

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: 2019 RENEWABLE ENERGY GROWTH :
CLASSES, CEILING PRICES AND CAPACITY :
TARGETS AND 2019 RENEWABLE ENERGY : DOCKET NO. 4892
GROWTH PROGRAM – TARIFFS AND SOLICITATION :
AND ENROLLMENT PROCESS RULES :

**DISTRIBUTED GENERATION BOARD’S RESPONSES
TO THE COMMISSION’S FIRST SET OF DATA REQUESTS**

1-1 In setting the ceiling price, did the analysis consider whether any of the projects would be eligible for a Rural Energy For America Program (USDA’s REAP) grant? If so, to what effect? If not, why not?

Response: No. The DG Board’s consultants’ general approach in developing the 2019 Ceiling Prices (as well as Ceiling Prices in prior years of the Renewable Energy Growth (REGrowth) and DG Standard Contract (DGSC) programs) is to assume maximum utilization of local, state and federal incentives that can be reasonably assumed to be available to all potential REGrowth project owners. For example, the federal Investment Tax Credit (ITC) for Solar projects and the Investment Tax Credit in Lieu of the Production Tax Credit (ILoPTC) for Wind projects are open to any individual and/or business taxpayer wishing to invest in a project reaching commercial operation or “begin(ning) construction” during a given tax year, and (as a tax expenditure without limit) are not constrained by Congressional appropriation.

However, REAP grants¹ are not open to all potential REGrowth program participants. Below are four key limitations on the grants relative to the 2019 REGrowth Program Year:

- Eligibility for REAP grants is limited by applicant type (a “rural small business” or “agricultural producer”, which are themselves very specifically defined), the geographic location of the applicant, the total amount of the loan guarantee or grant applied for, and the total budget for the program.
- All REAP grant applications must be submitted by specific intra-year deadlines, which may or may not align with realistic development and/or financing timelines for developers in Rhode Island.
- Since REAP grant funds are subject to Congressional appropriation, the total REAP allocation for federal Fiscal Year 2019 (through September 30,

¹ For more information about REAP grants available during FY 2019, please see: <https://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency>

2019) is currently unknown, given that the U.S. Department of Agriculture was operating on a continuing resolution (CR) that expired December 21, 2018, and has not been renewed as of this writing.

- The total amounts available after September 30, 2019 (and before March 31, 2020) are predicated on the disbursement of appropriations to REAP by the recently-seated 116th Congress. As such, the values applicable to several months of the 2019 Program Year that occur during federal Fiscal Year 2020 are unlikely to be known for some time.

1-2. Referencing page 6, (3) states that the ceiling price analysis includes pricing from DG Standard Contracts executed between 2011 and 2014 as well as the first four years of the Renewable Energy Growth Program.

1-2(a) Is there a weighting of prices according to the pricing year?

Response: For Solar projects larger than 25 kW_{DC}, the total installed cost inputs associated with accepted bids in the REGrowth program came solely from 2018 1st Open Enrollment data furnished by National Grid. The installed costs of accepted bids were averaged with values associated with other regional projects from New York and Massachusetts cost databases. These installed costs were calculated as a blended average in the following manner:

- **Medium Solar:** Three-part average of 1) 25th percentile installed costs from NY and MA projects, 2) the average of installed costs from NY and MA projects, and 3) the average value of 2018 1st Open Enrollment accepted bids; and
- **Commercial and Large Solar:** Average of installed costs from NY and MA projects and average 2018 1st Open Enrollment accepted bids.

At the request of consultants to the Division of Public Utilities and Carriers, these prices (and the other Solar prices) were then adjusted by an expected cost reduction factor based on the National Renewable Energy Laboratory's assessment of the change in cost between the time these expenses were incurred for the subject projects and the time that 2019 Ceiling Prices research was conducted.

For non-Solar projects, the assumed installed cost values (excluding any adjustments associated with Trump Administration steel and aluminum import duties or customer acquisition costs for CRDG projects) did not change from the prior year, since all accepted bid values for Wind and Hydro projects during 2018 1st Open Enrollment and 2017 3rd Open Enrollment (respectively) were at the Ceiling Price.

1-2(b) Why or why not?

Response: In the case of all project types with proposed capacity allocations, the DG Board’s consultant found it valuable to review costs and pricing from prior years in understanding the trajectory of costs over time as part of a broader exploratory data analysis undertaken in preparation for developing the first set of proposed prices (see Appendix B to the presentation by Sustainable Energy Advantage, LLC (SEA) to stakeholders on July 17, 2018). However, in the case of Solar projects, for which costs have been rapidly declining, including installed cost inputs from accepted bid values from prior years could present an inaccurate view of current market conditions and increase costs for ratepayers unnecessarily, and thus were not used directly.

1-3 How did the DG Board factor into the ceiling prices the fact that National Grid may have had to close enrollment to a class four to six months into a program year? If this was not a consideration in the development of the ceiling prices, please explain why.

Response: In proposing Small Solar I and II prices for the 2019 Program Year, the DG Board aimed to account for the high level of interest in the Small Solar I and II categories during the 2018 Program Year by balancing lower ceiling prices, which would incent more cost-effective Small Solar I and II projects, with larger capacity allocations. Please see the presentation made by the consultants to the DG Board to stakeholders on August 20, 2018 attached to the Report and Recommendations for more details on the specific approach taken to developing Small Solar I and II prices.

1-4 How did the DG Board factor into the targets and ceiling prices the lack of hydropower and anaerobic digestion projects during the first four years of the Renewable Energy Growth Program?

Response: For Hydro and Anaerobic Digestion projects, the DG Board’s consultants held the assumed installed costs at the same level as modeled to calculate the 2018 ceiling prices. The lack of upward or downward adjustments to the 2018 installed costs was due to limitations on incremental data availability (which reflects limited development activity in these areas).. However, Hydro project developers suggested to the DG Board’s consultants that Trump Administration import duties on steel and aluminum would increase the costs of such systems, and thus the DG Board’s consultants incorporated a small increase in costs associated with higher-priced materials for applicable hydro system components made from steel.

1-5 Why did the DG Board recommend targets and ceiling prices for hydropower and anaerobic digestion projects for the 2019 program year?

Response: One of the objectives of the DG Board since the adoption of the Distributed Generation Standard Contracts Program and the Renewable Energy Growth Program is to have a diversified portfolio of eligible renewable energy technologies, which has included small hydropower and anaerobic digestion. There

was one anaerobic digestion project awarded a contract in 2014 that would have been built within the Quonset Development Corporation in North Kingstown, which was eventually terminated by the developer over concerns over sufficient and consistent biomass materials being available to maintain the plant's operations. Anaerobic digestion, like small hydropower will be a limited market, but as the state's continued recycling and redirecting biomass related materials from the state landfill increase, there still remains an opportunity for anaerobic digestion systems to be developed with in the State. Small scale hydropower has seen two (2) projects awarded over the past few years, with a project being under development at the Natick Dam in West Warwick and the most recent project being the Ashton Dam in Cumberland that was awarded a tariff during the 3rd enrollment of the 2018 program year. Both anaerobic digestion and small scale have longer lead times to develop than compared to solar and wind and projects such as the ones at Natick and Ashton dams have been under discussions as viable projects dating back to 2012. Given these long lead times, the DG Board had been consistent with annual capacity and Ceiling Prices for these technologies.

1-6 Please provide a table showing the original targets and revised targets for each of the four Renewable Energy Growth Program years.

Response:

2015 Program Year

Technology & Eligible Class	Allocation Plan kW DC	National Grid Awarded kW DC
Small Solar I – Host Owned	3,000	3,395
Small Solar I – Third Party Owned/Financed		
Small Solar II		
Medium Solar	4,000	2,683
Commercial Solar	5,500	4,147
Large Solar	6,000	6,644
Wind I	5,000	1,500
Wind II		4,500
Anaerobic Digestion I	1,500	0
Anaerobic Digestion II		
Small Scale Hydropower		
Small Scale Hydropower		
Total	25,000	22,869

2016 Program Year

Technology	Allocation Plan kW DC	National Grid Awarded kW DC
Small Solar I – Host Owned (15 Year Tariff)	5,500	7,154
Small Solar I – Host Owned (20 Year Tariff)		
Small Solar I – Third Party Owned (15 Year Tariff)		
Small Solar I – Third Party Owned (20 Year Tariff)		
Small Solar II (11-25)		
Medium Solar (26-250)	5,000	4,495
Commercial Solar	8,000	7,559
Large Solar	9,000	7,854
Wind I	9,000	3,000
Wind II		0
Wind III		0
Anaerobic Digestion I	1,500	0
Anaerobic Digestion II		
Small Scale Hydropower I		
Small Scale Hydropower II		
Total	40,000	30,062

[2017 begins on next page]

2017 Program Year

Technology/Classes	Allocation Plan kW DC	National Grid Awarded kW DC
Small Solar I – Host Owned (15 Year Tariff)	6,550	7,044
Small Solar I – Host Owned (20 Year Tariff)		
Small Solar I – Third Party Owned (15 Year Tariff)		
Small Solar I – Third Party Owned (20 Year Tariff)		
Small Solar II (11-25)		
Medium Solar (26-250)	3,000	3,619
Commercial Solar	5,000	5,333
Community Remote - Commercial Solar	3,000	2,991
Large Solar	12,050	11,850
Community Remote - Large Solar	3,000	3,000
Small Wind	.400	0
Community Remote and Non-Community Remote Wind I, II and III	6,000	6,000
Anaerobic Digestion I	1,000	0
Anaerobic Digestion II		0
Small Scale Hydropower I		0
Small Scale Hydropower II		450
Total	40,000	40,287

[2018 begins on next page]

2018 Program Year

Technology/Classes	Allocation Plan kW DC	National Grid Awarded kW DC
Small Solar I & II	6,550	7,006
Medium Solar	3,000	3,102
Commercial Solar	5,000	5,110
Community Remote - Commercial Solar	3,000	997
Large Solar	12,050	14,479
Community Remote - Large Solar	3,000	2,999
Small Wind	.400	0
Community Remote and Non-Community Remote Large Wind	6,000	6,000
Anaerobic Digestion & Small Scale Hydropower	1,000	740
Total	40,000	40,433

1-7 Referencing page 17, how does the DG Board assess the area of greatest demand for reallocating MW capacity?

Response: One of the Board’s objectives in developing the annual megawatt allocation plan is to be relatively consistent with MW capacity being allocated to the various technologies and eligible classes of system sizes, which the Board has done since 2015. The Board made the determination in reallocating terminated MW capacity from the standard contracts and tariffs based on both demand from prior years programs and the local municipal siting dynamics with commercial and large solar over the past eighteen (18) months.

1-8 Referencing page 7, please explain how the DG Board defined cost effectiveness in evaluating the eligible technologies, including from whose perspective.

Response: In this context, cost-effectiveness refers to the direct cost of the payments to participating project owners borne by Rhode Island ratepayers.

1-9 Please explain how the cost effectiveness test used by the DG Board results affected the ceiling price.

Response: As described in the three presentations attached to the Report and Recommendations, in designing the proposed Ceiling Prices for 2019 and Ceiling

Prices approved by the PUC in prior Program Years, the DG Board’s consultants have consistently utilized an approach to developing installed cost inputs (associated with projects selected in REGrowth open enrollments and those of projects in Rhode Island and other states) that examines the range of costs present in Rhode Island and other Northeast states, and weights those inputs towards more cost-effective projects. In addition, the 2019 prices reflect a new approach to assume further reductions associated with expected installed costs for Solar projects based on the National Renewable Energy Laboratory’s 2018 Annual Technology Baseline.²

1-10 What percentage of medium solar is expected to be rooftop mounted?

Response: Neither the DG Board nor its consultant developed specific forecasts of projects within each category to be either roof mounted or ground mounted in any of the Solar categories during the 2019 Program Year (or any other years). However, given that most projects sized from 26-250 kW_{DC} in Rhode Island and in the Northeast region tend to be sited on project rooftops, it is reasonable to assume a roughly similar proportion of Renewable Energy Growth projects will also be roof mounted.

1-11 Please define carport.

Response: Solar Carport: A newly-built single story structure, attached to a foundation in the ground or to a building, designed solely to support solar panels and associated wiring and equipment, which is built over a parking lot, and has installed upon such structure at least 85% of the total solar PV capacity on the parcel that is seeking enrollment in the RE Growth Program.

1-11(a) Does a carport need to be a completely new structure to qualify for the Renewable Energy Growth Program or can it be on an existing structure?

Response: For a carport project to be eligible for the program, it would only be allowed to be collocated with existing or new parking lots and would need to be a new structure that is not currently present on the property. New and existing parking lots would be the only eligible location for the MW capacity recommended for the program year.

1-11(b) Does the carport need to be developed on property that has already been developed to qualify for the Renewable Energy Growth Program?

Response: No. Any new development that includes a parking lot would be eligible for the program. Both new and existing parking lots would be eligible.

1-11(c) How does a carport differ from a canopy?

² For more on the 2018 Annual Technology Baseline, please see: <http://atb.nrel.gov>

Response: Both the OER and stakeholders have used the term carport and canopy interchangeably when discussing solar PV projects being installed in existing or new parking lots over the last several months, in part because of how industry participants and program administrators in neighboring states refer to similar projects. For example, under the Solar Massachusetts Renewable Target (SMART) program (also mentioned in 1-13 below), a Carport project would officially be called a “Canopy Solar Generation Unit”.³ To simplify this going forward and to avoid any confusion, the term “carport” will be the terminology used by OER and the Board.

1-11(d) How does a carport differ from a standalone structure that would not qualify for the Renewable Energy Growth Program?

Response: As referenced in the response to 1-16 below, Carport installations require a taller and more durable structure (upon which the PV modules are mounted), which allows the system to provide shading or other cover. The structure requires utilization of more materials containing steel or aluminum than a traditional roof or ground mounted solar project. The Board didn’t want to blend Carport projects into the other commercial and large solar ceiling prices cost input aspects of carport installations, as that would have raised the ceiling prices for the Commercial and Large Solar classes.

1-12 What were the technical specifications that were used to develop both carport ceiling prices?

Response: Please see the inputs for Large Solar – Carport and Commercial Solar - Carport in the three Solar Cost & Production Assumptions tables in DG 2019 Packet – Page 063 through Page 065.

1-13 Referencing pages 4-5, items 1-7, in developing the ceiling prices for solar carports were any of the inputs unique from the inputs for the ceiling prices for the commercial and large scale solar classes? (for example, if a new carport structure were treated as an actual carport and not just a solar energy installation for property tax purposes, was that considered?)

Response: Yes. The DG Board’s consultant chose to implement a modified incremental cost-based methodology for developing Carport Ceiling Prices (see DG 2019 Packet - Page 060 for more information). Specifically, the prices as proposed include the incremental upfront capital costs (specifically, those associated with incremental structural balance-of-system costs) and system design/engineering costs relative to non-Carport installations. However, instead of using Commercial or Large Solar installed costs as the base non-Carport value, the DG Board’s consultants recommended utilizing average installed costs associated with non-Carport SREC

³ Please see 225 CMR 20.02 for all definitions associated with the SMART program (available at: <https://www.mass.gov/files/documents/2017/10/16/225cmr20.pdf>)

II projects in the same size categories in Massachusetts. The DG Board's consultants used this approach because such projects in Massachusetts have not yet been subject to more stringent competitive procurement (unlike Commercial and Large Solar projects in Rhode Island). When the assumed incremental capital and system design/engineering costs of Carport systems are added to these values, the resultant installed cost input allowed the DG Board's consultant to generate Ceiling Prices that the Board believes are likely to support Carport development in Rhode Island. The DG Board's consultant also applied a small incremental cost to account for import duties on steel and aluminum that will impact the costs of the carport structure; this incremental cost is unique to Carports and not included for other Solar categories.

If the DG Board's consultant is once again asked to develop Carport Ceiling Prices for the 2020 Program Year, the DG Board and its consultant would expect to be able to draw upon a larger pool of available data, including: Rhode Island-specific revealed cost and pricing data from selected Carport bids from the initial Open Enrollments of the 2019 Program Year; installed costs associated with a larger population of Solar Canopy projects in Massachusetts associated with projects that will have reached commercial operation under the SREC II program; and projects qualifying and/or reaching commercial operation under the SMART program (mentioned in 1-11(c)), which opened for qualification on November 26, 2018.

1-14 Did the DG Board recommend that National Grid include the technical specifications in its Enrollment Rules or Renewable Energy Growth Program tariffs? Why or why not?

Response: Outside of the OER working with National Grid to incorporate solar quality assurance related matters into the 2019 programmatic documents, the DG Board didn't vote or recommend on technical specification matters related to the annual enrollment rules or tariff documents that National Grid filed.

1-15 Is the rate of return the same for the commercial solar and commercial solar carport projects and for the large solar and large solar carport?

Response: The proposed Ceiling Prices for Carport projects do not assume different financing terms or return expectations relative to similarly situated non-Carport projects.

1-16 Do solar carports use a different technology than ground mounted or roof mounted solar?

Response: Carports do not use a different electric generation technology (e.g. photovoltaic cells) than ground mounted or roof mounted solar. However, carports do rely on different mounting technology (e.g., a taller and more durable structure upon which the PV modules are mounted and which allows the system to provide shading or other cover). The DG Board's consultant found no reason to assume (all system design/engineering factors being equal and based on solar industry stakeholder

feedback discussed in DG 2019 Packet - Page 087) that the PV system's performance would significantly differ from typical roof or ground mounted system operation at the same system tilt and/or azimuth.

1-17 Referencing pages 38-39 (Mr. Kearns' testimony), using the Docket No. 4600 Benefit Cost Framework, please identify the incremental benefits of solar carports compared to commercial and large solar projects, quantifying them, if possible.

Response: The objective of developing a class and associated MW capacity to promote solar carports was a part of the state's renewable energy policy objectives to take into account the local solar siting dynamics that have been encountered with commercial and large ground mount solar systems.

1-18 Will the inclusion of solar carports slow the development of solar installations on farms and forestland?

Response: As it relates to the Renewable Energy Growth Program, yes. By including a solar carport category and MW capacity to support projects on parking lots will elevate some of the capacity that may have otherwise been awarded to projects either on farms or forestland.

The state's renewable energy programs (primarily the virtual net metering program) are currently being evaluated in the context of the energy siting dynamics and challenges encountered for larger-scale distributed ground-mounted solar projects, depending on where the projects are proposed and each municipality having different perspectives on the subject.

1-19 How are the proposed carport targets and ceiling prices going to solve the concerns of stakeholders regarding remote net metering projects?

Response: See response to 1-18.

1-20 Referencing pages 19-20, it states, OER will perform a check on some of the projects to determine if a contractor's license number was provided and follow up with any that did not provide the number. On page 11 of National Grid's Enrollment Rules, Section 3.3 states that "Renewable energy firms, or their subcontractor or agent conducting installation work must hold a Rhode Island General Contractors License and provide their license registration number on the approved Solar Permit or building permit for a project as a condition of final approval to enroll."

1-20(a) Are these two provisions addressing the same issue?

Response: As of January 1, 2018, all municipalities in Rhode Island are required to use a standard solar permit. Separate building and electrical permits for solar PV projects

are no longer accepted by municipal building and electrical departments. The rules and regulations for the permit can be found here:

<http://www.energy.ri.gov/documents/renewable/solarpermit/FINAL%20Rules%20and%20Regs%20for%20Solar%20Permit.pdf>

The standard solar permit can be found here:

<http://www.energy.ri.gov/documents/renewable/solarpermit/STATEWIDE%20SOLAR%20PERMIT%20APPLICATION%2012-6-17%20FINAL.PDF>

The Solar permit requires a General Contractor number (see page 2 of the Solar Permit). These two provisions are addressing the same issue as building permits are no longer collected by RI municipalities.

1-20(b) If a contractor’s license is required for enrollment in the project, what is the purpose of OER’s review?

Response: OER’s review is to ensure that the license number correctly matches the company holding the General Contractor’s license.

1-20(c) What are the penalties to a contractor or customer if a project is not installed by a licensed contractor outside of the Renewable Energy Growth Program?

Response: OER is not aware of any penalties to a residential customer if a solar PV project is not installed by a licensed contractor. There are penalties to a contractor if a project is not installed by a licensed contractor in Rhode Island. Information related to contractors, penalties, and filing a claim related to RI contractors can be found in the “Administrative Regulations and Construction Standard of the Contractors’ Registration and Licensing Board”. <http://www.crb.ri.gov/documents/rules-and-regulations.pdf>

Section 3 3.6 1 Revocation or Suspension of Registration/Conditional Reinstatement (page 24) states, “If a registrant fails to pay and/or comply with an order of the Board, the Board may revoke, suspend, or refuse to issue or reissue a certificate of registration.

Section 5 5.1 Civil Penalties/Violations Authority and Scope (page 43) states” The Board has the authority to assess and impose civil penalties for violations of R.I.G.L. §§ 5-65 and the corresponding Rules and Regulations.

1-21 Please indicate what is included in the estimated total project development cost.

Response: Through meeting with some high volume small scale solar installers, OER learned that some companies were including additional costs such as roofing in the total project cost field on National Grid’s interconnection portal. In addition, financing costs associated with residential solar projects may not be included in the turn-key

total project cost referenced in a solar customer's contract. For example, a customer may secure a home equity loan or other bank financing, in a separate and distinct contractual arrangement with a third party than with the solar installation company. In order to reflect the differences between these two categories, OER has drafted two definitions of total project cost to be used for small scale solar PV projects and commercial scale PV projects.

Large Scale: As part of its Data Request and Survey, the DG Board's consultant has historically included the following definition of total project development cost: "(the) expected all-in project capital cost, which should include all hardware, balance of plant, design, construction, permitting, development (including developer fee), interest during construction, financing costs and reserves. This figure should not account for any tax incentives, grants, or other cash incentives, which will be accounted for separately...This category only excludes interconnection from upfront costs, and does not include O&M expenses or replacement costs. ALL other upfront capital costs must be included. Interconnection and metering costs will be known to the Company and will also be reported separately for projects."

Small Scale: "(the) total cost of the solar equipment, design, development, interconnection, construction, permitting, financing (if known), and labor necessary to install the solar PV project. This figure should not account for any tax incentives, grants, or other cash incentives. Additional costs, indirectly related to the solar project, such as roofing work or tree removal should not be included."

1-22 How are OER and National Grid going to protect customer privacy regarding providing estimated total project development cost?

Response: Total Project Cost for Small Scale projects is currently considered privileged information and it will continue to be. National Grid, OER, Cadmus and Sustainable Energy Advantage all have current non-disclosure agreements for this information.

1-23 Please explain how the cost effectiveness of the Renewable Energy Growth Program is enhanced by the additional cost of independent inspections of the projects.

Response: Neither OER or its consultants conducted a cost effectiveness analysis of the inspections of REG projects. Please see answer to question 1-25 regarding collection of cost information. However, there are four study goals in the Quality Assurance Study and Report (<http://www.ripuc.org/eventsactions/docket/4892-DGBoard-CadmusStudy-Nov5-2018.pdf>, page 8). Data related to quality of projects, summary of common and severity of installation issues, and installer responsiveness are collected and analyzed in the report. OER and the DG Board have commissioned this annual report to help ensure solar PV installations, which receive incentives through the REG program are "safe, high quality, performing as

inspected, and in conformance with the stated specifications” A cost effectiveness metric related to this would need to be established for additional analysis.

1-24 If an inspection finds problems with the installation, does the installation need to be cured before the PBI continues?

Response: No. In most cases, even if corrective issues are found during the solar inspection, the system continues to operate. It would be a severe penalty to the solar customer to have the PBI payments discontinue for errors made by the solar installation company.

1-25 Please provide a list of all costs to customers, contractors, and ratepayers of the inspections, and remediation, if required. Have these additional costs been considered as part of the development of the ceiling prices? How or why not?

Response: OER and Cadmus have not included a quantification of these costs in previous Quality Assurance Studies. A PV inspection and the resulting Corrective Action Report provided to the solar installation company are specific to each project. As such, the extent of remediation activities, and their associated costs, is project-specific. Cadmus makes multiple attempts to follow up with the solar installation company to determine whether corrective action has taken place, however, such corrective action is not mandatory.

1-26 How many inspections does OER anticipate conducting through its independent consultant?

Response: OER anticipates 100 inspections to take place in 2019 per the chart below.

Task	Quantity
Small Solar Inspections	87
Medium Solar Inspections	8
Large Solar Inspections	4
Wind Inspection	1
Total	100

1-27 Please explain the following sentence on page 21: “A larger sample size of the new installer solar installations would require mandatory inspections.”

Response: Some of the new installers and self-installations to the REG program were either unresponsive to or refused requests for inspections during the study period (a total of four refusals and one unresponsive customer in the 2018 round of the study). To increase the portion of the sample made up of new installers, Cadmus expects that inspections would need to be mandatory.

1-28 Have the DG Board and National Grid included a requirement that all self-installations would be subject to a mandatory inspection by OER’s consultant?

Response: The DG Board, as part of the quality assurance recommendations, voted to require that all REG projects, regardless of installation company or installer, would need to make the property available for inspection.

1-29 How long will the mandatory self-installer and new installer webinar take? Has the cost to installers been factored into the ceiling prices? If so, how? If not, why not?

Response: The webinar, which has not yet been designed, is expected to take between 45-60 minutes to watch. The cost for the time it will take for new solar installers and self-installers to watch the webinar was not factored into the 2019 ceiling prices. The DG Board did not approve this recommendation until the September DG Board meeting, after which the 2019 prices had been developed by SEA. In addition, the instructions for watching the webinar and issuing the certificate of completion have not been written. The instructions will include who from the new installer company should be watching the webinar. During the 2019 Quality Assurance Study, we can ask new installer participants and self-installers how long the process took and include that evaluation in the 2019 REG Quality Assurance midterm report and share the results with SEA to factor in the cost for the 2020 REG program.

1-30 Who has jurisdiction over inspecting solar installations? Is it the state, municipality, or another entity? Please cite the applicable law or regulation.

Response: Municipalities have jurisdiction over inspection of solar installations.
Building Inspector Legislation
<http://www.ribcc.ri.gov/documents/legis/Chapter%2023-27.3%20Local%20Building%20Official-Qualifications%20.pdf>

National Grid has jurisdiction over electrical metering and inspections of meters, including the specific requirements for the establishment of a meter socket that houses the REG generation meter, and the connection of the system with the service drop to the property, which are covered by National Grid’s Electric Service Bulletins and the Interconnection Standards. The specific sections in National Grid’s Interconnection Tariff can be found here:
https://www9.nationalgridus.com/non_html/RI_DG_Interconnection_Tariff.pdf
Terms and Conditions for Simplified Interconnections: Page 56, Section 3
“Company Right of Inspection”

1-31 Please explain why National Grid is not the lead developer of minimum technical requirements for the Renewable Energy Growth Program.

Response: In both the 2017 and 2018 Study of Renewable Energy Installation Quality in Rhode Island, recommendations to the DG Board and OER have included the

development of Minimum Technical Requirements. In conversations with DG Board members, Cadmus, and National Grid, OER moved forward with presenting this recommendation to the DG Board. During the October DG Board Meeting, OER indicated that Cadmus will provide assistance on developing a Minimum Technical Requirement document with National Grid. The development of this document will be collaborative. The reason that OER recommended that Cadmus develop the Minimum Technical Requirement document is because they have experience writing such documents. Examples include:

Minimum Technical Requirements for the Rhode Island Renewable Energy Fund programs - <https://commerceri.com/wp-content/uploads/2018/03/RI-REF-Minimum-Tech-Reqs-12.13.17.pdf> Specifically this document contains a section, “Interconnection Methods for Solar Programs in RI”. This section has been incredibly helpful in providing guidance to solar PV installers and electrical subcontractors about the various Rhode Island interconnection methods.

MassCEC Commonwealth Solar II Program Manual (see page 36 for Minimum Technical Requirements) - http://files.masscec.com/get-clean-energy/residential/solar/CSII_ProgramManual_V18_WithAttachments.pdf

Standards and Requirements for Solar Equipment, Installation, and Licensing and Certification: A Guide for States and Municipalities. Clean Energy States Alliance, February 2017. Matt Piantedosi, one of the lead authors of 2017 and 2018 REG quality assurance studies contributed to this guide for state and local governments. <https://www.cesa.org/assets/2017-Files/Standards-and-Requirements-for-Solar.pdf>

OER agrees with National Grid in their data response to question 1-8 regarding the Company’s expertise on the specifics of solar installation best practices. Cadmus has several years of experience working with the solar industry, specifically the solar PV installers and electricians, through their quality assurance work for both Rhode Island PV incentive programs, to develop a document specific to solar PV installation best practices.

During these discussions between OER, National Grid, and Cadmus during the Fall 2018, National Grid requested that the Minimum Technical Requirement document be renamed to “Solar Technical Guidance”. Both OER and Cadmus have agreed to this name change. Assuming the funding request for the 2019 quality assurance work is approved, OER will move forward with working with both Cadmus and National Grid with the development of this document.

Respondents: Chris Kearns, OER; Shauna Beland, OER; Jim Kennerly, SEA; Danielle Burns, Cadmus

Dated: January 17, 2019