

OER and National Grid Progress Update on Implementation of Recommendations Contained within the Study of Renewable Energy Installation Quality in the Renewable Energy Growth Program Final Report dated November 5, 2018

During the summer of 2018, OER staff worked to create a list of quality assurance recommendations and implementation plan. Quality Assurance was the subject of three DG Board meetings in 2018 and staff met with several individual DG Board members, either in person or via phone, to discuss the recommendations in the 2017 Cadmus study and report. In addition, Cadmus provided an interim 2018 progress report to the DG Board in May and gave a presentation to the DG Board on the final results of the 2018 study and report at the October board meeting. OER came up with a list of six quality assurance recommendations based on these discussions and additional conversations with Cadmus. Cadmus, National Grid, and OER are in the process of scheduling meetings to discuss planning and design of these recommendations.

1. Training to Renewable Energy Installers

Self-installers and new installers utilizing the REG program for the first time have consistently scored poorly in both the 2017 and 2018 Cadmus Quality Assurance Reports. The primary reason for these low scores is a lack of education about solar PV, the REG program in general, and the REG specific interconnection requirements. The Cadmus report from both 2017 and 2018 reports recommended providing a training to these two groups.

Recommendation: Self-installers and new installers who have not installed a REG Small Scale project prior to the 2019 Program Year will be required to sit through a mandatory training via webinar prior to submitting an interconnection application. The training would be a recorded webinar which discusses the Minimum Technical Requirements and the unique interconnection requirements of the program.

Action: During the 2018 September meeting, the DG Board voted to move forward with this recommendation. The training will be developed by Cadmus, OER, and National Grid and available on the REG and interconnection websites prior to April 1, 2019. National Grid would require the Certificate of Completion, indicating that the installer has completed the training, be submitted at the time of interconnection application. OER, National Grid and Cadmus will develop the curriculum for the webinar and agree on the content before it is recorded.

Monitoring: During the study period for the 2019 Quality Assurance Study and Report, Cadmus will be able to determine whether new program participants and self-installers scored higher during inspections than these groups had in previous years,

2. Collection of Additional Data

a. General Contractor's Registration Number

Per RI General Law §5-65-1 a registered contractor or firm with a contractor's registration shall perform the work associated with the installation of solar energy systems or equipment (i.e. racking systems, in ground mounting or anchoring).

Recommendation: National Grid shall require that renewable energy firms holding RI General Contractors registration provide their license number.

Action: OER shall perform a check on at least 10-20 projects on the monthly small solar spreadsheets provided by National Grid to OER and also the three (3) competitive commercial enrollment results to ensure that firms follow this requirement. In addition, OER will follow up with any awarded REG tariff project that leaves this field blank to ensure that they have a contractor's registration number. If a firm is not in compliance, OER will send both an email to the firm as well as to National Grid.

Note: This new disclosure aspect of the 2019 REG applicable documents will not be required to move onto the next field on the interconnection application with REG projects, which would trigger an application to be rejected.

Monitoring: OER will collect data on non-compliance with this new requirement and will report back to the DG Board and the PUC in late 2019 as part of the 2020 REG Program filing.

b. Total Project Cost

Currently a data field for total project cost is included on the interconnection application. Some installers are not filling this section out accurately. Total project cost is an important component of the REG program, as OER and the consultant use cost data for annual ceiling price development.

Recommendation: Total project cost shall need to be filled out by all developers and can no longer be omitted in application filings to National Grid. Language defining what should be included and reported in the total project cost field will be added to the applicable REG applications.

Monitoring: National Grid will report to the DG Board and the PUC on how this process worked for the 2019 REG Program Year.

3. Add language to REG Tariff requiring inspections

Inspections for the REG program are not currently mandatory for participation in the REG program. It can be challenging to schedule inspections because there is no language in the REG program tariff stating that inspections may be required if participating in the REG program.

Recommendation and Action:

OER and National Grid respective legal teams will develop disclaimer language which will be added to the applicable REG tariff documents and National Grid website for anyone seeking to participate in the REG program may have their system subject to inspection by OER contracted third-party solar quality inspector. OER and National Grid will make sure to circulate news of this language change to solar stakeholders via email lists. OER and National Grid will provide an update of this change to the 2019 REG program to solar stakeholders at a solar stakeholder meeting prior to April 1, 2019.

4. Minimum Technical Requirements

At the October DG Board meeting, the board directed OER and National Grid to develop Minimum Technical Requirement for the REG program. OER also asked for Cadmus to provide assistance on developing a Minimum Technical Requirement (MTR) document with National Grid. This document will

include information about the unique interconnection requirements for the REG Small Scale program and be structured similarly to the [Renewable Energy Fund's MTR document](#) (without the sections "Shading and Estimated Production Requirements" and "Roof Requirements"). This short document will help installers know in advance what will be inspected during the inspection and will include some examples of common installation violations that have been found most frequently in the past two years of Small Scale REG inspections.

5. Continuing Quality Assurance work in 2019

OER and the DG Board recommend that work related to quality assurance for the REG program continue for the 2019 program year. This work includes continuing the annual Renewable Energy Growth Solar Quality Assurance Inspection Study and Report in 2019 as well as the customer survey. During the October 2018 DG Board meeting, the DG Board voted to move forward with a reconciliation request to continue quality assurance work by Cadmus in the 2019 program year.

6. Building and Electrical Inspector Training

OER has worked with the Building Code Commission Office for the past three years to offer a mandatory training to Rhode Island municipal building and electrical inspectors. OER and the Renewable Energy Fund (REF) paid for the trainings in 2015 and 2016. National Grid paid for the 2017 training. Cadmus developed the curriculum and implemented the trainings with input from OER/REF staff for all three years.

Action: OER and REF will sponsor a 2018 training for RI building and electrical inspectors. Given that Rhode Island has not yet adopted 2017 National Electrical Code (NEC), a full day training is not warranted as the content related to NEC has not changed since the training provided in 2017. However, the results of both the 2017 and 2018 REG Quality Assurance work have been completed and inspectors will be provided an update on the results. OER is working with Cadmus to schedule a short presentation at one of the monthly evening meetings of RI building and electrical officials. While we do not anticipate the ability to make this presentation mandatory, OER will work with Building Code Commission Office to make sure all inspectors are aware of the training. The funding source for the 2018 training is the Renewable Energy Fund.