

THE STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

Puc 900, Net Metering Rules)
Rule Revision)
_____)

Docket No. DE 08-148



**COMMENTS OF THE
INTERSTATE RENEWABLE ENERGY COUNCIL
ON PROPOSED REVISIONS TO NET METERING RULES**

I. Introduction

For over two decades, the Interstate Renewable Energy Council (“IREC”) has worked as a non-profit organization to accelerate the sustainable utilization of renewable energy resources through the development of programs and policies that reduce barriers to renewable energy. With funding from the U.S. Department of Energy, IREC has participated in workshops, proceedings and rulemakings before more than twenty state public utility commissions during the past two years addressing issues directly impacting the development of renewable energy resources including net metering, interconnection, and third-party ownership of renewable energy systems. IREC appreciates the opportunity to file these comments.

IREC participated in the June 18 public hearing of the New Hampshire Public Service Commission (“Commission”) in the present docket, but has not been involved in the docket otherwise. Given this level of participation, IREC is not proposing last-minute substantial revisions to the proposed rules (“Proposed Rules”) issued by Commission Staff on April 21, 2009. However, IREC does propose the revisions noted here to facilitate greater participation in New Hampshire’s net metering program.

First, IREC applauds the New Hampshire Legislature and the Public Utilities Commission for moving the State’s net metering rules forward toward best practices. The

revisions made by New Hampshire's 2007 net metering law, RSA 362-A, double program capacity, from 0.5% of utility peak load to 1% of utility peak load, and quadrupled the allowable facility size, from 25 kilowatts ("kW") to 100 kW. Both are substantial improvements. As well, the Proposed Rules would prohibit the requirement of a utility external disconnect switch (UEDS) for all eligible customer-generators systems.¹ IREC support for that provision is included in these comments.

At an earlier stage of involvement, IREC would have recommend adoption of interconnection procedures based on the Federal Energy Commission's Small Generator Interconnection Procedures ("SGIP"), with some improvements. The SGIP recognized that IEEE 1547 should form the basis of any technical requirements, and the same approach has been taken in many states since that the May, 2005 adoption of the SGIP in FERC Order 2006. The Proposed Rules incorporate IEEE 1547, but the Proposed Rules modify rules that predate IEEE 1547 and include extensive technical requirements that are unnecessary in light of IEEE 1547. As well, the Proposed Rules do not clearly rely on IEEE 1547 for all interconnections or clarify the timing for many reviews. Commission-approved utility tariffs do account for these procedures, but allow costs and timelines far in excess of those allowed in many other states.

At this stage, IREC is not recommending that the Proposed Rules be overhauled, recognizing that permanent rules need to be enacted by the end of July. However, the Proposed Rules can be modified to recognize that supplemental review at the customer's expense for all inverter-based systems over 10 kilo volt-amperes ("kVA") and all non-inverter based systems is inappropriate. The SGIP and many states allow approval of almost all such systems, and systems up to 2 megawatts ("MW"), at no cost beyond the application fee. As well, the SGIP review takes only twenty business days for these systems up to 2 MW; certainly, New

¹ Proposed Rule Puc 905.01(a).

Hampshire utilities could meet the same timeline for systems up to 100 kW. Indeed, if a New Hampshire interconnection is FERC jurisdictional due to wholesale sales on the affected circuit, the affected utility will have to comply with the SGIP.² Suggestions to align the Proposed Rules with the SGIP are included here.

Finally, at the public hearing in this docket, IREC discussed the impact of third party ownership on distributed generation in other states and continues to encourage the Commission to broadly interpret the definition of a Customer-Generator to allow third party ownership. At least, IREC suggests that the Proposed Rules not drop the term “Applicant” as that will be a useful term in the rules if a future law explicitly allows third party ownership.

In general, it is clear that New Hampshire is dedicated to maximizing the benefits associated with increased, in-state renewable energy generation. Net metering and interconnection are important pillars of any robust renewable sector, and it with a sound belief in the efficacy of such rules that IREC respectfully suggests the modifications to the Proposed Rules stated below. IREC hopes that its comments will add to the conversation as the Commission continues to improve its foundation for a thriving renewables sector. IREC greatly appreciates this opportunity to comment.

II. Discussion

A. Utility External Disconnect Switch

All parties take very seriously the safety considerations that may lead to a requirement for a UEDS. In state after state, IREC has addressed this issue with the argument that inverters complying with UL 1741 recognize grid outages and stop power flow to the grid under outage

² The SGIP can be modified by an independent system operator (“ISO”) and IREC has not investigated whether the NEISO has made significant modifications to the SGIP.

conditions, making a disconnect switch unnecessary for those systems. New Jersey has not permitted such a requirement for inverter-based systems of any size without apparent consequence, and has the second most installations in the nation. At least for smaller inverter-based systems, requiring a disconnect switch at the customer's expense is not allowed in Oregon, California, Nevada, New York, North Carolina, Florida and Delaware.³ Pacific Gas & Electric in California has more than half of all solar electric interconnections in the country and dropped the requirement for inverter-based systems in 2006.⁴

In the past year, two important studies have concluded that the UEDS is unnecessary for most inverter-based systems. An excellent summary of the status of the external disconnect switch debate is provided in a 2008 report by NREL, which concludes that the switch is clearly unnecessary for small systems and quite possibly for systems of well more than 100 kW.⁵ A second report sponsored by the U.S. Department of Energy's Solar America Board for Codes and Standards reaches the even stronger conclusion that no inverter-based system requires a UEDS.⁶

Commission Staff's engineering advisor, Liberty Consulting Group, apparently recommended that a UEDS should not be required for non-inverter based systems, which has not been the standard approach. While IREC is not disputing that result, it is not aware of a similar provision elsewhere. IREC fully supports the Proposed Rules approach with respect to not allowing a UEDS requirement for inverter-based systems. As well, IREC would not contest any provision that would allow a utility to install a UEDS at its own expense. The significant cost of

³ See state summary table at *Freeing the Grid* at p. 96 at www.newenergychoices.org. New York is not included on the list, but adopted its rule in 2009.

⁴ See PG&E's 2006 announcement of its disconnect switch policy at: www.pge.com/mybusiness/customerservice/nonpgeutility/generateownpower/acdisconnectswitches/index.shtml

⁵ Coddington, M.H., *Evaluating the Rationale for the Utility-Accessible External Disconnect Switch*, May, 2008. Available at <http://www.nrel.gov/docs/fy08osti/43293.pdf>.

⁶ Sheehan, M.T., *Utility External Disconnect Switch*, November, 2008. Available at <http://www.solarabcs.org/utilitydisconnect>.

a UEDS would be justified if there was a corresponding safety benefit, but UL 1741 and IEEE 1547 standards and the extensive safety training utility workers receive make the UEDS for inverter-based systems redundant. Elimination of this cost is therefore justified.

B. Timelines and Technical Screens

Uniform statewide interconnection rules ease administrative burden for companies operating statewide and also facilitate worker safety by increasing familiarity with uniform interconnection standards. Adoption of the SGIP screens would accomplish this by creating statewide standards that all utilities must adopt in a tariff filed with this Commission. Short of full adoption of the SGIP screens, given the late stages of the present rulemaking, IREC suggests the following changes.

1. To Proposed Rule Puc 904.02(b)(3), add that, “Within three business days of receipt of an electronically submitted application, the distribution utility shall electronically acknowledge receipt.” As the Proposed Rule reads, the Applicant is required to obtain receipt, which is beyond the Applicant’s control for electronic submission. The Proposed Rule does not otherwise address electronic submission, and this provision clarifies that electronic submission is allowed. Such an allowance speeds the application process by more than a week (ten business days to three business days), reduces submission cost, and provides the utility with electronic data rather than requiring the utility to reenter all of the relevant data into its records from a hard copy of the application.

2. Modify Proposed Rule Puc 904.02(c)(2)(g) to drop the reference to 10 kilowatts in reference to whether a UEDS will be installed. Given the change to the UEDS requirement, this section can just read, “Whether an exterior manual disconnect switch for utility use will be installed; and”.

3. Modify Proposed Rule Puc 904.02(d) to recognize that the application is supposed to be filed with the distribution utility prior to installation. This section appears to assume that the

Applicant would normally submit an application after installation, which does not comport with the rest of the Proposed Rules, especially Puc 904.05(a), or standard practices.

4. In Proposed Rule Puc 904.02(f), drop the opening words, “Upon request.” The utility should be required to acknowledge receipt. Also, this section is just for an acknowledgement of receipt, not an acknowledgement that the application is complete. An acknowledgement of receipt takes no time and should be processed quickly. In Part (f)(2) should therefore require that receipt be acknowledged within five business days and not require a review for completeness, which is addressed in Puc 904.04(b).

5. Drop “Completeness” from the heading of Proposed Rule Puc 904.04; this section covers the actual technical review, including the initial review for application completeness.

6. Reference Puc 906 in Proposed Rule Puc 904.04(c) as well as Puc 905 and include a timeframe. Puc 905 addresses the transformer configuration and the disconnect switch. The intent is to assure compliance with standards, and IEEE 1547 is included in Puc 906. Critically, the Proposed Rules do not include timeframes for review at this point, which is a significant drawback. Even the utilities filed tariffs have a ten day window for simplified review and an additional 40 day flexible window for supplemental review. IREC suggests that Puc 904.04(c) state that any system complying with the distribution utilities simplified review process be processed within ten business days from acknowledgement of a complete application. This gives the utilities 20 business days from initial receipt of a complete application, given the ten days to review an application for completeness. As well, the supplemental review essentially serves the purpose of the screening process in SGIP 2.2.1 that is accomplished in 20 days, even for systems up to 2 MW under the SGIP. Given that the Proposed Rules only cover systems up to 100 kW, IREC suggests that a timeline for supplemental review add only an additional ten business days.

7. Modify Proposed Rule 904.04(m) by changing the timeline. This section addresses a timeline for review of applications for non-inverter based systems up to 25 kW. IREC strongly recommends that the 75 day window for non-inverter based systems be shortened. IEEE 1547 covers non-inverter-based systems and the simplified procedure/supplemental review process could handle most such applications. Under the SGIP, most non-inverter based systems up to 2 MW can pass the simplified review process in 20 business days, and not be required to pay additional expenses for review. At least, IREC suggests that the time frame be lowered to no more than 40 business days, roughly a full two months. Also, this section references non-inverter based systems up to 25 kW, and the reference should be changed to such systems up to 100 kW for consistency with the revised net metering system size limitation. Changes to subsection 904.04(n) and (y) would be necessary to comport with the changes suggested here.

8. Drop Proposed Rule 904.04(q). This addresses completeness review, which is already addressed in Puc 904.04(b).

9. Modify Proposed Rule 904.04(r) to reference the entirety of Puc 904.04, where the application review deadlines are provided. At present, this just gives the Applicant the right to protest a review lasting more than 75 days for a non-inverter based system.

C. Third Party Ownership

As mentioned above, the Commission is constrained by RSA 362-A:1-a(II-b) from extending net metering to systems owned by a third party. It is quite possible that the New Hampshire Legislature will follow the lead of states with significant renewable energy programs and modify this statute to remove the ownership requirement for “eligible customer-generator.” Such an act of the Legislature would allow New Hampshire utility customers to enjoy the same

benefits of alternative financing arrangements enjoyed in multiple jurisdictions throughout the country. As it stands, the requirement that the customer-generator own the net metering systems restricts access to net metering to the affluent. The burgeoning third party ownership model is becoming the bridge to affordable solar for many small businesses and homes across the country. A recent report from the Lawrence Berkeley National Laboratory shows that solar service agreements have grown from 10% of the non-residential solar market in 2006 to 90% of the non-resident solar market in 2008. Currently, solar service companies are expanding this model to the residential solar market and the growth in that market could become even more explosive.

If New Hampshire is able to expand eligibility of participation in net metering to third party owned systems, it will expand access to the benefits of solar generation beyond the wealthiest citizens with the disposable income to afford the initial capital outlay and use for the available tax credits. Third-party financing could provide significant benefits to New Hampshire residents seeking to invest in renewable energy. Most significantly, third-party financing allows customers to fully utilize available federal tax benefits. This directly impacts both the up-front and long-term cost of solar energy. Third-party financing also uses a performance-based payment mechanism that best aligns the incentives of host customers, third-party owners, and other stakeholders to ensure that solar energy systems are well maintained and operate at maximum output. These are significant benefits that should be available to all customers interested in investing in solar energy.

Should the Legislature act in the future to remove the ownership requirement for net metering eligibility, the Commission could now preserve a great deal of flexibility by not replacing the term “applicant” with the term “customer” in the Proposed Rules.

Finally, IREC continues to suggest that the Commission broadly interpret the ownership requirement in the definition of an “eligible customer-generator” to include any customer with an ownership interest such as a right to purchase a facility under a retail power purchase agreement. It makes little sense that RSA 362-A:2-a allows a limited producer to sell power to up to three customers, but that those customers could not then avail themselves of the benefits of net metering.

D. Facility Size Limits

Lastly, IREC suggests that the Commission encourage any measure to increase the allowed net metering facility size. New Hampshire is woefully behind the other New England states in its limitation of net metering to systems no larger than 100 kW (Table 1)⁷. Taken as a whole, the ineligibility of third party ownership to net metering and the very small size of the maximum allowable system capacity leave New Hampshire behind most other states currently involved in net metering.

Table 1.

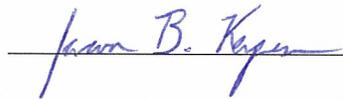
STATE	MAX SYSTEM ALLOWED FOR NET METERING
NEW HAMPSHIRE	100 kW
CONNECTICUT	2 MW
MAINE	660 kW
MASSACHUSETTS	2 MW
RHODE ISLAND	3.65 MW for city owned/ 1.65 MW for other customers
VERMONT	250 kW

⁷ Source: Database of State Incentives for Renewables and Efficiency, available at <http://www.dsireuse.org>.

CONCLUSION

For all of the foregoing reasons, IREC urges the Commission to adopt modest changes to the Proposed Rules that could have far reaching consequences in reducing administrative burdens and shortening the interconnection timeline. Further, IREC urges the Commission to consider allowance of third party ownership of net metering systems. IREC appreciates the opportunity to comment on Puc 900 and hope that the foregoing comments are helpful to the Commission and Staff.

Respectfully submitted this 25th of June 2009.

A handwritten signature in blue ink that reads "Jason B. Keyes". The signature is written in a cursive style and is positioned above a horizontal line.

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