Rhode Island Distributed Generation Board

SURVEY TO INFORM 2020 CEILING PRICE DEVELOPMENT

DUE DATE: Friday June 14, 2019

Dear Renewable Energy Industry Participants:

The Rhode Island Office of Energy Resources and Distributed Generation Board seek your input into the development of ceiling prices for renewable energy projects under the Renewable Energy Growth (REG) Program for the 2020 Program Year. OER and the DG Board have an obligation to submit ceiling price recommendations to the RI Public Utilities Commission intended to support viable and cost-effective projects. Receiving current information from market participants is critical to developing robust, accurate, and defensible ceiling price recommendations.

Given the natural evolution of market conditions, as well as the experience with the DG Standard Contracts (SC) and REG programs to date, the DG Board and OER seek your feedback on several topics related to Ceiling Price development for the 2020 Program Year (beginning April 1, 2020). This Survey requests descriptive explanations and source materials to complement the quantitative data provided in response to the Data Request.

Please note that relative to the 2019 Program Year, OER and the DG Board plan to propose splitting the Commercial Solar (251-999 kW_{DC}) category into new 250-500 kW_{DC} and 501-999 kW_{DC} subcategories. In addition, OER and the DG Board currently plan to propose a Solar Carport project adder (or adders), but will propose these changes and request stakeholder feedback on said changes at a later date.

Feel free to respond to as many of the following questions as you are able. Please be specific with your comments, recommendations and sources. Use as much room as you need. You may also save your responses and come back to complete the survey at a later time if you are interrupted.

This survey is your primary opportunity to provide written comments and recommendations, as well as evidence to substantiate your comments and recommendations. Additional opportunities will also exist for both written comments and participation in public meetings. In general, the absence of a response to any of these questions will be treated as support for the current policy design.

As has been the case in prior years, the 2020 Ceiling Prices must ultimately be approved by the Rhode Island Public Utilities Commission (PUC) after thorough review and comment by the Commissioners, Commission staff and the Division of Public Utilities and Carriers, Rhode Island's official advocate for electric ratepayers. In anticipation of this review, we note that it is highly unlikely that we would incorporate suggested changes to the recommended Ceiling Prices that are not supported by substantial and credible evidence, or could be inconsistent with state laws, rules and tariffs governing the REG Program already approved by the General Assembly and/or the PUC. While we welcome the opportunity to receive and vet all stakeholder feedback, our flexibility in incorporating said stakeholder feedback is not absolute.

All Survey responses are voluntary and will be kept confidential in accordance with the State's Access to Public Record Act. Any information provided in response to this Survey will not be identified in relation to, or attributed to, an individual respondent in any public presentation or public document.

If you have any questions about how to complete this survey, please contact Jim Kennerly at jkennerly@seadvantage.com or (508) 665-5862.

Respondent Information

* 1. Please provide your name and contact information:

Name	
Company	
Email Address	
Phone Number	

2. What types of projects are you involved with?

- [ ] Solar (including small solar, commercial & industrial, community solar)
- [ ] Non-solar (wind, hydroelectric, anaerobic digesters)

Feedback on Solar Cost and Production Modeling Inputs

Copied below are the solar cost and production modeling inputs used in the approved 2019 Ceiling Prices calculations for Solar projects. Please reference the table as you answer the questions below.

3. The 2019 Total Installed Capital Cost estimates are based on quartiles and averages obtained from databases of projects participating in state programs in MA, CT, and NY, and quotes from EnergySage. Is there any reason for the consulting team not to use these data sources in Program Year 2020?

If so, please provide documentary data and evidence to substantiate your claim to Jim Kennerly at jkennerly@seadvantage.com.

4. Which, if any, of these inputs should be changed? Note in comments if the input should be updates across all solar categories, or specifically for a certain range of project sizes or types. In addition, please provide any documentary data and evidence to substantiate your claim to Jim Kennerly at jkennerly@seadvantage.com.

- [ ] Nameplate Capacity (e.g., typical sized project modeled for the category)
- [ ] Capacity Factor
- [ ] Annual Degradation
- [ ] Interconnection Costs
- [ ] Year-Over-Year Capital Cost Declines
- [ ] Fixed O&M
- [ ] O&M Inflation
- [ ] Insurance
- [ ] Project Management
- [ ] Site Lease
- [ ] Decommissioning Costs
- [ ] For the inputs you selected, please note which project categories should be updated.

5. As mentioned in the preamble to this survey, OER and the DG Board currently plan to propose the subdivision of the current 251-999 kW_{DC} Commercial Solar category into systems between 251-500 kW_{DC}, and another for systems 501-999 kW_{DC} for the 2020 Program Year. Our initial assumption is that outside of Installed Capital Costs and interconnection (which will likely vary based on size) that all other cost and financing cost categories will not vary between the proposed 250-500 kW_{DC} and 501-999 kW_{DC} market segments. Do you agree or disagree with this initial assumption? If you disagree, please explain why, and provide any documentary data and evidence to substantiate your claim to Jim Kennerly at jkennerly@seadvantage.com.

Solar Financing Inputs

6. The table below contains the 2019 Ceiling Price analysis financing assumptions for Solar projects.

Which, if any, of these inputs should be changed? Note in comments if the input should be updated across all solar categories, or specifically for a certain range of project sizes or types.

NOTE #1: The after-tax equity IRRs shown above reflect a levered value (i.e., the project's net return after paying its debt obligations), in order to ensure fidelity with the inputs to the Cost of Renewable Energy Spreadsheet Tool (CREST) model used to calculate the Ceiling Prices.

NOTE #2: These values are subject to change based on further evidence, research, analysis and stakeholder feedback.

- [ ] % Debt
- [ ] Debt Term
- [ ] Interest Rate on Term Debt
- [ ] Lender's Fee
- [ ] Target After-Tax Equity IRR
- [ ] For the inputs you selected, please note which project categories should be updated.

Expiration of the Federal ITC (for Solar Market Participants)

As you likely are aware, 2020 is the first year in which the 30% federal Investment Tax Credit (ITC) is no longer available for projects unable to be "safe harbored" (as defined and allowed by the Internal Revenue Service (IRS) in IRS Notice 2018-59). Below we detail our assumptions regarding the ways in which Solar projects will adjust their approach to monetization of federal tax benefits.

7. Based on the fact that the REG tariff incentive is (by law) a fixed and unchanging value over the majority of the life of REG-eligible Solar projects intended to ensure the project's revenue requirements are met, our initial assumption is that the stability of program revenue provides a sound basis for utilizing debt to cover for the reduced assumed share of tax equity capital in the project. If you disagree, please explain why in the box below, and email any available documentary evidence to the contrary to jkennerly@seadvantage.com.

8. Given the reduced maximum ITC value, we assume that even though the overall return expectation for tax equity is lower than for sponsor or cash equity (all on a levered basis), the total percentage share of tax equity in the project would fall given that the maximum tax credit basis for the project is 4 percentage points lower. If you disagree, please explain why in the box below, and email any available documentary evidence to the contrary to jkennerly@seadvantage.com.

9. In the Tax Cuts and Jobs Act of 2017, Congress enacted new bonus depreciation provisions of 100% for all projects in service by January 1, 2023, and declining by 20% per year thereafter. Under these provisions, taxpayers may either choose to take traditional MACRS depreciation, or the bonus values described above. We assume, based on stakeholder feedback in the 2018 and 2019 Ceiling Price processes, that the bonus depreciation provisions will remain less attractive until most tax equity capacity disappears (e.g. for projects safe harbored at the 2022 ITC value or thereafter). If you disagree, please explain why in the box below, and email any available documentary evidence to the contrary to jkennerly@seadvantage.com.

10. Based on discussions with market participants and a review of project financing trends, we assume that levered tax and sponsor equity IRRs remain compressed due to high demand for positions in solar projects ahead of the phase-down of the ITC to progressively lower levels. If you disagree, please explain why in the box below, and email any available documentary evidence to the contrary to jkennerly@seadvantage.com.

11. Is it reasonable to assume that projects selected during the 2020 Program Year will “begin construction” (as defined by the IRS in in IRS Notice 2018-59) in 2020, even if the project is selected in the Third Open Enrollment in Q4 2020? Why or why not?

PV System Design and Technology

12. Have any of your distributed solar PV projects (<=5 MW_{DC}) in the Northeast utilized bifacial modules?

- ◯ Yes
- ◯ No

13. If yes, what is the incremental capital cost to the project compared to standard modules?

14. If yes, how has the use of bifacial modules affected the capacity factor of the system?

15. Have any of your distributed solar PV projects (<=5 MW_{DC}) in the Northeast used single-axis tracking?

- ◯ Yes
- ◯ No

16. If yes, what is the additional capital cost to the project compared to a fixed-tilt system? In addition, how has the use of single-axis trackers affected the capacity factor of the system?

Other Questions for Solar Participants

17. The 2019 program year has a new requirement for small solar projects that applications received must be 100% “complete and accurate” or will be rejected by National Grid. Has the new requirement impacted your participation in the REG program? If so, please describe how.

Feedback on Non-Solar Cost and Production Modeling Inputs

Copied below are the non-solar cost and production modeling inputs used in the approved 2019 Ceiling Prices calculations for Wind, Hydroelectric, and Anaerobic Digestion projects. Please reference the table as you answer the questions below.

18. Which, if any, of these inputs should be changed? Note in comments if the input should be updates across all solar categories, or specifically for a certain range of project sizes or types. For the inputs you selected, please note which project categories should be updated.

- [ ] Nameplate Capacity (e.g., typical sized project modeled for the category)
- [ ] Capacity Factor
- [ ] Annual Degradation
- [ ] Interconnection Costs
- [ ] Year-Over-Year Capital Cost Declines
- [ ] Fixed O&M
- [ ] O&M Inflation
- [ ] Insurance
- [ ] Project Management
- [ ] Site Lease
- [ ] Decommissioning Costs
- [ ] For the inputs you selected, please note which project categories should be updated.

19. If you find that one or more of the inputs should be updated, please quantify what the new value(s) should be, or otherwise explain the magnitude and direction of the recommended change.

20. Please provide source data or documentation for your suggested changes. OER and the Board will give substantially greater weight to requests to revise inputs that are accompanied by clear and documented evidence supporting the request.

Non-Solar Financing Inputs

21. The table below contains the assumed 2019 Ceiling Price analysis financing assumptions for Non-solar projects.

Which, if any, of these inputs should be changed? Note in comments if the input should be updated across all solar categories, or specifically for a certain range of project sizes or types.

- ◯ % Debt
- ◯ Debt Term
- ◯ Interest Rate on Term Debt
- ◯ Lender's Fee
- ◯ Target After-Tax Equity IRR

22. For Wind projects eligible for the Investment Tax Credit in Lieu of the Production Tax Credit (ILoPTC), we assume that developers will seek and receive "safe harbor" treatment under the at the 2019 ILoPTC value, given the relatively minimal requirements to be met for safe harbor for such systems. If this assumption is not reasonable, please explain and show documentary evidence to the contrary.