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**Vermont Agency of Natural Resources**

Office of Planning

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**Electronically Filed Using ePUC**

September 24, 2021

Holly R. Anderson, Clerk

Vermont Public Utility Commission

112 State Street – 4<sup>th</sup> Floor

Montpelier, VT 05620-2701

Re: Post-Workshop Comments, 19-0855-RULE

Dear Ms. Anderson:

On August 24, 2021, the Vermont Public Utility Commission (“Commission”) held a workshop in Case Number 19-0855-RULE to discuss the certificate of public good application process for net-metering systems, including standards to address forest clearing. The Vermont Agency of Natural Resources (“Agency”) submits the following comments responding to various issues discussed at the workshop.

**Forest Conversion and Preferred Sites Data**

At the workshop, the Agency presented data on forest conversion, preferred site type, and system capacity collected during its review of NM- and NMP-docket net-metering applications filed with the Commission between July 1, 2017 and July 31, 2021. From this data, the Agency estimates that 208 acres of forest would be converted for 202 net-metering systems, with nearly 70 percent of forest conversion occurring at sites qualifying as preferred site 7. Summary statistics and charts showing this data are included in the slideshow filed via ePUC on August 20, 2021.

The Agency indicated it would upload to ePUC the spreadsheet used to generate the summary statistics and charts. After the workshop, the Commission’s staff requested that the Agency remove data for all open cases from the spreadsheet. Therefore, attached to these comments is the spreadsheet with data for open cases omitted.

## **Significance of Forest Conversion for Net-Metering and Rationale for Rule Revision**

Representatives of Renewable Energy Vermont and VHB suggested at the workshop that 208 acres of forest cleared for net-metering systems over four years is insignificant and that, rather than revise Commission Rule 5.100 to address the issue, the forest clearing impacts of net-metering should be evaluated on a case-by-case basis solely through application of the Section 248(b)(5) criteria. The Agency respectfully disagrees.

Recognizing that net-metering systems were being disproportionately sited in undeveloped fields and forests, the Commission revised Rule 5.100 in 2017 to offer incentives—higher rates—to net-metering systems on preferred sites such as roofs and previously developed areas.<sup>1</sup> Specifically, net-metering systems between 150 and 500 kilowatts (kW) in capacity must now be located on one of 9 preferred site types to net-meter and receive above wholesale market rates for the electricity they generate. Systems between 15 and 150 kW in capacity need not be on a preferred site but, if they are, receive a siting adjutor superior to comparably sized systems not on a preferred site. These incentives are distinct from the Section 248(b)(5) criteria.

Against this incentive-based regulatory backdrop, and considering the many values forests provide, the Agency believes 208 acres of forest conversion proposed for net-metering over the last four years is significant and that net-metering incentives should be structured to disfavor forest conversion independent of the Section 248(b)(5) criteria. These 208 acres include forest conversion not merely ancillary to a redevelopment project or system proposed atop a previously developed area; 29 systems involve more than three acres of forest conversion per system and 10 involve more than five acres of forest conversion per system. That the sites for such systems qualify as preferred suggests that the intent of the preferred siting standards—to steer development away from undeveloped fields and forests—is not being fully realized.

The area of forest converted for net-metering does represent a very small proportion of the 2,051 to 4,191 acres of forest conversion estimated to occur in Vermont each year.<sup>2</sup> Yet an acre of forest converted for net-metering, incented through the higher rates conferred by Rule 5.100, is an acre of forest values lost while those systems are in operation. While forest conversion for other uses may not be prohibited or restricted as proposed in the ways suggested by the Agency at the workshop, these other uses do not receive, to the Agency's knowledge, a state-sponsored incentive associated with their siting.

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<sup>1</sup> Vermont Public Utility Commission, *Report to the Vermont General Assembly on the Net-Metering Program Pursuant to Act 99 of 2014* ("2017 Net-Metering Program Report"), January 20, 2017, at 9.

<sup>2</sup> Vermont Department of Forests, Parks, and Recreation, *Vermont Forest Carbon Inventory*, 2021, at 1. Available online at: <https://fpr.vermont.gov/forest/climate-change/forest-carbon>.

In addition to the lost carbon storage and sequestration resulting from forest conversion,<sup>3</sup> large amounts of forest conversion for net-metering systems significantly increases their embodied emissions. It can take years for such systems to turn “net positive” through the displacement of energy generated by fossil fuel plants, which runs counter to the urgent need articulated by many for immediate emissions reductions. Indeed, a lifecycle greenhouse gas assessment conducted for the 2.2-megawatt Battle Creek I solar project, which proposed to remove 12.72 acres of forest, estimated that the emissions associated with disturbance of forest above-ground biomass, below-ground biomass, and annual sequestration of biomass comprise approximately 35 percent of that project’s total greenhouse gas emissions.<sup>4</sup> Thus, a significant amount of the carbon dioxide emissions associated with renewable energy generation projects can be avoided by steering them away from forested sites.

Finally, the Agency does not believe that prohibiting forested sites from being treated as preferred for net-metering or restricting the amount of forest conversion that may occur at preferred net-metering significantly constrains the attainment of in-state renewable energy generation goals. It would, necessarily, reduce the amount of land available for net-metering at capacities 150 kW and greater. But the Agency’s forest conversion data indicates that it is possible to construct net-metering systems at all capacities without converting forest. Further, non-forested land for net-metering appears sufficiently available in Vermont. A preliminary analysis by the Agency estimates that, after excluding tree canopy from the “no constraint” and “possible constraint” categories of the Act 174 Ground Mount Solar Potential dataset,<sup>5</sup> 507,056 non-treed acres would still be available for net-metering in Vermont, including 78,677 no constraint acres and 428,379 possible constraint acres. The Agency can conduct further analysis on land availability for net-metering if desired by the Commission.

Rule 5.100 is, in part, a regulation that provides incentives for environmentally beneficial land use outcomes. It can and should be revised to reduce forest conversion, consistent with the intent of the preferred siting standards.

### **Agency-Recommended Rule Revision to Reduce Forest Conversion**

The Agency presented three options to reduce forest conversion for net-metering at the workshop. The options are summarized in the slideshow and in the handout filed in advance of the workshop on August 13, 2021. Option one would prohibit forested sites from being treated as preferred. Option two would prohibit “excessive forest conversion” at preferred sites. Option three would repeal the joint letter option of preferred site 7 or establish forest conservation standards or criteria for municipalities and regions to

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<sup>3</sup> *Ibid.*

<sup>4</sup> Exhibit BC1-HD-2 of Case No. 17-3727-PET at 7.

<sup>5</sup> Available online at: <https://geodata.vermont.gov/datasets/vt-act-174-ground-mount-solar-potential>.

consider before designating a site as preferred with a joint letter. All three options would apply to Category II and III systems, *i.e.*, those systems that must be on a preferred site or receive a superior siting adjutor for being on a preferred site.

The Agency is not opposed to limited forest conversion for net-metering that is ancillary to a redevelopment project (*e.g.*, a brownfield) or that is reasonably necessary to interconnect, access, and limit shade around a system that otherwise involves no or little forest conversion. The Agency recognizes the joint letter option of preferred site 7 is still desired by regions and municipalities given the challenges inherent in identifying specific preferred sites for net-metering in municipal plans.<sup>6</sup> The Agency notes a similar concern was raised in comments on the 2017 revisions to Rule 5.100.<sup>7</sup>

Therefore, of the three options presented at the workshop, the Agency recommends option two, prohibiting excessive forest conversion at preferred sites. The Agency recommends defining excessive forest conversion in Rule 5.100 as, “forest clearing for the project that would result in a ratio of capacity, in kW, to acres of forest cleared that is lower than 500 to 1.” In the Agency’s experience, one acre represents about one third of the footprint of a 500-kW solar array.<sup>8</sup> Of the 202 NM- and NMP-docket net-metering applications reviewed by the Agency between July 1, 2017 and July 31, 2021, 67 (33 percent) had ratios of capacity to acres of forest cleared lower than 500 to 1. These 67 applications account for 95 percent of the forest conversion proposed.

Please note the above position regarding what constitutes excessive forest conversion is limited to this rulemaking. It should not be construed to apply outside of this rulemaking.

### **Other Application Process-Related Comments**

A portion of the workshop was dedicated to amendments, transfers, and expirations. The Agency’s position on these topics is contained in comments filed in this case on May 17, 2019.

Though not discussed at the workshop, the Agency believes site plan requirements for net-metering systems subject to sections 5.106 and 5.107 of Rule 5.100 should be revised to include additional information needed by the Agency to evaluate impacts on the natural environment and compliance with preferred site definitions. The recommended revisions

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<sup>6</sup> See Comments of Vermont Association of Planning and Development Agencies, September 7, 2021, in Case No. 19-0855-RULE.

<sup>7</sup> 2017 Net-Metering Program Report at 20.

<sup>8</sup> The average amount of forest conversion per 500-kW net-metering application reviewed by the Agency between July 1, 2017 and July 31, 2021 is 1.65 acres. Nine of those 500-kW applications involved more than 5 acres of forest conversion per project; 4 involved more than 7 acres of forest conversion per project. 39 involved no forest conversion.

are included in the attached document.<sup>9</sup> The Agency believes that requiring this information in Rule 5.100 will expedite its review of applications. The Agency already requests much of it from applicants during its review of advance notices and applications.

Subsections 5.106(D)(6) and 5.107(C)(9) require applications to include a wetland delineation or letter from a qualified professional stating that no delineation is necessary. The Agency's Wetlands Program requires that wetland delineations be reevaluated for accuracy every five years. Therefore, the Agency recommends that the following sentence be added to 5.106(D)(6) and 5.107(C)(9): "Any wetland delineation older than five years at the time of application filing must be reevaluated for state jurisdictional purposes." This information is also communicated by the Agency to applicants during its review of advance notices and applications. Providing it in Rule 5.100 will expedite the Agency's review of applications and put applicants on notice of this important requirement.

The registration and application forms for systems subject to sections 5.105 and 5.106 contain various certifications. The Agency recommends that the registration form certification regarding hydroelectric systems be revised to ensure registrants have evaluated whether Federal Energy Regulatory Commission licensing or exemption applies.<sup>10</sup> The Agency also recommends that a new certification be added to the registration form to ensure registrants have determined whether their projects are in the Special Flood Hazard Area or River Corridor and comply with the Agency's Flood Hazard Area and River Corridor Rule. On the application form, the Agency recommends that the Commission update or remove the hyperlink to the *Low Risk Site Handbook for Erosion Prevention and Sediment Control*, which was updated in 2020.<sup>11</sup>

Section 5.121 limits the cumulative number of discovery requests in net-metering cases to 20, including subparts, unless the Commission issues an order approving more. In the Agency's experience, when it litigates a net-metering case the technical nature of the issues being litigated are likely to warrant more than 20 discovery requests, including subparts. To simplify the Agency's participation in contested net-metering cases, including the need to submit a request to the Commission every time it needs to exceed the 20-discovery request cap (and for the Commission to rule on the request), the Agency recommends that 5.121 be eliminated and that discovery requests instead be governed by Rule 2.

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<sup>9</sup> These revisions expand on recommendations made in the Agency's May 17, 2019 comments.

<sup>10</sup> For example, "(5) if this project is a hydroelectric system, I have confirmed that the project does not require authorization from the Federal Energy Regulatory Commission or, if it does, that it has received such authorization, and that the project has received all other necessary federal and state permits.

<sup>11</sup> Available online at: <https://dec.vermont.gov/watershed/stormwater/permit-information-applications-fees/stormwater-construction-discharge-permits>.

Finally, as the Commission is aware, the Agency often requests certificate of public good conditions that require applicants to mark project boundaries or protected resources prior to construction, certain maintenance activities, and decommissioning. The intent of these conditions is to ensure certificate of public good holders do not inadvertently disturb protected resources or more land than they represent they would in their applications. The Agency encourages the Commission to consider whether it could, on its own motion or in connection with a requirement established in Rule 5.100 or in other Commission rules, include a standard certificate of public good condition for construction flagging or fencing. Doing so may preclude the need for the Agency to request such conditions. A construction flagging and fencing certificate of public good condition that is agreeable to the Agency is:

*Prior to commencement of site preparation, construction, maintenance involving earth disturbance, or decommissioning, the CPG Holder shall install a perimeter fence, orange barrier tape, or flagging on stakes or trees along the Limits of Disturbance as depicted on the approved site plan.<sup>12</sup>*

Thank you for the opportunity to submit comments responding to issues discussed at the August 24, 2021 workshop. The Agency respectfully requests the opportunity to reply to the comments of other participants.

Respectfully submitted,

/s/ Kevin Anderson

Kevin Anderson

Regulatory Policy Analyst

Vermont Agency of Natural Resources

Encl: (2)

cc: Service List (by ePUC only)

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<sup>12</sup> In its May 16, 2019 comments, the Agency recommended that the definition of limits of disturbance in Rule 5.100 be changed to “project limits” and that a new definition of “earth disturbance” be added to the rule. If the Commission adopts this recommendation, “limits of disturbance” in this proposed certificate of public good condition should be changed to “project limits.”

**Recommended New Site Plan Requirements Under Sections 5.106 and 5.107 of Rule 5.100**

*Vermont Agency of Natural Resources, September 24, 2021*

1. Limits of proposed earth disturbance (as defined in the Stormwater Permitting Rule)
2. Limits of proposed vegetation clearing and management during construction and operation
3. Existing, proposed new, and proposed redeveloped impervious surfaces
4. Existing and proposed stormwater management facilities
5. Existing water supply and wastewater infrastructure, including replacement areas and the names and identification numbers of any public water source
6. Source Protection Areas, including their associated water system names and identification numbers
7. Underground and aboveground storage tanks
8. Streams, top of bank or top of slope, lakes, ponds, and the 50- or 100-foot riparian zone identified in accordance with ANR's Guidance for Agency Act 250 and Section 248 Comments Regarding Riparian Buffers
9. Detailed plans for any proposed stream crossings
10. Floodways, Special Flood Hazard Areas, and River Corridors as defined in the Vermont Flood Hazard Area and River Corridor Rule
11. Class I, II, and III wetlands and wetland buffer zones and wetland investigation area if wetland investigation area not described in other application materials
12. Vermont Fish and Wildlife Department-mapped Significant Natural Communities
13. The locations of any rare, threatened, or endangered species and any ANR-recommended buffer zones for such species
14. Necessary wildlife habitats as defined in 10 V.S.A. § 6001(12)
15. Landfill cap boundaries
16. At properties where a release or suspected release of hazardous materials has occurred, the information required in §35-306(14)(B) of the Investigation and Remediation of Contaminated Properties Rule
17. For preferred site 6, the boundaries of the disturbed or previously disturbed portion of the extraction site