

MEMORANDUM

Date April 30, 2010

TO: RHODE ISLAND DIVISION OF PUBLIC UTILITIES AND CARRIERS
FROM: DICK HAHN
SUBJECT: DOCKET NO. 4150 – NGRID’S RFP FOR LONG-TERM CONTRACTS WITH RENEWABLE ENERGY PROJECTS

At the request of the Rhode Island Division of Public Utilities and Carriers (“Division”), I have reviewed NGRID’s March 1, 2010 filing for Long-Term Contracts for Renewable Energy Projects Pursuant to Rhode Island General Laws Section 39-26-1 et seq. I have also reviewed the comments filed by Constellation on April 19, 2010. The purpose of this review was to assess NGRID’s compliance with the regulations and identify areas of non-compliance, if any, and to address the comments by Constellation. I will not address those aspects of the Company’s filing that are in compliance with the regulations. This memorandum summarizes the results of those reviews.

The NGRID filing of March 1, 2010 describes the Company’s plan for issuing annual RFPs to purchase the output from newly developed renewable energy projects. I believe that NGRID has prepared a professional RFP that largely complies with the Commission’s requirements. I note a few issues below where adjustments to the RFP should be made. I also agree with some of suggestions made by Constellation, and suggest that these modifications be incorporated in a final version of the RFP. Therefore, I will address Constellation’s comments first and then provide comments on the NGRID RFP.

Constellation has raised the following issues in its comments of April 19, 2010.

- NGRID should allow behind-the-meter solar installations where only RECs are sold to NGRID and the capacity and energy are used by the customer at the host location to reduce purchases from NGRID.
- Solar proposals should be evaluated against other solar proposals and not compared to other forms of renewable energy.
- NGRID should allow non-unit contingent bids, where the exact location and interconnection of solar project may not be known far enough in advance during the bid process.
- NGRID should change the minimum project size to 500KW from 1.0 MW for solar projects.
- The RFP should include specific requirements for milestones for completion and operational dates.
- Security requirements for behind-the-meter solar installations where only RECs are sold to NGRID should be lower than for other technologies.
- Certain sections of the RFP are not applicable or relevant to solar projects, and should be changed.

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I agree with Constellation that solar projects should be evaluated only against other solar projects. As noted in testimony in Docket No. 4111, PV solar is the most expensive renewable energy technology. Under the Commission's regulations, the amount of PV solar projects must be at least 3 MW of the 90 MW requirement. However, with the requirement of commercial reasonableness, it is unlikely that significant amounts above 3 MW will be procured. Since there are likely to be a good deal of interest in solar projects, there should be adequate competition among potential solar developers.

I also agree with Constellation that the minim size for a solar project should be less than 1 MW. The Company proposes to procure renewable energy purchases in equal-sized tranches over four years. This would mean that, if the Company limited its solar total to 3 MW, the amount procured in any given year would be 750 KW, which is less than 1.0 MW. Setting a minimum at 500 KW as suggested by Constellation might only allow one solar project to be selected each year. Based upon my review of solar projects in other jurisdictions, 250 KW seems like an appropriate minimum threshold level. This level will allow more than one solar project to be selected if their bids are attractive, but does not preclude one large solar project from winning the solicitation award.

Despite its initial intuitive appeal, I disagree with Constellation that this RFP should allow REC-only sales to NGRID. My reading of the Commission's regulations is that these regulations provide a process for a long-term purchase of all products (*i.e.*, energy, capacity, and RECs), so I believe that NGRID proposal on this point complies with those regulations. Section 4.1 of the Commission's regulations specifically states the contracts must be for the purchase of capacity, energy, and RECs.

Figure 1
Excerpt from Commission's Regulations

4.1 On or before July 1, 2010, each Electric Distribution Company is required to annually solicit proposals from Renewable Energy Developers and, provided Commercially Reasonable proposals have been received, enter into Long-Term Contracts for the purchase of capacity, energy and attributes from Newly Developed Renewable Energy Resources.

In addition, allowing REC-only sales would complicate NGRID's evaluation of bids. Suppose that two solar projects are proposed, and one project sells all three products to NGRID and the other sells only RECs. NGRID's RFP states that it will develop forecast of market prices and compare the net cost of each project (*i.e.*, PPA cost to NGRID less any market revenues over the life of the contract). It will be very difficult, if not impossible, to fairly compare two such projects.

I also disagree with Constellation that the provisions of the RFP regarding site control are onerous to solar developers. Since solar projects should only be evaluated against other solar projects, all proponents of roof-mounted solar projects face the same difficulty. The RFP allows a letter of intent as part of the proposal, with additional proof of site control to be provided according to a future milestone schedule. This requires only the minimum effort on the part of developers to at least identify suitable sites, and does not appear to be burdensome. With these and the above comments, I believe that the NGRID RFP adequately addresses the remainder of Constellation's comments.

With the acceptance of two of Constellation's suggestions discussed above and with a few additional, minor comments, provided below, I believe that the NGRID RFP is acceptable and should be approved.

NGRID should provide its forecast of markets prices, including the effects of future federal regulation of carbon dioxide emissions, in advance of the due date for responsive bids to the RFP. The RFP timeline does not allow a lot of time to evaluate bids, and therefore, even less time to evaluate the market prices that will be used in the evaluation. Receiving these forecasts earlier in the timeline will facilitate an orderly review of this important component of the RFP process.

The RFP does not provide much detail on how NGRID will determine if a proposal is commercially reasonable, or how it will quantify project risk and diversity of resources. If possible, these determinations should be better defined in the RFP.

The RFP timeline states that NGRID will review the bids received with the Division within five days of their receipt. The five-day milestone is taken from the Commission’s regulations. However, it is unclear from the NGRID RFP if the Division’s review of the proposals is to be completed within five days, or if NGRID must simply provide the Division with copies of the proposals received within five days. As shown in Table 1 below, five days, two of which could be weekend days, is insufficient except for only a cursory review. I suggest that this provision of the regulations in NGRID’s RFP be interpreted to mean that the Company must provide the Division with copies of the bids within five days after the submittal deadline. The Division should then have 30 days in which to conduct its review. Since the Company has 75 days after the receipt of the bids to select the short-listed bidders, allowing the Division 30 days for its review can easily be accommodated without altering the rest of the timeline.

Table 1
Example RFP Timeline

Activity	days	date	weekday
RFP issued by NGRID		7/1/2010	Thursday
Bidders conference	14	7/15/2010	Thursday
Developers to submit NOI	17	7/18/2010	Sunday
Deadline for submission of questions	17	7/18/2010	Sunday
Due date for submission of proposals	35	8/5/2010	Thursday
Review bids with Division	40	8/10/2010	Tuesday
Select Short-Listed Bidders	110	10/19/2010	Tuesday
Negotiate and execute contracts	155	12/3/2010	Friday
Submit contracts for Commission approval	185	1/2/2011	Sunday

Section 3.4 of the RFP appears to allow NGRID to accept certain proposals received after the submittal deadline, although the conditions under which such late proposals would be accepted are not specified. This should be changed to state that any proposal received after the deadline will be rejected.

The RFP seeks a Notice of Intent (“NOI”) to bid on the same schedule as the deadline for submitting questions. Some potential bidders may wish to see the responses to the questions before deciding whether or not to bid. The RFP does state that the submittal of an NOI does not mandate the submittal of a proposal. The RFP is unclear if a proposal can be submitted without an NOI or without attendance at the Bidder’s Conference. The RFP should be clarified to state that bidders may submit a proposal even if they did not submit an NOI or attend the Bidder’s Conference.

Lastly, regarding Appendix B – the Bidder Response forms, the content of section 10.6 and 10.7 appears to be duplicated in section 15. One of these could be removed.

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Richard S. Hahn

Principal Consultant

Mr. Hahn is a senior executive in the energy industry, with diverse experience in both regulated and unregulated Company. He joined La Capra Associates in 2004. Mr. Hahn has a proven track record of analyzing energy, capacity, and ancillary services markets; valuation of energy assets, developing and reviewing integrated resource plans, creating operational excellence, managing full P&Ls, and developing start-ups. He has demonstrated expertise in electricity markets, utility planning and operations, sales and marketing, engineering, business development, and R&D. Mr. Hahn also has extensive knowledge and experience in both the energy and telecommunications industries. He has testified on numerous occasions before the Massachusetts Department of Telecommunications and Energy, and also before FERC.

SELECTED EXPERIENCE – LA CAPRA ASSOCIATES

- Performed an assessment of plans to procure Default Service Power Supplies for a Rhode Island utility. Provided expert testimony before the Rhode Island Public Utilities Commission.
- Served as an advisor to Vermont electric utilities regarding the evaluation of new power supply alternatives.
- Conducted a review of Massachusetts electric utilities' proposal to construct, own, and operate large scale PV solar generating units. Served as an advisor to the Massachusetts Attorney General in settlement negotiations.
- Served as a key member of a La Capra Team evaluating wind generation RFPs in Oklahoma.
- Performed an assessment of plans to procure Default Service Power Supplies for Pennsylvania utilities. Provided expert testimony before the Pennsylvania Public Utilities Commission.
- Performed an assessment of a merchant generator proposal to construct, own, and operate 800 MW of large scale PV solar generating units in Maine.
- Analyzed proposed environmental upgrades to an existing coal-fired power plant in Wisconsin, including an economic evaluation of this investment compared to alternative supply resources. Provided expert testimony before the Public Service Commission of Wisconsin.
- Performed a study of non-transmission alternatives (NTAs) to a proposed set of transmission upgrades to the bulk power supply system in Maine.
- Served as a key member of the La Capra Team advising the Connecticut Energy Advisory Board (CEAB) on a wide range of energy issues, including integrated resources plan and the need for and alternatives to new transmission projects.
- Performed a study of non-transmission alternatives (NTAs) to a proposed set of

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transmission upgrades to the bulk power supply system in Vermont.

- Served as an advisor to the Delaware Public Service Commission and three other state agencies in the review of Delmarva Power & Light's integrated resource plan and the procurement of power supplies to meet SOS obligations.
- Served as an expert witness in litigation involving a contract dispute between the owner of a merchant powerplant and the purchasers of the output of the plant.
- Served as an advisor to the Maryland Attorney General's Office in the proposed merger between Constellation Energy and the FPL Group.
- Reviewed and analyzed outages for Connecticut utilities during the August 2006 heat wave. Prepared an assessment of utility filed reports and corrective actions.
- Conducted a study of required planning data and prepared forecasts of the key drivers of future power supply costs for public power systems in New England.
- Reviewed and analyzed Hawaiian Electric Company integrated resource plan and its DSM programs for the State of Hawaii. Prepared written statement of position and testified in panel discussions before the Hawaii Public Utility Commission.
- Assisted the Town of Hingham, MA in reviewing alternatives to improve wireless coverage within the Town and to leverage existing telecommunication assets of the Hingham Municipal Light Plant.
- Conducted an extensive study of distributed generation technologies, options, costs, and performance parameters for VELCO and CVPS.
- Analyzed and evaluated proposals for three substations in Connecticut. Prepared and issued RFPs to seek alternatives in accordance with state law.
- Performed an assessment of merger savings from the First Energy – GPU merger. Developed a rate mechanism to deliver the ratepayers share of those savings. Filed testimony before the PA PUC.
- Prepared long term price forecasts for energy and capacity in the ISO-NE control area for evaluating the acquisition of existing powerplants.
- Conducted an assessment of market power in PJM electricity markets as a result of the proposed merger between Exelon and PSEG. Developed a mitigation plan to alleviate potential exercise of market power. Filed testimony before the PA PUC.
- Performed a long-term locational installed capacity (LICAP) price forecast for the NYC zone of the NYISO control area for generating asset acquisition.
- Served as an Independent Evaluator of a purchase power agreement between a large mid-west utility and a very large cogeneration plant. Evaluated the implementation of amendments to the purchase power agreement, and audited compliance with very complex contract terms and operating procedures and practices.
- Performed asset valuation for energy investors targeting acquisition of major electric generating facility in New England. Prepared forecast of market prices for capacity and energy products. Presented overview of the market rules and operation of ISO-NE to investors.

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- Assisted in the performance of an asset valuation of major fleet of coal-fired electric generating plants in New York. Prepared forecast of market prices for capacity and energy products. Analyzed cost and operations impacts of major environmental legislation and the effects on market prices and asset valuations.
- Conducted an analysis of the cost impact of two undersea electric cable outages within the NYISO control area for litigation support. Reviewed claims of cost impacts from loss of sales of transmission congestion contracts and replacement power costs.
- Reviewed technical studies of the operational and system impacts of major electric transmission upgrades in the state of Connecticut. Analysis including an assessment of harmonic resonance and type of cable construction to be deployed.
- Conducted a review of amendments to a purchased power agreement between an independent merchant generator and the host utility. Assessed the economic and reliability impacts and all contract terms for reasonableness.
- Assisted in the development of an energy strategy for a large Midwest manufacturing facility with on-site generation. Reviewed electric restructuring rules, electric rate availability, purchase & sale options, and operational capability to determine the least cost approach to maximizing the value of the on-site generation.
- Assisted in the review of the impact of a major transmission upgrade in Northern New England.
- Negotiated a new interconnection agreement for a large hotel in Northeastern Massachusetts.

SELECTED EXPERIENCE – NSTAR ELECTRIC & GAS

President & COO of NSTAR Unregulated Subsidiaries

Concurrently served as President and COO of three unregulated NSTAR subsidiaries: Advanced Energy Systems, Inc., NSTAR Steam Corporation, and NSTAR Communications, Inc.

Advanced Energy Systems, Inc.

- Responsible for all aspects of this unregulated business, a large merchant cogeneration facility in Eastern Massachusetts that sold electricity, steam, and chilled water. Duties included management, operations, finance and accounting, sales, and P&L responsibility.

NSTAR Steam Corporation

- Responsible for all aspects of this unregulated business, a district energy system in Eastern Massachusetts that sold steam for heating, cooling, and process loads. Duties included management, operations, finance and accounting, sales, and P&L responsibility.

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NSTAR Communications, Inc.

- Responsible for all aspects of this unregulated business, a start-up provider of telecommunications services in Eastern Massachusetts. Duties included management, operations, finance and accounting, sales, and P&L responsibility.
- Established a joint venture with RCN to deliver a bundled package of voice, video, and data services to residential and business customers. Negotiated complex infeasible-right-to-use and stock conversion agreements.
- Installed 2,800 miles of network in three years. Built capacity for 230,000 residential and 500 major enterprise customers.
- Testified before the Congress of the United States on increasing competition under the Telecommunications Act of 1996.

VP, Technology, Research, & Development, Boston Edison Company

- Responsible for identifying, evaluating, and deploying technological innovation at every level of the business.
- Reviewed Electric Power Research Institute (EPRI), national laboratories, vendor, and manufacturer R&D sources. Assessed state-of-the-art electro-technologies, from nuclear power plant operations to energy conservation.

VP of Marketing, Boston Edison Company

- Promoted and sold residential and commercial energy-efficiency products and customer service programs.
- Conducted market research to develop an energy-usage profile. Designed a variable time-of-use pricing structure, significantly reducing on-peak utilization for residential and commercial customers.
- Designed and marketed energy-efficiency programs.
- Established new distribution channels. Negotiated agreements with major contractors, retailers, and state and federal agencies to promote new energy-efficient electro-technologies.

Vice President, Energy Planning, Boston Edison Company

- Responsible for energy-usage forecasting, pricing, contract negotiations, and small power and cogeneration activities. Directed fuel and power purchases
- Implemented an integrated, least-cost resource planning process. Created Boston Edison's first state-approved long-range plan.
- Assessed non-traditional supply sources, developed conservation and load-management programs, and purchased from cogeneration and small power-production plants.
- Negotiated and administered over 200 transmission and purchased power contracts.

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- Represented the company with external agencies. Served on the Power Planning Committee of the New England Power Pool.
- Testified before federal and state regulatory agencies.

EMPLOYMENT HISTORY

La Capra Associates, Inc. <i>Managing Consultant</i>	Boston, MA 2004 – present
Advanced Energy Systems, Inc. <i>President & COO</i>	Boston, MA 2001-2003
NSTAR Steam Corporation <i>President & COO</i>	Cambridge, MA 2001-2003
NSTAR Communications, Inc. <i>President & COO</i>	1995-2003
Boston Edison Company <i>VP, Technology, Research, & Development</i>	Boston, MA 1993-1995
<i>VP, Marketing, Boston Edison Company</i>	1991-1993
<i>Vice President, Energy Planning, Boston Edison Company</i>	1987-1991
<i>Manager, Supply & Demand Planning</i>	1984-1987
<i>Manager, Fuel Regulation & Performance</i>	1982-1984
<i>Assistant to Senior Vice President, Fossil Power Plants</i>	1981-1982
<i>Division Head, Information Resources</i>	1978-1981
<i>Senior Engineer, Information Resource Division</i>	1977-1978
<i>Assistant to VP, Steam Operations</i>	1976-1977
<i>Electrical Engineer, Research & Planning Department</i>	1973-1976

EDUCATION

Boston College <i>Masters in Business Administration</i>	Boston, MA 1982
Northeastern University <i>Masters in Science, Electrical Engineering</i>	Boston, MA 1974
Northeastern University <i>Bachelors in Science, Electrical Engineering</i>	Boston, MA 1973

PROFESSIONAL AFFILIATIONS

Director, NSTAR Communications, Inc.	1997-2003
Director, Advanced Energy Systems, Inc.	2001-2003
Director, Neuco, Inc.	2001-2003
Director, United Telecom Council	1999-2003

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Head, Business Development Division, United Telecom Council
Elected Commissioner – Reading Municipal Light Board
Registered Professional Electrical Engineer in Massachusetts

2000-2003
2005-present