

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

DATE: August 3, 2017 NHPUC 3AUG'17PM1:10  
AT (OFFICE): NHPUC

**FROM:** Barbara Bernstein, Sustainable Energy Analyst

**SUBJECT:** REC 17-027 Power Factors' Waiver Request of Puc 2505.09(i)(1) and Approval of Power Factors as an Independent Monitor

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

**CC:** Karen Cramton, Director, Sustainable Energy Division *KPC*  
David Wiesner, Staff Attorney

On February 10, 2017, the Commission received an application from Power Factors requesting approval as an independent monitor for Class II solar photovoltaic (PV) facilities under the Puc 2500 rules regarding the Renewable Portfolio Standard (RPS). Power Factors proposes to implement a remote validation, monitoring, and reporting process that varies in certain respects from the process contemplated by the Puc 2500 RPS rules. Power Factors' rule waiver request has been docketed and Staff has reviewed and evaluated the application, the letter requesting a rule waiver, and subsequent e-mail communications. Staff recommends that a rule waiver be granted to permit Power Factors to implement its remote electronic monitoring process in New Hampshire.

### *Power Factors Independent Monitoring Model*

Power Factors is a software/IT company that has developed an automated web-based reporting interface to remotely read production data over the internet from customer's on-site equipment of choice. Power Factors states that its software is "hardware-agnostic," and that it does not manufacture, procure, or install metering equipment on behalf of their clients.

### *Rule Waiver Request for RPS Independent Monitor Approval*

The use of Power Factors' proposed alternative process is intended to provide assurance equivalent to that required under Puc 2505.09(i)(1), without the need for an on-site REC meter inspection. The purpose of the rule is:

- a) To verify that a meter of a specified model and serial number is actually installed at the designated location;
- b) To ensure that the meter meets or exceeds ANSI C-12 and New England Power Pool Generation Information System (NEPOOL-GIS) requirements; and

- c) To validate the data being reported.

Power Factors states the company reviews Issued for Construction and As-Built drawing sets to determine and verify meter specifications. These documents have been approved for accuracy by certified industry professionals. These drawing sets display the location of meters and related equipment, including the site meter, and provide sufficient information to map real-time performance data for those assets. According to Power Factors, each set of equipment installed on-site comes with a unique set of available data points, creating a “digital fingerprint” that validates that the equipment identified on the drawing sets matches the source of the data read.

Power Factors coordinates with clients early in the plant design process to ensure that all PV system equipment meets regulatory requirements. Power Factors also consults with engineering specifications provided by original equipment manufacturers to ensure that ANSI C-12 compliance is met. The company works directly with PV facility owners and charges customers based on the complexity of the monitoring system and system components.

Power Factors maintains that accurately linking these mapped assets to associated performance data enables it to provide concise, accurate independent monitoring services to its clients. Power Factors asserts that the sum of all inverter production is equal to the site meter’s measured production with a small tolerance for line losses. Production is further validated by comparing measured site production to weather-expected production. In addition, Power Factors is able to log directly into the individual meters, inverters, transformers, and other on-site equipment to validate those data against the relevant As-Built drawing sets.

The Power Factors 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 may serve to reduce or eliminate potential data entry errors and improve reporting efficiency. Given the accuracy improvements provided by automation and Power Factors’ ability to offer customer support through its remote servicing capabilities, Staff recommends that the Commission approve the Power Factors request for a waiver of the on-site inspection rule requirement.

In conclusion, Staff recommends that the Commission grant the requested rule waiver under Puc 201.05, based on a finding that the waiver will not disrupt the orderly and efficient resolution of matters before the Commission and will serve the public interest, where compliance with the rule would be onerous given the circumstances of the affected person and the purpose of the rule would be satisfied by the alternative method proposed.

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- 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  
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- 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.