



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Rhode Island Division of  
Public Utilities and Carriers  
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Warwick RI 02888  
(401) 941-4500

October 1, 2013

Luly Massaro, Commission Clerk  
Rhode Island Public Utilities Commission  
89 Jefferson Blvd.  
Warwick, RI 02888

**In Re: Review of Power Purchase Agreement- Champlain Wind, LLC  
Pursuant to R.I Gen. Laws §39-26 *et seq.*  
Docket No. 4437**

Dear Luly,

Please find for filing with the Public Utilities Commission, ten (10) copies of the Division of Public Utilities and Carriers, (the "Division") Memorandum by its consultant Richard Hahn of La Capra Associates related to the above captioned docket.

I appreciate your anticipated cooperation in this matter.

Very truly yours,

Jon G. Hagopian  
Senior Legal Counsel

cc: Stephen Scialabba



**To:** Rhode Island Public Utilities Commission

**From:** Richard Hahn and Carrie Gilbert, La Capra Associates, on behalf of the Division of Public Utilities and Carriers

**Re:** Purchased Power Agreement between National Grid and Champlain Wind, LLC, Docket 4437

**Date:** October 1, 2013

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On September 3, 2013, National Grid (“NGRID” or the “Company”) filed with the Rhode Island Public Utilities Commission (the “Commission”) a Purchased Power Agreement (“PPA”) with Champlain Wind, LLC (“Champlain Wind”) for the bundled power output from the Bowers Wind Project (“Bowers Wind Project”). The Rhode Island Division of Public Utilities and Carriers (“Division”) requested that La Capra Associates, Inc. review the PPA and provide comments for submission to the PUC, on behalf of the Division. This memorandum provides the results of La Capra Associates’ review of the PPA and associated analyses filed by NGRID.

### **Summary**

Based upon our review of the proposed PPA and the analyses provided by NGRID, we offer the following conclusions.

- The PPA was selected via a Commission-approved long-term procurement process for renewable projects through a competitive solicitation.
- According to the Company’s August 29, 2013 Summary Report to the Commission, the Bower’s Wind Project ranked highest based upon the final combined price and non-price criteria.
- Due to current transmission system limitations at Orrington, Maine, the project is not able to participate in the Forward Capacity Market at this time. As a result, capacity revenues are not included in the market comparison. If the project does qualify for capacity in the future and does receive capacity revenues, these additional benefits should be passed on the NGRID’s customers.

- ISO-NE introduced the possibility of negative offer prices in energy markets after the Company issued the RFP. This increases the amount that the Champlain Wind could be above market in a given hour, increasing the risk to ratepayers. We find that the expected project benefits outweigh this risk for this PPA.
- The project was denied a Maine Department of Environmental Protection Permit on August 5, 2013 due to sight impacts of the project. Champlain Wind plans to appeal, but obtaining approval is a significant challenge for the project.
- The Company compared the cost of the Bowers Wind Project PPA over its 15-year term of the contract to the cost of market purchases for energy and RECs using a market price forecast prepared by ESAI. A power contract whose prices are lower than the cost of purchases from ISO-NE markets is considered to be below market, a favorable outcome from the perspective of buyers - in this case Rhode Island ratepayers. A power contract whose prices are higher than the cost of purchases from ISO-NE markets is considered to be above market. NGRID concluded that the Bowers Wind Project PPA will cost less than market purchases over its term and therefore is expected to be below market. The ESAI market price forecast used in this comparison appears to be out of date. However, using lower energy and REC price forecasts did not change this conclusion. Therefore, it is reasonable to expect that this PPA will cost less than market purchases and be below market over its term.
- The terms and conditions in the PPA are reasonable.

Based upon the above, we recommend that the proposed PPA be approved.

### **Overview of the Project**

According to the testimony of Ms. Abrams, the Bowers Wind Project is a 48 MW (nameplate) land-based wind project to be located in Carroll Plant, Maine. The project will consist of 16, 3 MW Siemens turbines, with flexibility for the project to include 15, 3.5 MW turbines for a nameplate capacity of 49.5 MW. The Bowers Wind Project will be interconnected via an existing 38-mile 115 kV generator lead. The Keene Road Substation is the location for the 115 kV interconnection to the NEPOOL Pool Transmission Facilities.

NGRID sought proposals for the purchase of capacity, energy, and RECs via an RFP for long-term renewable contracts. NGRID sought such proposals to achieve 75% of the 90 MW renewable energy requirements by December 31, 2012.

In its response to NGRID's long-term renewable RFP, the Bowers Wind Project proposed a bundled price for energy, capacity and renewable energy certificates (RECs) of \$78.00 per MWH fixed without escalation over the 15-year PPA term for contractual deliveries at the Keene Road substation.

It is our understanding the Bowers Wind Project is not currently eligible for ISO-NE's Forward Capacity Market because of constraints in the transmission system at Orrington, Maine. This means that the Bowers Wind Project will not be able to provide capacity until these constraints are relieved. The seller is required to participate in future Forward Capacity Auctions, but will not be required to incur more than \$150,000 in out-of-pocket costs for any Network Upgrades to become a capacity resource.

It is also our understanding that NGRID will receive an incentive payment equivalent to 2.75% of all PPA payments, as provided for in Rhode Island state law

### **Negative Pricing**

On July 1, 2013, ISO-NE filed changes to the Transmission, Markets and Services Tariff with the Federal Energy Regulatory Commission. These changes include a revision to the ISO-NE market rules that would reduce the minimum offer price in the spot wholesale energy market from \$0/MWH to negative \$150/MWH. Allowing negative offer prices could increase the likelihood of negative Locational Marginal Prices ("LMPs").

This changes ratepayer exposure to above market costs in those hours per year when LMPs are very low, as it increases the amount by which the Champlain Wind PPA could be above market in a given hour. Consider an example in an hour when the LMP is zero as the result of a zero offer price. The amount by which the purchase in that hour is above market is the contract price minus the LMP. Prior to the change, the maximum above market exposure in such an hour

would be the \$78 per MWH PPA price less the \$0 per MWH LMP, or \$78/MWH. Now assume that a negative \$150 per MWH offer price is allowed and it results in an LMP of negative \$150 per MWH. In this example, the amount by which the purchase in this hour is above market becomes the \$78 per MWH PPA price minus a negative \$150 per MWH or \$228/MWH.

NGRID proposed a solution that would have put the risk of negative pricing on Champlain Wind. However, because the RFP was issued prior to the proposed change in the market rules, Champlain Wind's bid price did not include accepting this risk. Champlain Wind countered with a higher contract price to take on this risk. NGRID decided not to change the contract and to have ratepayers accept the risk associated with negative pricing.

In response to Division's Data Request 1-2, the Company states that there were 62 hours during the period July 1, 2012 to June 30, 2013 in which real time pricing in ISO-NE Maine Zone dropped to zero. If the price went to negative \$150 in each of these hours the ratepayer impact of the rule change would be approximately \$170,000.

In its recent RFP for renewable resources in Massachusetts, NGRID and the other electric utilities placed the risk of negative pricing on the power sellers. Ms. Abrams states that the Company intends to revisit this issue in the next renewable RFP in Rhode Island with the benefit of the Company's experience in Massachusetts.

Given the timing of the rule change, the importance of maintaining the integrity of the RFP process, and the relatively small degree of risk to ratepayers, we believe it is acceptable for the Champlain Wind PPA to place this risk on ratepayers. In future RFPs, NGRID should, and has agreed to, require power sellers to take on this risk.

### **DEP Permit**

Maine DEP issued an order denying a permit to Champlain Wind on August 5, 2013. This order found that the project would "significantly compromise views from a scenic resource of state or national significance (SRSNS) and would have unreasonable adverse effect on the scenic

character and existing uses rated to the scenic character of the resources.” The Order states that the Champlain Wind project was acceptable in all the other permit criteria.

At issue is the view of the project from the fifteen SRSNS within 8 miles of the project site. Fourteen of the SRSNS are designated “Great Ponds” and one is an historic property, the Springfield Congressional Church. It will be possible to see the project from eight of the Great Ponds. The Maine DEP hired a scenic expert, held a public hearing and visited the SRSNS. The DEP concluded that the impact on seven of the SRSNS would be medium and the impact on one SRSNS would be high. The DEP found that this impact was unreasonable.

Champlain Wind is expected to appeal this decision with the Maine DEP. Pursuant to Section 3.1 (a) of the PPA, Champlain Wind is required to obtain a permit from the Maine DEP by December 31, 2015. If Champlain Wind fails to obtain the Maine DEP Permit by this date and the Company decides to terminate the contract, then Champlain Wind is required to pay delay damages plus up to \$1,485,000 according to Section 9.3(b)(i).

### **Capacity Revenues**

The Bowers Wind Project is not currently eligible for participation in the ISO-NE Forward Capacity Market (“FCM”) because of constraints in the transmission system at Orrington, Maine. If these transmission constraints are eliminated in the future and the project becomes eligible for the FCM, the PPA calls for Champlain Wind to take commercially reasonable steps necessary to:

- (i) *to qualify the Facility for participation in the Forward Capacity Auctions (or reconfiguration auctions) as a New Capacity Resource or an Existing Capacity Resource (as applicable) with the maximum Seasonal Claimed Capability available for the Facility,*
- (ii) *to bid and clear in the Forward Capacity Auctions,*
- (iii) *to secure a Capacity Supply Obligation equivalent to the Seasonal Claimed Capability of the Facility,*
- (iv) *to avoid being de-listed from the Forward Capacity Market, and*

- (v) *to participate in every Capacity Commitment Period in the Forward Capacity Market covered by the remainder of the Services Term.*<sup>1</sup>

The Seller will not be required to incur more than \$150,000 in out-of-pocket costs for any Network Upgrades required to satisfy the above requirements.

### **Comparison to Market Prices**

The Company claims in its pre-filed testimony the Champlain Wind PPA will over its entire term be below market prices. The analysis it originally submitted as Exhibit 2 to the pre-filed testimony was for a fifteen year timeframe beginning in 2015, despite the fact that the project would not be online until 2017. In response to Commission DR 1-1, the Company provided an updated Exhibit 2 with a timeframe consistent with the expected timeframe. This analysis showed that the project would be below market for the length of the contract on the basis of the REC and energy revenue alone. The analysis showed that the project would be below market by about \$45/MWH.

The energy price forecast submitted by the company was developed in July 2012 and is therefore a year out of date. We have performed a sensitivity analysis using energy and REC price forecasts 30% lower than the Company's forecast in the Company's analysis and have found that the project is still expected to be below market for the life of the project.

### **Terms and Conditions**

We have reviewed the terms and conditions contained in the PPA and have no suggested changes at this time.

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<sup>1</sup> Power Purchase Agreement between the Narragansett Electric Company, D/B/A National Grid, as Buyer and Champlain Wind, LLC as Seller, August 2, 2103. Section 4.8 (b), page 29.