



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

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February 18, 2014

VIA FIRST CLASS MAIL AND ELECTRONIC MAIL:

Luly E. Massaro
Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, Rhode Island 02888

RE: Rhode Island Distributed Generation Standard:
Contract Board's Report and Recommendations :Docket No. 4288
Regarding 2014 Distributed Generation Classes,
Ceiling Prices and Targets

Dear Ms. Massaro:

Enclosed for filing on behalf of the Rhode Island Distributed Generation Standard Contract Board ("Board") is an original and ten (10) copies of the Responses to the Wind Energy Development, LLC's First Set of Data Requests dated January 28, 2014.

Electronic copies were sent to all persons named on the attached Service List and I will provide a hard copy to anyone who requests it. Thank you for your assistance.

Sincerely,

Daniel W. Majcher, Esq.

DWM/njr

Enclosure

c. Docket 4288 Service List

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

In re Rhode Island Distributed Generation Standard :
Contract Board's Report and Recommendations : Docket No. 4288
Regarding 2014 Distributed Generation Classes, :
Ceiling Prices and Targets :

OFFICE OF ENERGY RESOURCES AND THE DISTRIBUTED GENERATION
STANDARD BOARD'S RESPONSES TO WIND ENERGY DEVELOPMENT, LLC'S FIRST
SET OF DATA REQUESTS DATED JANUARY 7, 2014

WED 1-1

On January 15, 2014, the Rhode Island Office of Energy Resources (OER) responded to Wind Energy Development, LLC's (WED's) appealed denial of its public records request (the "Data Response") for "any and all data that the Distributed Generation Standard Contract Board received and may have considered in establishing the following ceiling price inputs for the CREST model for wind projects of 1.5 MW in size: capacity factor, federal tax credits, construction costs, lease expense, insurance." The Data Response stated that OER had responded to that request by providing a link to the Board's filing at issue in this docket and the minutes of the Board's meetings. Please provide copies of any other documents or materials and describe any additional communications that are referenced in the Board's response to request number 9 of the Commission's First Set Of Data Requests Directed to the R.I. Office Of Energy Resources.

In reference to the response provided to request #9 of the Commission's First Set of Data Requests, there are no additional documents or materials beyond what was already provided. Aside from the publically available documents filed by the Distributed Generation Standard Contract Board ("Board"), the Board and the Office of Energy Resources ("OER") provided additional documents to Wind Energy Development, LLC's ("WED") in response to a document request. These documents provided to WED were redacted in accordance with the Rhode Island Access to Public Records Act. In the interests of transparency to all parties involved, attached with this data response are copies of the documents provided to WED.¹

Also attached are documents submitted by WED to Sustainable Energy Advantage ("SEA"), but were not provided back to WED because it was assumed that these documents were already in WED's possession. Finally, three CREST model spreadsheets corresponding to the three federal incentives scenarios assessed for the 1 to 3 MW wind turbine class are being provided in

¹ The approved minutes from the Board's meetings are available on the Secretary of State's website.

response to a recent records request by WED. These CREST models were also provided to the Division of Public Utilities and Carriers and are attached.

WED 1-2

The Data Response to WED's request for "any and all data considered by the consultant Sustainable Energy Advantage in establishing the following ceiling price inputs for the CREST model for wind projects of 1.5 MW in size: capacity factor, federal tax credits, construction costs, lease expense, insurance" included fairly extensive documentation of stakeholder comment and other data considered by the consultant. Please produce or identify any of the specific data produced in response to WED's second request that was produced to the Board for its consideration in setting the ceiling prices.

The data produced for WED was collected during both the 2012 and 2013 proceedings. The data was collected by SEA and presented to OER² without attribution. Ceiling price inputs were then recommended to the Board along with a discussion of both the number of data responses received from stakeholders/other sources and the range of resulting values.

WED 1-3

The Data Response did not include all of the information WED filed with OER in response to its request for stakeholder input. Did the consultant consider all the information WED filed in response to the request for stakeholder input?

Both SEA, on behalf of the Board, and the OER considered all of the information filed by WED in response to the request for stakeholder input.

WED 1-4

Did the Board receive and consider all the information WED filed in response to the request for stakeholder input before approving the proposed ceiling prices?

The Board received first and second drafts of the developed CREST model ceiling prices that considered and took into account different stakeholders inputs into the ceiling price development, including information provided by WED. SEA as a consultant and agent working on behalf of the Board took into consideration the all the information filed by WED in developing its recommendations to the Board. The Board, after receiving public comment, voted and approved the recommendations for submission to the Commission.

WED 1-5

If OER or the Board did not receive and consider all the information WED filed in response to the request for stakeholder input before approving the proposed ceiling prices, please explain why not.

² Please note that the DG Standard Contracts Board was not in place during the 2012 proceeding.

All of the information provided by WED was considered, but not necessarily adopted. The Board followed the same exact process that was utilized by the OER during the development of the 2011, 2013 and 2013 DG programs and approved by the Commission. The Board selected and contracted with SEA due to their expertise on renewable energy policy design, cost modeling and economic feasibility analysis. The Board selected SEA to conduct outreach, collect information from interested stakeholders on modeling inputs, and develop the ceiling price recommendations on their behalf. SEA was contracted to analyze data on the Board's behalf and present results to both the Board and stakeholders. This methodology was described both at the time that SEA was selected and during SEA's public presentation introducing the CREST model to the Board.

SEA was made available to stakeholders by phone and email, and if necessary for face to face meetings. The OER and Board instructed SEA to consider all stakeholder input when developing ceiling price recommendations, which is what occurred in the evolution of ceiling price recommendations between the first, second, and final proposed draft 2014 ceiling prices. SEA participated in four (4) public meetings for the development of the 2014 DG program plans. In prior years, SEA had only participated in two (2) public meetings for each annual program.

WED 1-6

If the Board had all the information it needed to approve the ceiling prices at the December 2, 2013 meeting why did board members respond to WED's advocacy on its specific inputs at that meeting by stating that given the deadlines for filing with the Commission they had insufficient time to consider the details of the basis for the capacity factor and construction costs that the consultant had used in the CREST model?

SEA provided the Board with two drafts of the 2014 ceiling prices, including the suggested input assumptions for the modeling of the ceiling prices, and then a final draft of the recommended 2014 ceiling prices prior to the December 2, 2013 meeting. The final recommendations were presented to the Board by SEA at the December meeting. The proposed ceiling prices for each technology were provided by the OER to the Board in preparation for the public meetings. Individual Board members had significant lead time to review and ask SEA any questions on the input assumptions made into ceiling prices between the 1st draft and the final recommendations approved by the Board.

Although an individual board member or member(s) may have commented on the amount of time to consider information during a process subject to an aggressive statutory time period, the Board ultimately voted and adopted the recommendations notwithstanding the comments. SEA and OER, who considered all information and were extremely involved in the process, were present to provide responses raised by any of the stakeholders. Ultimately, after weighing SEA, OER, and stakeholder comments, the Board determined that sufficient adjustments had been made to the ceiling prices and increasing the wind turbine ceiling price more than what was calculated and proposed by SEA and OER would not be acceptable. The Board voted 4-0 on the proposed ceiling prices.

WED 1-7

If Board members did not have access to the data supporting the inputs on the capacity factor and total installed cost of 1.5 MW wind turbines developed in Rhode Island that the consultant used or resolved not to use in the CREST model, how could they vote on whether the price generated from the CREST model is a ceiling price that will allow an owner to invest in such a development with a reasonable rate of return?

As stated in the response to WED 1-5, the Board contracted with SEA to analyze and assess all information provided by stakeholders, due to their expertise in renewable energy, and present such analysis through multiple ceiling prices presentations at public meetings. Each public meeting presentation featured a complete list of the recommended CREST input values, and invited discussion on each item. It is the Board's position as evidenced by its December 2, 2013 vote, that the recommendations developed by SEA represent ceiling prices that would provide renewable energy developers with reasonable rates of return for cost effective projects. The policy objectives of the DG law are not intended to cater the design of a ceiling prices to a specified project in a particular geography or topography within the State. The Board did not develop annual ceiling price recommendations for a specific solar, wind, anaerobic digestion or small scale hydropower project or location. Rather, the Board considered the factors in accordance with the DG law to develop ceiling prices.

WED 1-8

As a follow up to your response to Commission 10, do the inputs for capacity factor and construction costs used in the crest model accurately reflect conditions for the development of 1.5 MW wind turbines in Rhode Island, thereby generating a ceiling price that will allow an owner to invest in such a development with a reasonable rate of return? If yes, provide a detailed explanation of your response.

The inputs for capacity factor and construction costs used in the CREST models provide a balanced representation of developed and proposed wind energy projects in the ISO-NE region, and pricing for standard contracts received during the previous program year. These inputs are not intended to represent a specific facility. It is well understood that in any representative modeling of cost effective projects, some inputs will be higher than actual values while others will be lower. In aggregate, these inputs are intended to produce a ceiling price recommendation that would allow an owner a reasonable rate of return on a cost-effective project. In this context, it is inappropriate to narrowly focus the discussion on a limited set of inputs.

WED 1-9

Please define the horizontal axes on all pages of the attached chart entitled "Monthly Production of MRET Wind Energy Systems > 100kw, produced with your Data Response"

The horizontal axes provide monthly production, in kWh.

WED 1-10

How did you and/or your consultant interpret the attached chart entitled "Monthly Production of MRET Wind Energy Systems > 100kw" to support a capacity factor of 26% for 1.5 MW wind turbines to be developed in Rhode Island?

The monthly production chart was not interpreted to support any particular hypothesis. This summary of actual historic production data was provided by the Massachusetts Clean Energy Center in response to one of the data requests made by SEA and OER. The MassCEC data were considered in conjunction with data filed by stakeholders and all other market participants over the three-year history of the DG Standard Contracts program. Historic production data from operating facilities expected to most closely resemble those that may be pursued in Rhode Island (under the 1 to 3 MW Standard Contract category) were weighted more heavily. For example, historic data from 1.5 MW wind turbines was weighted more than historic data from 100 kW turbines. In addition, MW-scale projects located in southeastern MA were assumed to have topography and wind resources more closely resembling RI than projects operating in the Berkshire Mountains of western MA, and were therefore weighted more heavily.

WED 1-11

Why was the data included in chart entitled "Monthly Production of MRET Wind Energy Systems > 100kw," deemed more compelling for the capacity factor for 1.5 MW turbines located in Rhode Island than the Rhode Island data WED provided?

The historic production data provided by MassCEC was not "deemed more compelling" than data provided by other sources. Data from all sources within a geographic region encompassing Rhode Island and southeastern Massachusetts (which were generally assumed to have similar wind resource potential and topographic qualities) were compiled to create a range of potential production outcomes for projects located in Rhode Island. Because electricity production is a cubic function of wind speed, optimizing wind resource potential is a critical component of site selection and economic viability. From this range of values, a capacity factor input was selected which is intended to represent a reasonable level of wind resource optimization during the siting and development process and not for a particular project location.

WED 1-12

Explain if and how the added cost referenced in the attached email from Jason Gifford dated October 22, 2012, that was produced with the Data Response ("albeit at a cost"), were factored into the CREST model for the total installed costs of 1.5 MW wind turbines in Rhode Island.

When the modeled capacity factor of 25% (for 2012 Ceiling Prices) was increased to 27.5% (for 2013 CPs), the corresponding modeled installed cost was increased from \$2,750/kW to \$3,200/kW (\$675,000 for a 1.5 MW project). The majority of this increase was to account for

the additional cost associated with technological improvements intended to optimize production in low wind speed regimes. In response to stakeholder feedback that such technological improvements may not be readily deployable in Rhode Island, the modeled capacity factor was reduced from 27.5% to 26% for the proposed 2014 Ceiling Prices. No corresponding reduction in installed costs was modeled, however, in recognition that the increasing expense and challenge of wind project development may either partially or fully replace the previously modeled technological improvements. In fact, the total project cost assumption increased between the 2013 and proposed 2014 CPs through an increase in the interconnection cost assumption from \$100/kW to \$200/kW³.

WED 1-13

Did OER, the Board or its consultants make a determination as to whether the Jamestown turbine location and/or a hub height of 70 meters or above represented typical conditions for Rhode Island, as presented in the attached document "Long Term Gross Energy Estimates at Jamestown, RI" produced with the Data Response?

The OER, Board and consultants recognize that it is not practical or appropriate to try to model individual projects for the purpose of proposing ceiling prices to the PUC. As such, each piece of information submitted by stakeholders – including the Jamestown data – was used to compile and consider a range of potential outcomes for each modeling variable. The recommended ceiling prices were based on modeling inputs estimated by the OER, Board and consultants to collectively (not individually) represent cost effective projects in Rhode Island.

WED 1-14

Did OER, the Board or its consultants give more weight to the estimated capacity factor numbers from Jamestown than they gave to actual capacity factor numbers from the Narragansett Bay Commission turbines, the North Kingstown turbine and the Rhode Island wind studies WED produced? If so, why was that capacity factor deemed more indicative of existing wind development conditions in Rhode Island?

The estimated capacity factor data provided by Jamestown was not weighted more heavily than data provided by other sources. Please see response to WED 1-11.

WED 1-15

Produce and explain any specific document generated with the Data Response or any other data supporting the "total installed cost" carried in the consultant's CREST model for 1.5 MW wind turbines and why it was deemed more persuasive than the actual construction costs of Rhode Island projects that WED produced.

The presentations made at the public meetings and circulated to stakeholders constitute the documents generated with the Data Response. The recommended CREST input for total

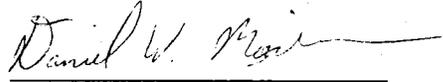
³ The draft proposed 2014 ceiling prices increases the interconnection cost from \$100/kW to \$150/kW, and the final proposed 2014 CPs increases the modeled interconnection cost again to \$200/kW.

installed cost is supported by stakeholder input from both the 2012 and 2013 proceedings, which included participants active in Rhode Island, Massachusetts, and the broader ISO-NE region.

Respectfully submitted,

The State of Rhode Island, Office of Energy Resources and the Distributed Generation Standard Contract Board.

By their attorney,

A handwritten signature in cursive script, appearing to read "Daniel W. Majcher", is written over a horizontal line.

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