STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: OFFICE OF ENERGY RESOURCES REPORT AND RECOMMENDATION REGARDING DISTRIBUTED GENERATION CLASSES AND CEILING PRICES

DOCKET NO. 4288

RHODE ISLAND OFFICE OF ENERGY RESOURCES' RESPONSES TO THE DIVISION OF PUBLIC UTILITIES AND CARRIERS FIRST SET OF DATA REQUESTS

(Issued December 24, 2012)

DIVISION REQUEST 1-2:

Please explain why the capital cost estimates are [lower] for the 750 kW subclass than for the 1.5 MW subclass.[1]

RESPONSE:

In general, wind technology is subject to strong scale economies as a function of both turbine size and number of turbines installed. The (corrected) question reflects the perspective of this conventional expectation. In this instance, the data available to the OER's consultants did not align with the expectation of scale economies. This may be in part due to a lack of comparable depth of data. While many 1.5 MW subclass turbines have been installed and proposed throughout the region, there are very few actual recent installations in the region in the 750 kW subclass range, and so there is very little available data. After Vestas withdrew its V47 turbine from the market a few years ago, there were virtually no offerings in the sub-1 MW wind turbine niche larger than the Northern Power 100 kW machine; only in the past two or so years have new entrants been available for the community wind market in this size range, and while the number of turbine choices in this range available to the U.S. community wind market is

[1] OER assumes that the Division meant "lower" and not "higher" as originally worded.

Response prepared by or under the supervision of
Robert C. Grace

increasing, with very few installed to date.

The capital cost figure used corresponds with the lowest data point available, provided by a manufacturer. No comments were provided during the stakeholder process critiquing this figure. While the limited available data is not of sufficient resolution to confirm this factor, a potential reason for the lower projected cost for the 750 kW subclass may derive from the smaller size of the machines. Anecdotally, installers have related to the OER's consultants that the smaller size turbines have a much lower installation cost than a single 1.5 MW subclass turbine, for example, requiring much smaller cranes (which are relatively plentiful, easier to move, and less expensive to hire), while larger machines require scarce cranes that can be difficult and expensive to hire for a single turbine installation. This is one reason that installers and manufacturers have been entering this size niche, which until recently had been devoid of any commercial offerings.

In contrast, for the 1.5 MW wind subclass, available data suggested that the capital costs used for setting ceiling prices in 2011 were unattainable: data suggested that the per-kW cost assumed in the 2011 analysis was only achievable in multiple turbine installations in this region, and that single turbines would be unable to achieve costs in that range. Of the data available for setting 2013 ceiling prices, OER's consultants used data from the lowest end of available data benchmarks (a figure below any of the recent single turbine installation data points and slightly above the actual per-kW cost for a recent 3 turbine installation). Data from the one 1.5MW class wind project previously proposed to National Grid under the Standard Offer program had a higher capital cost than used in either the analysis for setting 2013 ceiling prices.

We note that in determining the 2013 ceiling prices for the 1.5 MW wind subclass, while the capital cost was increased from that used in 2011, the capacity factor was also increased, offsetting most of the per-kWh price increase. The primary drivers for higher 2013 ceiling price for the 1.5 MW subclass turbine, however, is the loss of bonus depreciation and income tax credit in lieu of Production Tax Credit.

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DIVISION REQUEST 1-3:

Please indicate whether wind turbines between 101kw and 199kW are eligible for the DGSC program, given that no ceiling prices were shown in Exhibit A.

RESPONSE:

The small-scale wind turbine projects that have been installed in Rhode Island over the last several years include 100, 250, and 275 kW system sizes. The Office of Energy Resources hosted multiple public meetings and discussed the eligible technologies and system sizes. During that process, no wind turbines within the 101 and 199 kW range were proposed for participation in the DGSC program. In addition, we are unaware of any turbines on the market in this size range. Thus a ceiling price was not set for projects in this range.

Response prepared by or under the supervision of
Christopher Kearns

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DIVISION REQUEST 1-4:

Please explain how availability of funds from the renewable energy fund were incorporated into the LCOE estimates.

RESPONSE:

Funding from the Renewable Energy Fund (REF) was not factored into the 2013 DGSC ceiling prices. In December 2012, the REF program was revamped by the Economic Development Corporation and the Office of Energy Resources, with the objective of providing grants and loans for residential (capped at a 10 kW system size), small-scale commercial (capped at a 50 kW system size), and innovative renewable energy technology and research efforts. One of the objectives of the new REF program was to assist projects that could not utilize the DGSC program. The residential and small-scale commercial systems do not qualify for the DGSC program because of their size limits.

Response prepared by or under the supervision of
Christopher Kearns

CERTIFICATE OF SERVICE

I hereby certify that on the ____ day of December, 2012, that I transmitted an electronic copy of the within Responses to Data Requests to the attached service list and to Luly Massaro, Commission Clerk via electronic mail and regular mail.

_____

Docket No. 4288 – Office of Energy Resources Filings: 1) Proposed Distributed Generation (DG) Standard Contract Act Classes and Ceiling Prices; and 2) Proposed DG Standard Contract; and

Docket No. 4277 – National Grid – Distributed Generation Enrollment Application and Enrollment Process Rules

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