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January 23, 2020

SENT VIA FIRST CLASS MAIL AND ELECTRONIC MAIL:

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

RE: Docket No. 4983: The Office of Energy Resources (OER) response to Commission's Second Set of Data Requests directed to the Distributed Generation Board.

Dear Ms. Massaro:

Enclosed for filing on behalf of the Rhode Island Office of Energy Resources ["OER"] is an original and ten (10) copies of *the Commission's Second Set of Data Requests* directed to the Distributed Generation Board (Issued January 7, 2020).

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Daniel W. Majcher

Daniel W. Majcher

DWM/njr

Enclosure

c. Docket 4983 Service List

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: 2020 RENEWABLE ENERGY GROWTH – CLASSES, CEILING PRICES AND CAPACITY TARGETS AND 2020 RENEWABLE ENERGY GROWTH PROGRAM – TARIFFS AND SOLICITATION AND ENROLLMENT PROCESS RULES	:	DOCKET NO. 4983

COMMISSION'S SECOND SET OF DATA REQUESTS
DIRECTED TO THE DISTRIBUTED GENERATION BOARD
(Issued January 7, 2020)

Responses due January 23, 2020

Add on residential systems

2-1. National Grid has proposed tariff revisions to allow REG systems to be enrolled at residential sites where a renewable generation system already exists. Did (or will) the DG Board include the different revenue factors presented by allowing these additional systems (e.g., higher tax liability, additional interconnection costs, etc.) in developing ceiling prices?

National Grid currently allows existing REG system owners to add an additional REG solar system after two years. However, two years may be a long time to wait or an additional REG system may not make the most sense for the property owner. Additionally, solar installers come up with creative and often innovative solutions to what their customers want related to the design of the solar system or add on solar system. National Grid's proposal clarifies what is currently allowed for installers and their customers to move forward with additional solar capacity under the net metering program in addition to their existing REG system.

The number of customers that add on to their existing solar systems with either an add on REG system or a net metered system are relatively low. When National Grid presented this tariff change to the DG Board, it was viewed as a creative fix to a problem and to clarify existing processes that are allowed under existing tariffs. As such, the DG Board did not recommend that SEA perform additional analysis related to revenue factors for the 2020 program year.

Based upon experience gleaned from this solution being exercised in the coming year(s), the DG Board may consider supplemental analysis in future filings.

Response prepared by Shauna Beland, OER

2-2. Accepting the premise that it is possible for a residential customer to simultaneously enroll a net metering and REG facility up to the three-year usage limit, would the DG Board consider this design in setting recommending ceiling prices?

OER and the DG Board do not recommend factoring this scenario for the 2020 REG program. The rate for a new REG Small Solar facility is applied only to the new capacity enrolled in the program, and the rate on the existing or co-installed net metered capacity is paid on that output. The values paid support separate capacity.

Response prepared by Shauna Beland, OER

Capacity factors

2-3. Does the DG Board use the same capacity factors to develop ceiling prices as those used by National Grid for interconnection and program enrollment?

No. The Board uses a capacity factor that is consistent with SEA's experience of expected and actual performance of projects throughout the Northeast region. This is how SEA has developed the annual ceiling prices since 2011.

Response prepared by Jim Kennerly, SEA

2-4. Does the DG Board consider electric system outages when setting capacity factors for each system class and size?

See the answer to Question 2-3 above.

Response prepared by Jim Kennerly, SEA

Solar Carport Incentive (Carport Incentive)

2-5. The prefiled direct testimony of Jim Kennerly (Kennerly testimony) at lines 6 through 7 on Bates page 60, the witness says "Given that OER aims to mitigate the risk that local siting disputes could undermine the effectiveness of the REG program..."

a. Please provide the information OER supplied to the DG Board on which the witness bases this statement.

SEA doesn't have any information to provide, beyond that SEA is aware of OER's past and ongoing efforts to improve solar development and siting disputes in Rhode Island and attempting to balance the different stakeholder interests and perspectives.

SEA is also generally aware (through other consulting engagements, and the company's regulatory and policy tracking services) of a growing number of instances where local permitting challenges have created challenges or prohibited the development of ground-mounted solar projects on certain parcels (or in some cases, all parcels) under their jurisdiction.

Response prepared by Jim Kennerly, SEA

b. Please explain how the information provided in response to part a was used to support the witness's analysis of "Direct Value Category #2: Non-Carbon value of Open Space" in Schedule 6 of the Kennerly testimony on Bates page 75.

The information described in part a was unrelated to the response in JK Schedule 6 on Bates page 75.

Response prepared by Jim Kennerly, SEA

2-6. Please provide the DG Board's definitions for "closer to load" and "relatively distant from load" used in the DG Board's analysis.

The DG Board does not have standardized definitions for either item referenced in the data request. However, as discussed in JK Schedule 6 (Bates page 73), it is the assessment of the Board's consultant, after having consulted with National Grid staff, that projects that require less distribution system upgrading (either through immediate proximity to load or through siting on a heavily loaded feeder that is not already saturated with DG) would not be as costly to the power system, and thus to ratepayers.

Response prepared by Jim Kennerly, SEA

2-7. According to the DG Board's response to PUC 1-1, the Commercial Solar and Large Solar Class ceiling prices are based on modeled sizes of 500 kilowatts (kW) and 2 megawatts (MW), respectively.

a. Please provide a table with the modeled generation in kilowatt-hours (kWh) for these two modeled generators over the twenty-year tariff.

b. Please add two columns to the table created in part a that shows the annual revenue of $0.06/kWh?

c. Please add a row to the bottom of the table that includes totals.

d. **Please add three rows to the bottom of the table that includes the total net present value of the generation revenue using discount rates of 1%, 3% and 7%.**

Please see DG Board Response to DR 2-7.xlsx

Response prepared by Jim Kennerly, SEA

2-8. According to the DG Board's response to PUC 1-1, the Commercial Solar and Large Solar Class ceiling prices are based on modeled sizes of 500 kilowatts (kW) and 2 megawatts (MW), respectively.

a. **What is the area of land necessary to develop these facilities in the type of areas the DG Board has identified as causing local siting concerns? Please explain if this area includes ancillary facilities such as interconnection facilities.**

A project's spatial footprint is not part of the quantitative ceiling prices analysis.

Reponses prepared by Jim Kennerly, SEA

The project proposals for these sites will be site specific, but a general range in terms of the acreage that these sites will be developed on will range between an acre to several acre sites. The actual physical footprint of the project will be dependent on a municipalities ordinances and local rules regarding setbacks (from abutters and roads) and lot coverage restrictions on how large a system can be within the specific acreage and lot of each specific site.

Response prepared by Chris Kearns, OER

b. **Does the DG Board's analysis of societal-level costs and benefits of the Carport Incentive have a baseline assumption that the REG program will drive development on greenfield lands? If so, is the proposal assumption that the Carport Incentive will direct REG solar development away from these lands?**

No. The analysis undertaken by the Board's consultant did not include a baseline assumption.

Reponses prepared by Jim Kennerly, SEA

The Board's expectation is that a portion of the megawatt capacity awarded from the commercial and large solar classes will be directed and awarded to permanent parking lot sites during the 2nd or 3rd enrollment in 2020. The Board recommended that a portion of the megawatt capacity remain available to carport project opportunities in the second half of 2020, as carport projects are a new type of application with the state solar programs and there may be a 3-5 month lead time for solar developers to obtain land agreements with parking lot owners and have interconnection studies underway to submit an application during the 2nd or 3rd enrollment period in 2020.

Response prepared by Chris Kearns, OER

c. **Does the DG Board's analysis of societal-level costs assume that the preservation of greenfields and open spaces is made permanent by the installation of a carport in some other location? If so, please explain why this assumption is reasonable, including an explanation of why other development uses (e.g., commercial property, residential property, wind resources, net metering resources) would not occur on such land. If not, please provide the length of time the analysis assumed preservation would persist.**

No. The analysis undertaken by the Board's consultant did not include preservation of open space and greenfields or a length of time that preservation would persist.

Response prepared by Jim Kennerly, SEA

The carport adder for the 2020 program is not going to prevent possible development on privately owned properties that some stakeholders and local constituents may view or refer to as open space, greenspace or greenfields and don't want to see any form of development on them. These properties may be zoned residential, commercial or industrial lots depending on a municipality's zoning map, but are lots permitted for a form of either energy, commerce or housing development depending on the municipal ordinances and rules for different types of lots.

Locations that have legal protections through land protection agreements that are associated with state or municipal bonds or are purchased by non-profit conservation organizations can't have any economic related development on them, including ground mounted solar systems from the REG or another state renewable program, if the deeds or contracts prevent any form of disturbance on the legally protected property.

Response prepared by Chris Kearns, OER

d. **Please provide the assumed annual carbon sequestration per acre of the type of land the DG Board proposes will be preserved by adoption of the Carport Incentive. If the answer to part c is some period other than "permanent," please provide the total carbon sequestration over the period for the areas provided in response to part a.**

SEA performed a qualitative analysis on carports and did not perform a quantitative analysis regarding carbon sequestration per acre of the type of land.

Reponses prepared by Jim Kennerly, SEA

e. **Please provide the assumed avoided cost of associated with carbon sequestration, and net present value of the total avoided cost over the period provided in response to part d.**

SEA performed a qualitative analysis on carports and did not perform a quantitative analysis regarding avoided costs and carbon sequestration.

Reponses prepared by Jim Kennerly, SEA

2-9. Regarding the DG Board's analysis of "Likely Benefits (or Avoided Costs) to Power System" in Schedule 1 of the Kennerly testimony (Bates page 73), please explain why it is reasonable to assume carports will be developed in areas that are "closer to load." Is it the DG Board's assumption that there is no significant opportunity in Rhode Island to develop carports in eligible parking areas that are far from load? Does the DG Board understand the program to specifically limit developing eligible carports far from load?

Mr. Kennerly's memorandum and testimony does not, as phrased in the above question, "assum(e) carports will be developed in areas that are closer to load – in fact, in JK Schedule 6 (Bates page 73), Mr. Kennerly posits (after also consulting with staff from National Grid) that Power System benefits are only possible if associated with "Carport projects in areas closer to load or in less saturated areas", as such projects "will likely require less distribution system upgrade cost to interconnect."

Reponses prepared by Jim Kennerly, SEA

OER will be monitoring the locations for proposed projects in the coming months and communicate its observations with stakeholders. OER would be happy to provide a status update to the Commission later in the program year after the renewable market has had time to develop potential projects.

Response prepared by Chris Kearns, OER