Competitive Bidding Behavior in Uniform-Price Auction Markets," Report before the Federal Energy Regulatory Commission, March 2003.

"Rebuttal Addendum: Assessment of Submissions of the California Parties," Report before the Federal Energy Regulatory Commission, March 2003.

"Electricity Market Design: The Good, the Bad, and the Ugly," *Proceedings of the Hawaii International Conference on System Sciences*, January, 2003.

"Collusive Bidding in the FCC Spectrum Auctions," (with Jesse Schwartz) *Contributions to Economic Analysis & Policy*, 1:1, www.bepress.com/bejeap/contributions/vol1/iss1/art11, 2002.

"Demand Reduction and Inefficiency in Multi-Unit Auctions," (with Lawrence M. Ausubel) Working Paper, University of Maryland, July 2002.

"Spectrum Auctions," in Martin Cave, Sumit Majumdar, and Ingo Vogelsang, eds., *Handbook of Telecommunications Economics*, Amsterdam: Elsevier Science B.V., Chapter 14, 605-639, 2002.

"Tradeable Carbon Permit Auctions: How and Why to Auction Not Grandfather," (with Suzi Kerr) *Energy Policy*, 30, 333-345, 2002.

"Pricing in the California Power Exchange Electricity Market: Should California Switch from Uniform Pricing to Pay-as-Bid Pricing?" (with Alfred E. Kahn, Robert H. Porter, and Richard D. Tabors), Blue Ribbon Panel Report, California Power Exchange, January 2001.

"Uniform Pricing or Pay-as-Bid Pricing: A Dilemma for California and Beyond," (with Alfred E. Kahn, Robert H. Porter, and Richard D. Tabors), *Electricity Journal*, 70-79, July 2001.

"How Affirmative Action at the FCC Auctions Decreased the Deficit," (with Ian Ayres) in Ian Ayres, ed., *Pervasive Prejudice? Unconventional Evidence of Race and Gender Discrimination*, Chicago: University of Chicago Press, 315-395, 2001.

"Lessons Learned from the UK 3G Spectrum Auction." In U.K. National Audit Office Report, *The Auction of Radio Spectrum for the Third Generation of Mobile Telephones*, Appendix 3, October 2001.

"A Review of Markets for Clean Air: The U.S. Acid Rain Program," *Journal of Economic Literature*, 38, 627-633, September 2000.

"Eliminating the Flaws in New England's Reserve Markets," (with Jeffrey Lien) Working Paper, University of Maryland, March 2000.

"Review of the Reserves and Operable Capability Markets: New England's Experience in the First Four Months," White Paper, Market Design Inc., November 1999.

"Collusive Bidding: Lessons from the FCC Spectrum Auctions," (with Jesse Schwartz) *Journal of Regulatory Economics*, 17, 229-252, May 2000.

"The Optimality of Being Efficient," (with Lawrence M. Ausubel) Working Paper, University of Maryland, March 2001.

"The Role of the ISO in U.S. Electricity Markets: A Review of Restructuring in California and PJM," (with Lisa Cameron) *Electricity Journal*, 71-81, April 1999.

"A Review of ISO New England's Proposed Market Rules," (with Robert Wilson) White Paper, Market Design Inc., September 1998.

Maryland Auction Conference, May 29-31, 1998.

"Auctioning Securities," (with Lawrence M. Ausubel) Working Paper, University of Maryland, March 1998.

Simultaneous Ascending Auctions with Package Bidding, (with John McMillan, Paul Milgrom, Bradley Miller, Bridger Mitchell, Daniel Vincent, and Robert Wilson) Report to the Federal Communications Commission, March 1998.

"Efficient Relocation of Spectrum Incumbents," (with Evan Kwerel and John Williams) *Journal of Law and Economics*, 41, 647-675, October 1998.

"The Distributional Effects of Carbon Regulation," (with Suzi Kerr) in Thomas Sterner (ed.) *The Market and the Environment*, Cheltenham, United Kingdom: Edward Elgar, chapter 12, 1999.

"Ascending Auctions," *European Economic Review*, 42:3-5, 745-756, May 1998.

"The Efficiency of the FCC Spectrum Auctions," *Journal of Law and Economics*, 41, 727-736, October 1998.

"Auctions and Takeovers," *New Palgrave Dictionary of Economics and the Law*, Peter Neuman (ed.), London: MacMillan Press, 1, 122-125, 1998.

Package Bidding for Spectrum Licenses, (with John McMillan, Paul Milgrom, Bradley Miller, Bridger Mitchell, Daniel Vincent, and Robert Wilson) Report to the Federal Communications Commission, October 1997.

Auction Design Enhancements for Non-Combinatorial Auctions, (with John McMillan, Paul Milgrom, Bradley Miller, Bridger Mitchell, Daniel Vincent, and Robert Wilson) Report to the Federal Communications Commission, September 1997.

"The FCC Spectrum Auctions: An Early Assessment," *Journal of Economics and Management Strategy*, 6:3, 431-495, 1997. Reprinted in Donald L. Alexander (ed.), *Telecommunications Policy*, Praeger Publishers, 1997.

"Synergies in Wireless Telephony: Evidence from the Broadband PCS Auctions," (with Lawrence M. Ausubel, R. Preston McAfee, and John McMillan) *Journal of Economics and Management Strategy*, 6:3, 497-527, 1997.

"Auction Design for Standard Offer Service," (with Andrew Parece and Robert Wilson) Working Paper, University of Maryland, July 1997.

"Using Auctions to Divest Generation Assets," (with Lisa J. Cameron and Robert Wilson) *Electricity Journal*, 10:10, 22-31, December 1997.

"Deficit Reduction Through Diversity: How Affirmative Action at the FCC Increased Auction Competition," (with Ian Ayres) *Stanford Law Review*, 48:4, 761-815, 1996.

"Money Out of Thin Air: The Nationwide Narrowband PCS Auction," *Journal of Economics and Management Strategy*, 4, 267-343, 1995.

"The Case for Affirmative Auction: From Conscience to Coffers," (with Ian Ayres) *New York Times*, 21 May 1995, F13.

"Using Auction Theory to Inform Takeover Regulation," (with Alan Schwartz) *Journal of Law, Economics, and Organization*, 7, 27-53, 1991.

"Dissolving a Partnership Efficiently," (with Robert Gibbons and Paul Klemperer) *Econometrica*, 55, 615-632, 1987. Reprinted in Paul Klemperer (ed.), *The Economic Theory of Auctions*, Volume 2, Cheltenham, UK: Edward Elgar, 2000.

Research on Bargaining

"ESOP Fables: The Impact of Employee Stock Ownership Plans on Labor Disputes," (with Hamid Mehran and Joseph Tracy) Working Paper, University of Maryland, September 2005.

"Unions, Bargaining and Strikes," (with Joseph S. Tracy) in John T. Addison and Claus Schnabel, eds., *International Handbook of Trade Unions*, Cheltenham, UK: Edward Elgar, Chapter 4, 86-117, 2003.

"Bargaining with Incomplete Information," (with Lawrence M. Ausubel and Raymond J. Deneckere), Robert J. Aumann and Sergiu Hart, eds., *Handbook of Game Theory*, Vol. 3, Amsterdam: Elsevier Science B.V., Chapter 50, 1897-1945, 2002.

"The Effect of Collective Bargaining Legislation on Strikes and Wages," (with Morley Gunderson and Joseph S. Tracy) *Review of Economics and Statistics*, 81:3, 475-487, 1999.

"Impacts of Strike Replacement Bans in Canada," (with Morley Gunderson and Joseph S. Tracy), *Labor Law Journal*, 50:3, 173-179, Fall 1999.

"The Use of Strike Replacements in Union Contract Negotiations: the U.S. Experience 1980-1989," (with Joseph S. Tracy) *Journal of Labor Economics*, 16:4, 667-701, 1998.

"Efficient Relocation of Spectrum Incumbents," (with Evan Kwerel and John Williams) *Journal of Law and Economics*, 41, 647-675, October 1998.

"Deception and Mutual Trust: A Reply to Strudler," (with J. Gregory Dees) *Journal of Business Ethics*, 5, 813–822, 1995. Reprinted in Carrie Menkel-Meadow and Michael Wheeler (eds.), *What's Fair*, John Wiley & Sons, 2004.

"Wage Bargaining with Time-Varying Threats," (with Joseph S. Tracy), *Journal of Labor Economics*, 12, 594–617, 1994.

"The Determinants of U.S. Labor Disputes," (with Joseph S. Tracy), *Journal of Labor Economics*, 12, 180–209, 1994.

"Promoting Honesty in Negotiation: An Exercise in Practical Ethics," (with J. Gregory Dees) *Business Ethics Quarterly*, 3, 359–394, 1993. Reprinted in Patricia Werhane and Tom Donalson, *Ethical Issues in Business: A Philosophical Approach*, Prentice-Hall, 1996, and Carrie Menkel-Meadow and Michael Wheeler (eds.), *What's Fair*, John Wiley & Sons, 2004.

"Strikes and Holdouts in Wage Bargaining: Theory and Data," (with Joseph S. Tracy) *American Economic Review*, 82, 100–121, 1992. Reprinted in Bengt Holmstrom, Paul Milgrom, and Alvin E. Roth (eds.), *Game Theory in the Tradition of Bob Wilson*, Berkeley Electronic Press, www.bepress.com/wilson, May 2002.

"Strategic Delay in Bargaining with Two-Sided Uncertainty," *Review of Economic Studies*, 59, 205–225, 1992.

"Dynamic Bargaining with Transaction Costs," *Management Science*, 37, 1221–1233, 1991.

"Shrewd Bargaining on the Moral Frontier: Toward a Theory of Morality in Practice," (with J. Gregory Dees) *Business Ethics Quarterly*, 1, 135–167, 1991.

"Sequential Bargaining Mechanisms," in *Game-Theoretic Models of Bargaining*, Alvin Roth (ed.), Cambridge University Press, Chapter 8, 149–179, 1985.

"Bargaining with Incomplete Information: An Infinite-Horizon Model with Two-Sided Uncertainty," *Review of Economic Studies*, 51, 579–593, 1984.

Other Research

"Ratifiable Mechanisms: Learning from Disagreement," (with Thomas R. Palfrey) *Games and Economic Behavior*, 10, 255–283, 1995.

"Relational Investing and Agency Theory," (with Ian Ayres) *Cardozo Law Review*, 15, 1033–1066, 1994.

"Cartel Enforcement with Uncertainty About Costs," (with Thomas R. Palfrey) *International Economic Review*, 31, 17–47, 1990. Reprinted in Stephen W. Salant and Margaret C. Levenstein (eds.), *Cartels*, Volume 1, Cheltenham, UK: Edward Elgar, 2005.

"Nonrandom Mixing Models of HIV Transmission," (with Edward Kaplan, and A. David Paltiel) in *Mathematical and Statistical Approaches to AIDS Epidemiology*, edited by Carlos Castillo-Chávez, *Lecture Notes in Biomathematics Series*, Springer-Verlag, 218–239, 1989.

Research Grants

- "Dynamic Matching Mechanisms," National Science Foundation, August 2005 to July 2008, \$264,188.
- "Slot Auctions for U.S. Airports," Federal Aviation Administration, Department of Transportation, September 2004 to August 2005, \$309,729.
- "Rapid Response Electronic Markets for Time-Sensitive Goods," National Science Foundation, July 2002 to June 2005, \$2,000,000.
- "Multiple-Item Auctions," National Science Foundation, July 2001 to June 2004, \$313,872.
- "Auctions for Multiple Items," National Science Foundation, April 1998 to March 2001, \$318,175.
- "Auctions and Infrastructure Conference," National Science Foundation, April 1998 to March 1999, \$25,000.
- "Auctions and Infrastructure," World Bank, March-June 1998, \$25,000.
- "Applying Strategic Bargaining Models to Union Contract Negotiations," National Science Foundation, April 1995 to March 1998, \$143,637.
- "Applying Strategic Bargaining Models to Union Contract Negotiations," National Science Foundation, April 1992 to March 1994, \$177,760.
- "Strikes and Delays in Wage Bargaining: Theory and Data," National Science Foundation, April 1990 to March 1992, \$153,407.
- "Gaming Exercises in Negotiation and Dispute Resolution," National Institute of Dispute Resolution, July to August 1988, \$6,000.
- "The Role of Time and Information in Bargaining," National Science Foundation, July 1986 to June 1988, \$40,000.
- "Public Sector Cases on Negotiation," Mellon Foundation, July to August 1985, \$12,000.

Editorial and Public Service

- Journal of Industrial Economics*, Associate Editor, 1998-present.
- Member, RTO Futures (a working group of economists, executives, and government leaders to address critical issues in electricity restructuring), 2000-present.
- Panelist, National Science Foundation, Economics, 1999-2002.
- Panelist, National Science Foundation, Electricity Power System Efficiency and Security, 2002.
- Program Committee Chair, *North American Econometric Society Summer Meetings*, June 21-24, 2001.
- Panelist, National Science Foundation, Knowledge and Distributed Intelligence, 1998.

Referee for

American Economic Review, American Political Science Review, Cambridge University Press, Econometrica, Economic Inquiry, Economic J, Economic Letters, Economic Theory, Energy J, Games & Economic Behavior, Group Decision & Negotiation, International Economic Review, International J of Game Theory, J of Business, J of Business & Economic Statistics, J of Conflict Resolution, J of Economic Theory, J of Economic Surveys, J of Economics & Management Strategy, J of Industrial Economics, J of Labor Economics, J of Law and Economics, J of Law, Economics & Organization, J of Political Economy, J of Public Economics, J of Regulatory Economics, Labour Economics, Management Science, Mathematical Social Sciences, Marketing Science, MIT Press, National Institute for Dispute Resolution, National Science Foundation, Omega, Operations Research, OPSEARCH, Quarterly J of Economics, Rand J of Economics, Research in Experimental Economics, Review of Economic Studies, Scandinavian J of Economics, Science, Social Choice & Welfare, Southern Economic J.

Recent PhD Committees Chaired (Initial Placement)

Martin Ranger, May 2005 (Indiana University)
Jeffrey Lien, August 2001 (US Department of Justice)
Allan Ingraham, May 2001 (Criterion Auctions)
Jesse Schwartz, August 1999 (Vanderbilt University)
Laurent Martin, July 1999 (University of Washington)

Entrepreneurship and Consulting

Chairman, Market Design Inc. (with Lawrence Ausubel, R. Preston McAfee, John McMillan, Paul Milgrom, and Robert Wilson), a consulting firm that works with governments and companies in designing and implementing state-of-the-art auctions, 1995 to present (President since 8/99, Chairman since 9/03). Major projects:

- Design auction and suggest market reforms for British Columbia timber market.
- Design and implement auction to sell electricity capacity in France for Electricite de France and in Belgium for Electrabel.
- Design and implement auction to sell gas capacity in Germany and France.
- Design and implement U.K. auction to procure greenhouse gas emission reductions.
- Design and implement spectrum auctions in U.S., Canada and Mexico.
- Comment on design of spectrum auctions in Australia and U.S.
- Design and implement electricity auctions in California and New England
- Design auctions to divest electricity generation plants and power purchase agreements in U.S. and Canada.

President and Founder, Criterion Auctions (with Robert Crandall, Greg Sidak, and Hal Singer), a consulting firm that provides auction support services to governments and companies in high-stake auctions. 12/00 to present.

Chairman and Founder, Spectrum Exchange (with Lawrence Ausubel, Paul Milgrom, and Market Design Inc.), a firm to create value for the public by promoting the efficient exchange of spectrum. 12/99 to present.

Expert Reports, Affidavits, and Testimony

New England Power Pool, Federal Energy Regulatory Commission, "Review of the Proposed Reserve Markets in New England," (with Hung-po Chao and Robert Wilson) Market Design Inc., January 2005.

U.S. Department of Defense, "Estimating Auction Revenues for the Proposed FCC Sale of 3G Spectrum for Broadband and Advanced Wireless Services," Criterion Auctions, December 2003.

Expert Report of Peter Cramton, *D. Lamar DeLoach, et al. v. Philip Morris, Inc., et al.*, Civil Action No. 00-CV-1253, United States District Court, Middle District of North Carolina. October 2003. For R.J. Reynolds. Concluded that R.J. Reynolds did not collude in U.S. tobacco auctions during the class period.

Supplier Behavior in California Energy Crisis, Federal Energy Regulatory Commission, Docket Nos. EL00-95-075 and EL00-98-063, "Competitive Bidding Behavior in Uniform-Price Auction Markets," March 2003. For Duke Energy.

Supplier Behavior in California Energy Crisis, Federal Energy Regulatory Commission, Docket Nos. EL00-95-075 and EL00-98-063, "Rebuttal Addendum: Assessment of Submissions of the California Parties," March 2003. For Duke Energy.

U.S. Department of Transportation, Docket Nos. FAA-2001-9852, FAA-2001-9854, "Comments on Alternative Policy Options for Managing Capacity and Mitigating Congestion and Delay at LaGuardia Airport," June 2002. Recommending auctions to manage congestion at LaGuardia.

Verizon Wireless Petition for Permanent Forbearance from CMRS Number Portability, Federal Communications Commission, WT Docket No. 01-184, "Declaration of Peter Cramton," February 2002. Comments in support of wireless number portability. For Leap Wireless.

ISO New England, Docket No. ER02, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton," February 2002. Comments on proposed changes to how the energy clearing price is calculated. For ISO New England.

2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services, WT Docket No. 01-14, Federal Communications Commission, "Ex Parte Declaration of Peter Cramton," October 2001. Further comments on the CMRS spectrum cap. For Leap Wireless.

ISO New England, Docket No. EL00-62-015, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton," June 2001. Comment on modifications to installed capability market. For ISO New England.

2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services, WT Docket No. 01-14, Federal Communications Commission, "Declaration of Peter Cramton," April 2001. Comments on the CMRS spectrum cap. For Leap Wireless.

C and F Block Broadband PCS Auction, Federal Communications Commission, "Declaration of Peter Cramton," March 2001. Comments on the impact of fronts in the C and F Block Broadband PCS auction.

"Lessons Learned from the UK 3G Spectrum Auction," May 2001. An expert report on the UK 3G Spectrum Auction. For UK National Audit Office.

"Market Effectiveness Assessment," (with Jeffrey Lien) May 2001. An expert report assessing the effectiveness of the electricity restructuring plan in Ontario. For Transcanada.

First Millennium Communications, Inc. and Barbara Laurence vs. Entravision Communications Company, No. 1420009074, "Expert Report of Peter Cramton," May 2001. Comment on the value of clearing rights for broadcast television stations 59 to 69. For First Millennium Communications and Barbara Laurence.

Pacific Communications vs. American Wireless, Superior Court of Fulton County, Georgia, No. 2000CV20099, "Reply Declaration of Peter Cramton," April 2001. Further comments on the impact of a delayed sale of spectrum license by Pacific Communication. For American Wireless.

Pacific Communications vs. American Wireless, Superior Court of Fulton County, Georgia, No. 2000CV20099, "Expert Affidavit of Peter Cramton," February 2001. Comments on the impact of a delayed sale of spectrum license by Pacific Communication. For American Wireless.

"Lessons from the United States Spectrum Auctions," Prepared Testimony of Peter Cramton before the United States Senate Budget Committee, February 2000.

New England Power Pool, Docket No. EL00-83-000, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton," July 2000. Comment on deficiency charge in installed capability market. For ISO New England.

NSTAR Services Company vs. New England Power Pool, Docket No. EL00-83-000, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton," June 2000. Further comments on energy price cap as a response to design flaws. For ISO New England.

NSTAR Services Company vs. New England Power Pool, Docket No. EL00-83-000, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton," June 2000. Comments on energy price cap as a response to design flaws. For ISO New England.

New England Power Pool, Docket No. EL00-62-000; ER00-2052-000, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton," May 2000. Comments on installed capability market. For ISO New England.

New England Power Pool, Docket No. ER00-2016-000, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton," April 2000. Comments on one-part vs. three-part bidding in energy market. For ISO New England.

New England Power Pool, Docket No. ER99-4536-000, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton." October 1999. Summary of review of reserves and operable capability markets. For ISO New England.

New England Power Pool, Docket No. OA97-237-000, Federal Energy Regulatory Commission, "Affidavit of Peter Cramton." October 1998. Reply to comments on review of rules. For ISO New England.

New England Power Pool, Docket No. OA97-237-000, Federal Energy Regulatory Commission, "A Review of ISO New England's Proposed Market Rules." (with Robert Wilson), September 1998. For ISO New England.

Best Digital vs. U.S. West, American Arbitration Association, Denver Office, No. 77 181 00204 97, "Expert Report of Peter C. Cramton," September 1998. Determine the value of spectrum licenses won by Best Digital in the C-block Broadband PCS auction. For Best Digital.

NextWave vs. Antigone and Devco, Petition to Deny License Proceedings, Federal Communications Commission, "Statement on the Effect of NextWave's Participation in the C-block Auction on Antigone and Devco." March 1997. For Antigone and Devco.

NextWave vs. Antigone and Devco, Petition to Deny License Proceedings, Federal Communications Commission, "Reply Statement on the Effect of NextWave's Participation in the C-block Auction on Antigone and Devco." April 1997. For Antigone and Devco.

Personal

Born on 12 November 1957

Married to Catherine Durnell Cramton

ATTACHMENT 5

**NEPOOL PARTICIPANTS COMMITTEE
MARCH 3, 2006 MEETING
VOTE TALLY
LICAP SETTLEMENT AGREEMENT**

TOTAL

| SECTOR | VOTE |
|-----------------------|--------------|
| GENERATION | 17.07 |
| TRANSMISSION | 9.75 |
| SUPPLIER | 11.38 |
| ALTERNATIVE RESOURCES | 14.67 |
| PUBLICLY OWNED ENTITY | 17.07 |
| END USER | 8.53 |
| % IN FAVOR | 78.46 |

SUPPLIER SECTOR

| Participant Name | Vote |
|--|----------|
| BOC Energy Services, Inc. | O |
| Citadel Energy Products, LLC | A |
| Constellation Energy Commodities Group, Inc. | O |
| Cross Sound Cable Company, LLC | A |
| Edison Mission Marketing and Trading | A |
| El Paso Merchant Energy, LP | A |
| Energy America, LLC | O |
| Epic Merchant Energy, L.P. | F |
| Exelon Generation, LLC | F |
| H.Q. Energy Services (U.S.) Inc. | F |
| LIPA | A |
| NRG Power Marketing, Inc. | F |
| PPL EnergyPlus, LLC | A |
| PPM Energy Inc. | F |
| Strategic Energy Ltd. | F |
| Unitil Corporation Participant Cos. | A |
| IN FAVOR (F) | 6 |
| OPPOSED (O) | 3 |
| TOTAL VOTES | 9 |
| ABSTENTIONS (A) | 7 |

GENERATION SECTOR

| Participant Name | Vote |
|------------------------------------|-----------|
| ANP Funding I, LLC | F |
| Boston Generating, LLC | F |
| Consolidated Edison Energy, Inc. | F |
| Dominion Energy Marketing, Inc. | F |
| Duke Energy North America, LLC | F |
| Entergy Nuclear Generation Company | F |
| FPL Energy LLC | F |
| Lake Road Generating Company, LP | F |
| Milford Power Company, LLC | F |
| Millennium Power Partners | F |
| Mirant Energy Trading, LLC | F |
| TransCanada Power Marketing Ltd. | F |
| IN FAVOR (F) | 12 |
| OPPOSED (O) | 0 |
| TOTAL VOTES | 12 |
| ABSTENTIONS (A) | 0 |

ALTERNATIVE RESOURCES SECTOR

| Participant Name | Vote |
|--|----------|
| Renewable Generation Sub-Sector | |
| Calpine Energy Services, LP | F |
| Gas Recovery Systems, Inc. | F |
| Indeck Maine | F |
| Ridgewood Rhode Island | F |
| Distributed Generation Sub-Sector | |
| Pinpoint Power LLC | F |
| Seneca Energy II, LLC | F |
| Load Response Sub-Sector | |
| Conservation Services Group | F |
| Energy Federation Inc. | F |
| IN FAVOR (F) | 8 |
| OPPOSED (O) | 0 |
| TOTAL VOTES | 8 |
| ABSTENTIONS (A) | 0 |

TRANSMISSION SECTOR

| Participant Name | Vote |
|--------------------------------------|----------|
| Bangor Hydro-Electric Company | O |
| Boston Edison Company | O |
| Central Maine Power Company | O |
| New England Power Company | F |
| Northeast Utilities System Companies | F |
| The United Illuminating Company | F |
| Vermont Electric Power Company, Inc. | F |
| IN FAVOR (F) | 4 |
| OPPOSED (O) | 3 |
| TOTAL VOTES | 7 |
| ABSTENTIONS (A) | 0 |

ATTACHMENT 6

II. COST COMPARISON OF THE TRANSITION PAYMENTS UNDER THE SETTLEMENT AND LICAP

4. In my Prepared Rebuttal Testimony in this proceeding,¹ I provided projected LICAP clearing prices. To derive those estimates I used the then current data concerning Local Sourcing Requirements, Installed Capacity Requirements, available generation resources, and existing installed capacity. I also used the LICAP demand curve proposed by the ISO. The multi-year pricing model used to create these projections is the same as that used in the LICAP case and is described in the Prepared Rebuttal Testimony of Mark Karl filed in this proceeding.²

5. On May 9, 2005, in Docket No. ER05-715-000, the Commission issued an order which accepted revised Installed Capacity Requirements for the ISO for Power Year 2005/2006.³

6. In addition, since my February testimony was filed, the ISO has issued 2005 Regional System Plan ("RSP05"). The executive summary of this document was submitted to the Commission to provide background for the September 20, 2005 oral argument in this proceeding.⁴

¹ Prepared Rebuttal Testimony of David LaPlante, Exhibit No. ISO-23 at 60-62.1

² Prepared Rebuttal Testimony of Mark Karl, Exhibit No. ISO-39 at 49:20-57:16.

³ *ISO New England Inc.*, 111 FERC ¶61,185 (2005).

⁴ Notice of Proposed Speakers and Time allocation for Oral Argument, September 13, 2005.

7. In light of these and other developments, for purposes of this affidavit, I have updated the assumptions used in my earlier testimony to project LICAP prices. The projections in this affidavit assume:

1. the projections of Installed Capacity Requirements contained in RSP05;
2. the addition of 200 MW of capacity in Connecticut in 2007/08 in response to RFPs issued under recent legislation enacted in Connecticut;
3. the Local Sourcing Requirements set forth in Table 1 below;
4. the annual capacity imports set forth in Table 2 below; and
5. a Peak Energy Rent deduction to ensure that the comparison to transition payments is correct.

8. The LICAP price projections in this affidavit use the estimate of Local Sourcing Requirements shown in Table 1 below. The methodology used to derive these Local Sourcing Requirements is as described in my testimony in this proceeding.⁵

Table 1

| Local Sourcing Requirements (MW) | | | | |
|----------------------------------|---------|---------|---------|---------|
| Zone | 2006/07 | 2007/08 | 2008/09 | 2009/10 |
| Connecticut | 6169 | 6295 | 6466 | 6749 |
| NEMA/Boston | 2192 | 2202 | 2112 | 2352 |
| Rest of Pool | 12614 | 12719 | 12935 | 13159 |
| Maine | 0 | 0 | 0 | 0 |

⁵ Prepared Direct Testimony of David LaPlante, Exh No. ISO-1, at 38:8-43:12.

9. Table 2 below summarizes the annual capacity imports assumed for these projections.

Table 2
Annual Capacity Imports (MWs)

| | 2006/07 | 2007/08 | 2008/09 | 2009/10 | |
|-----------------|---------|---------|---------|---------|--|
| Connecticut | 0 | 0 | 0 | 0 | |
| NEMA Boston | 0 | 0 | 0 | 0 | |
| Rest of Pool | 360 | 600 | 600 | 600 | |
| Maine | 200 | 200 | 200 | 200 | |
| Total | 560 | 800 | 800 | 800 | |

10. In deriving these assumptions, capacity imports are assumed starting upon market implementation in 2006/07. Imports from New York were added when capacity prices in the Rest-of-Pool region reached \$5.00. Imports from New Brunswick, via Maine, were assumed when prices in Maine reached \$3.00. Imports from New York are limited to 600 MW and imports from New Brunswick are limited to 200 MW.

11. The following estimated LICAP prices result from applying updated assumptions described above to the demand curve approved in the Initial Decision:

Table 3

LICAP Clearing Price Less PER⁶

(\$Kw-Month)

| Zone | 2006/07 | 2007/08 | 2008/09 | 2009/10 |
|--------------|---------|---------|---------|---------|
| Connecticut | \$4.13 | \$5.14 | \$6.39 | \$11.15 |
| NEMA/Boston | \$4.13 | \$5.14 | \$6.39 | \$7.84 |
| Rest of Pool | \$4.13 | \$5.14 | \$6.39 | \$7.84 |
| Maine | \$4.13 | \$5.14 | \$6.39 | \$7.84 |

12. The following Table 4 shows the transition payment rates in the final settlement agreement. Transition payments, like LICAP payments, are made to all capacity resources.

Table 4

Transition Payment Rates

(\$Kw-Month)

| 2006/07 | 2007/08 | 2008/09 | 2009/10 |
|---------|---------|---------|---------|
| \$3.05 | \$3.05 | \$3.75 | \$4.10 |

⁶ The PER deduction was \$.48/kw-month, the same as that used in the LICAP price projections and described in Mr. David LaPlante's testimony, Exhibit ISO-NE 1 at page 23.

13. A comparison of Table 3 and Table 4 shows that the transition payment rates are significantly less than the projected LICAP prices. Table 5 summarizes how much lower the transition payments are than the projected price of LICAP for each year of the transition.

Table 5

Percentage Savings of Transition Agreement Compared to LICAP

| Year | Percentage reduction for Maine, NEMA Boston and Rest of Pool | Percentage reduction For Connecticut |
|---------|--|---|
| 2006/07 | 26% | 25% |
| 2007/08 | 41% | 40% |
| 2008/09 | 41% | 41% |
| 2009/10 | 48% | 63% |

14. It is worth noting that, in this price projection, as compared to the prior projections contained in the LICAP hearing record, due to transmission enhancements described in RSP05 that have increased the transfer limits into Southwest Connecticut by about 300 MW and the changes in the forecasted Installed Capacity Requirements, the pool clears all zones on a single price basis, except for Connecticut in the last year of the projections. This means that under these LICAP projections the Maine and NEMA/Boston zones, and for all years except one the Connecticut zones, would have paid the same price as the rest of the region. Since there is limited transmission out of Maine and a good deal of generation in Maine, some have speculated that Maine might be an export-constrained zone. These results show that Maine is in fact not an export-constrained zone and therefore appropriately pays the same prices as the rest of New England.

15. The Connecticut prices were based on the assumptions described above. However, there are possible transmission improvements and generation additions not yet included in RSP05 that may eliminate the need for a separate zone in Connecticut. The transmission enhancements, which would likely increase the transfer limits into Connecticut, are being investigated as part of the Southern New England Reinforcement Project but were not included in RSP05 because they are only in the initial planning stages. The studies did not include any additional generation that would be built pursuant to the forward reserve market filed by the ISO on February 6, 2006 (Docket No. ER06-613-000). If these transmission enhancements or additional generation pursuant to the forward reserve market materialize, then a separate zone for Connecticut may not be necessary and therefore, Connecticut's prices may be the same as the other regions in 2009/2010.

III. THE RANGE OF CAPACITY PRICES PERMITTED BY THE SETTLEMENT

16. Section III. G. 4. of the settlement provides that:

For the lesser of five [Forward Capacity Auctions ("FCAs")] or three successful FCAs: (a) if the Capacity Clearing Price is above 1.4 times [the Cost of New Entry ("CONE")], Existing Capacity shall be paid 1.4 times CONE, and New Capacity shall be paid the Capacity Clearing Price; and (b) the Capacity Clearing Price shall not fall below 0.6 times CONE.

17. As agreed upon in the settlement, the CONE for 2010/11 will be \$7.50/kW-mo. This means that the first year auction results will be between a floor price of \$4.50/kW-mo. and a ceiling price of \$10.50/kW-mo. for existing capacity.

ATTACHMENT 7

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Devon Power LLC, et al.) Docket No. ER03-563-000, et al.

NOTICE OF FILING

Take notice that on March 6, 2006, the Settling Parties¹ filed an Explanatory Statement of the Settling Parties and Request for Expedited Consideration (“Explanatory Statement”) and Settlement Agreement Resolving All Issues (“Settlement Agreement”) pursuant to Rule 602 of the Commission’s Rules of Practice and Procedure for approval by the Commission in the captioned proceedings. 18 C.F.R. § 385.602 (2005).

The filing was made under Docket Nos. ER03-563-000, -030, and -055. Copies of these materials were sent to all participants to this proceeding by electronic mail pursuant to the listserv established in this proceeding. The foregoing has also been served on the NEPOOL Participants Committee members by electronic mail, pursuant to section 17.11(e) of the NEPOOL Participants Agreement.

In accordance with Rule 602(f) of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.602(f), any person desiring to comment on this Settlement Agreement should file its comments with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, by March 27, 2006. Reply comments will be due no later than April 5, 2006. This filing is available for review at the Commission in the Public Reference Room or may be viewed on the Commission’s website at <http://www.ferc.gov> using the “eLibrary” link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance with any FERC Online service, please email ferconlinesupport@ferc.gov or call toll-free (866) 208-3676, for TTY, call (202) 502-8659.

Comment Date: March 27, 2006.

**Magalie R. Salas
Secretary**

¹ The parties to the Settlement Agreement as of the date of the Settlement Agreement are identified in Section V of the Explanatory Statement.

ATTACHMENT 8

In Reply Refer To:
ISO New England, Inc.
Docket Nos. ER03-563-000, *et al.*

Attn: Sherry A. Quirk
Sullivan & Worcester LLP
1666 K Street, NW
Washington, DC 20006

Dear Ms. Quirk:

On March 6, 2006, you filed a Settlement Agreement in the above-referenced dockets on behalf the Settling Parties in Docket Nos. ER03-563-000, *et al.*¹ Comments in this proceeding were filed by _____ on _____, 2006. Reply comments were filed by _____ on _____, 2006. On _____, 2006, the settlement judge certified the settlement to the Commission.

The subject settlement is in the public interest and is hereby accepted. The Commission's acceptance of this settlement does not constitute approval of, or precedent regarding, any principle or issue in this proceeding. The Commission retains the right to investigate the rates, terms and conditions under the just and reasonable and not unduly discriminatory or preferential standard of Section 206 of the Federal Power Act, 16 U.S.C. § 824e.

By direction of the Commission.

Secretary

Enclosure

cc: To All Parties

¹ The parties to the Settlement Agreement as of the date of the Settlement Agreement are identified in Section V of the Explanatory Statement.