

STATE OF NEW HAMPSHIRE

Inter-Department Communication

NHPUC 3AUG17PM1:10

DATE: August 3, 2017

AT (OFFICE): NHPUC

FROM: Barbara Bernstein, Energy Analyst ^{2/4}

SUBJECT: REC 16-867 Solectria Renewables, LLC's Request for Waiver of Puc 2505.09(i)(1), Puc 2505.09(a), and Puc 2505.09(g) On-Site REC Meter Inspection Requirements for Independent Monitors

TO: Martin P. Honigberg, Chairman
Kathryn M. Bailey, Commissioner
Debra A. Howland, Executive Director and Secretary

CC: Karen Cramton, Director, Sustainable Energy Division ^{kin}
David K. Wiesner, Staff Attorney

On December 19, 2016, the Commission received an application and a letter from Solectria Renewables, LLC (dba Yaskawa Solectria Solar) (Solectria) requesting approval as an independent monitor under the Puc 2500 rules regarding the Renewable Portfolio Standard (RPS). Solectria proposes to implement a remote monitoring and reporting process that varies in certain respects from the process contemplated by the Puc 2500 rules. Staff reviewed the application and recommended that Solectria provide a letter requesting waivers from certain specific rules, as discussed in more detail below. Solectria submitted a letter requesting waivers from three specific rules on April 10, 2017, and provided clarifying information in subsequent e-mail communications. The rule waiver requests have been docketed and Staff recommends that rule waivers be granted for all three requests to permit Solectria to implement its remote electronic monitoring and reporting process in New Hampshire.

Solectria Independent Monitoring Model

Solectria states that it actively manufactures, markets and sells inverters and monitoring solutions for photovoltaic (PV) systems in North America. Solectria provides an automatic monitoring and data collection system (SolrenView), which monitors both inverters and revenue grade production meters installed at each PV site to report production data directly to New England Power Pool Generation Information System (NEPOOL-GIS). Solectria's SolrenView system is currently certified for reporting generation by NEPOOL-GIS, PTS, CSI, and IID.

The SolrenView web-based monitoring solution provides PV system owners a real-time web-based monitoring solution. SolrenView is available for use with residential, commercial and utility-scale inverters, allowing for real-time, seamless recording and reporting of PV system production. The SolrenView data logger comes

standard and fully-integrated within all commercial and utility-scale inverters. The integrated revenue grade meters report the energy generation readings to the Solectria monitoring platform, which in turn reports at least quarterly to NEPOOL-GIS. Solectria confirmed that ongoing validation is performed by comparing production meter data with summed inverter data, expected production readings for the site, and/or live on-site meter readings.

Rules Waiver Requests for RPS Independent Monitor Approval

Puc 2505.09(i)(1) - the duties of the independent monitor shall be to perform an initial inspection of the source's meters for accuracy and capability to measure the electricity or useful thermal energy produced, unless the meter is owned by a distribution utility that has already inspected it pursuant to Puc 305.

This rule states that one of the duties of the independent monitor is to perform an initial inspection of the installed meter to confirm its accuracy and verify that it is capable of measuring production. The initial on-site inspection is intended to confirm that the meter has been installed properly and to verify that the data to be provided to NEPOOL-GIS will be accurate.

Solectria representatives affirmed that the company sells inverters with fully integrated revenue grade meters that are ANSI-certified as required by NEPOOL-GIS. For systems of 100 kilowatts or greater, the production meter and the inverter are assembled, tested and validated on the assembly line. For smaller PV systems, off-the-shelf ANSI C12.20 certified revenue grade production meters from manufacturers such as GE and ABB are shipped along with the inverters for on-site installation. The meters are specifically designed for remote monitoring and are installed at the same time as other PV equipment. Typically, when a system is installed, Solectria's service team enters the site parameters (including the location and system size, the meter, the data logger, and the inverter information). The meter data is uploaded to the Solectria server using on-site internet or cellular connections. Customers without on-site internet to monitor energy production are able to use the SolrenView Air monitoring product. Solectria's customer service staff is available by e-mail or telephone if there is an issue validating either an installation or the data generated. Data from revenue quality meters can also be regularly validated by telephone or e-mail communications or by live on-site reliability checks for more complex systems.

Staff's review has determined that the Solectria system installation procedures and electronic tracking process provide an adequate alternative to the initial on-site inspection required under the rule. Staff therefore recommends that the Commission approve Solectria's request for this rule waiver.

Puc 2505.09(g) - No customer-sited source or source producing useful thermal energy shall use an independent monitor who is a member of the immediate family of the owner of the source, holds a direct or indirect ownership interest in the source, or who sold or installed the renewable energy system and associated equipment;

This rule requires that the independent monitor have no vested interest in the production of renewable energy certificates (RECs) from any monitored renewable energy source. Although it sells the metering equipment together with the inverters used by PV system owners, Solectria does not receive compensation or otherwise have any other financial interest in any renewable energy source using its inverters or the SolrenView system that is a function of the production of RECs by that source.

Staff recommends that the Commission approve Solectria's request for a waiver of this rule provision because the mere fact of its sale of certain facility equipment seems unlikely to compromise its independence with respect to the production monitoring and reporting functions it performs remotely.

Puc 2505.09(a) - An independent monitor shall verify the electricity production of a customer-sited source or the production of useful thermal energy from an eligible source and report such production and REC calculation to the GIS. A customer-sited source or a source producing useful thermal energy shall retain the services of an independent monitor directly.

This rule requires that the customer-sited renewable energy source owner retain the services of an independent monitor directly. In the case of Solectria, the commitment to provide remote electronic system production monitoring and reporting services is packaged with the sale of the SolrenView web-based monitoring solution along with the integrated inverter and/or production meter, which are installed with the complete PV system. The Solectria independent monitoring services are provided to the facility owner for a fee for an initial five-year period. Residential system owners are charged \$220 and commercial systems are charged \$750 for this initial monitoring period. Independent monitoring services can be renewed thereafter upon request.

The Solectria transactional model provides PV system owners a reasonable alternative means of obtaining independent monitoring services to measure, verify, and report their PV system production to create RECs. Electronic systems can serve to reduce or eliminate potential data entry errors and improve reporting efficiency, and the need for direct contracting is eliminated because the monitoring services are packaged together with the inverter and monitoring systems. Staff therefore recommends that the Commission also approve Solectria's request for a waiver of this rule provision.

Staff further observes that the Commission has approved five applicants in the past year that utilize electronic monitoring platforms to assist solar facilities in tracking PV production for participation in the REC market. This increase in approved, active independent monitors has helped to alleviate the shortage of qualified and active independent monitors and provides facility owners a choice for production verification and reporting. The addition of Solectria as an approved independent monitor in New Hampshire further expands choices for PV system owners.

In conclusion, Staff recommends that the Commission grant the requested rules waivers under Puc 201.05, based on a finding that the waivers will not disrupt the orderly

and efficient resolution of matters before the Commission and will serve the public interest, where compliance with the rules would be onerous given the circumstances of the affected person and the purpose of the rules would be satisfied by the alternative method proposed.

SERVICE LIST - EMAIL ADDRESSES - DOCKET RELATED

Pursuant to N.H. Admin Rule Puc 203.11 (a) (1): Serve an electronic copy on each person identified on the service list.

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FILING INSTRUCTIONS:

- a) Pursuant to N.H. Admin Rule Puc 203.02 (a), with the exception of Discovery, file 7 copies, as well as an electronic copy, of all documents including cover letter with:
- DEBRA A HOWLAND
EXECUTIVE DIRECTOR
NHPUC
21 S. FRUIT ST, SUITE 10
CONCORD NH 03301-2429
- b) Serve an electronic copy with each person identified on the Commission's service list and with the Office of Consumer Advocate.
- c) Serve a written copy on each person on the service list not able to receive electronic mail.