May 27th, 2022

Ms. Holly Anderson, Clerk

Vermont Public Utilities Commission
112 State Street, 4th Floor
Montpelier, VT 05602

RE: 19-0855-RULE Proposed revisions to Vermont Public Utility Commission Rule 5.100

Dear Clerk Anderson,

Renewable Energy Vermont ("REV") submits this comment in response to the Commission's Order, dated April 29th 2022, requesting comments on the Commission's proposed changes to Rule 5.100. The net-metering program has been and will continue to be critical to the state's efforts to advance renewable energy development and meet its climate goals.

These climate goals, mandated in the Global Warming Solutions Act of 2020, will require widespread electrification in the transportation and thermal sector and corresponding growth in clean, renewable energy generation. Modeling conducted for the Vermont Agency of Natural Resources indicates that complying with the GWSA will increase Vermont's electricity usage by 2.4 TWh by 2030.[1] This staggering new demand will need to be served by dramatically expanded renewable generating capacity. As other states in the region ramp up their own climate commitments, there will be significant competition for renewable energy resources, and assuming that energy out of state projects will be available for purchase by Vermont utilities on the scale required to meet this additional demand is a significant risk to assume. This is especially true of relying on electricity from offshore wind, which has a long history of lengthy legal delays, and which (if successfully constructed at all) will be located closer to large load centers in New York and Massachusetts. Given these realities, it is clear that the state should be aggressively promoting new renewable development in Vermont, the only jurisdiction over which it has regulatory control. **Consequently, proposed changes to Rule 5.100 must be evaluated based on one criterion above all others: Will the change facilitate or impede the rapid and responsible deployment of new net-metered systems**? **Any proposed change which impedes the rapid deployment of renewable development faces a high burden of proof to demonstrate that it is addressing an issue that is comparably vital to the public interest and that cannot be addressed in a less burdensome manner.**

REV applauds the Commission's goal of streamlining the process of applying for and receiving a certificate of public good (CPG) and the decision to maintain the basic structure of the net-metering program. Allowing two years for the construction of net-metered systems is also a very

[1] Cadmus Group and Energy Futures Group (2021).*Vermont Pathways Analysis Report* https://outside.vermont.gov/agency/anr/climatecouncil/Shared%20Documents/Vermont%20Pathways%20Analysis%20Report.pdf

positive change for customers and developers of net-metered systems that will facilitate net-metering deployment. However, many of the proposed changes in the draft rule unnecessarily restrict the locations and markets available for net-metered system, introduce uncertainty into the process, and otherwise impede the rapid and responsible deployment of net-metering in Vermont

Given the conflict between the stated goals of these revisions and what REV sees as their likely implication for net-metering in Vermont, REV respectfully urges that the Commission revisit the public engagement process for this Rule. It is vital that the state takes every opportunity to promote renewable development to further its climate goals but several of the proposed changes have the result of slowing renewable development under the net-metering program without a clearly articulated benefit.

1 Changes to the Preferred Site Definition Unnecessarily Discourages Net-Metering Development

Vermonters have a legitimate interest in balancing the benefits of new development of all types – residential, commercial, agricultural, and recreational as well as for new renewable generation – against the environmental and social impacts of that new development. The net-metering program's preferred site framework is intended to steer renewable energy development towards locations that mitigate environmental and social impacts – previously developed and disturbed sites and sites supported by local planning entities. Excessively restrictive criteria for preferred sites undermine the effectiveness of the preferred site mechanism by pushing developers to look for cheaper greenfield development options instead of pursuing preferred site locations. Consequently, any new restrictions on preferred should address meaningful problems, be well supported by the science, and be consistent with the principles guiding other types of development in Vermont. REV believes that several of the proposed changes to the preferred site definition do not address significant problems, are poorly justified, and artificially exclude sites that would effectively mitigate development impacts.

Several proposed revisions limit the portion of an otherwise eligible parcel that can be utilized for net-metering without considering the site-specific characteristics. Limiting renewable development to only a portion of the eligible parcel creates a strong likelihood that additional areas on the parcel that is generally unsuitable for other types of development and which, depending on their size and location, may provide only marginal environmental benefit, are not utilized for any productive purpose. As with other types of development, Vermont should be encouraging compact development of renewable generation, this means fully utilizing tracts that qualify for preferred site status absent a compelling rationale for their exclusion.

1.1 Prohibition on Significant Forest Clearing

The proposed prohibition on "significant forest clearing" is overly broad, does not support the state's climate goals, or significantly advance conservation efforts. Among the potential

revisions to limit tree clearing suggested by the Agency of Natural Resources, the blanket, one-acre method utilized in the proposed rule changes is the least sensitive to project context. The prohibition does not take into account project size, forest quality, habitat connectivity, or other factors that would speak to the balance between a project's benefits and its impacts or the urgency of preserving a specific forested block.

While there are estimates that Vermont's forest cover is declining by as much as 1,500 acres per year, this is overwhelmingly attributable to "suburban and rural residential sprawl."[2] In contrast, the *total impact* of net-metering on forest cover is the clearing of 208 acres.[3] It is unclear what public good is achieved by targeting this restriction at net-metering projects when these projects account for very little forest loss while also providing direct and measurable environmental benefits in the form of tangible greenhouse gas emission benefits that exceed the sequestration rates of Vermont's forests. Differentially penalizing renewable development for tree clearing is inconsistent with the state's climate and energy goals.

In addition, because the prohibition applies to land in "any stage of succession and not currently developed for non-forest use" it will block development on many of the brownfields, extraction sites, and previously disturbed sites that would otherwise be preferred sites. Essentially if a site does not transition directly to use for net-metering, scrub growth of dogwoods, birches and other early succession trees will cause the site to exit out of the pool of potential preferred sites within a few years.

REV strongly urges the Commission to reconsider this proposed change and re-engage stakeholder to consider 1) if the scale of forest clearing for net-metered projects rise to the level that it needs to be addressed at all and 2) to establish more scientifically ground criteria by which to determine what trees can and cannot be cleared that reflects their value to Vermont's environment.

1.2 Preferred Site (2): Parking Lot Canopies

The proposed revision to net-metering for parking lot canopies (5.103 "Preferred Site" (2)), fails to recognize that unpaved parking lots are substantially similar to paved parking lots in terms of their impact on stormwater volumes and maybe worse from the perspective of nutrient run-off. The Department of Environmental Conservations Stormwater Management Rule includes both paved *and unpaved* roads as an example of impervious surfaces[4] and research at the University of Vermont indicates that unpaved roads contributed significantly to suspended sediment and

[2] Brown, Joshua (2017). *Report: Vermont Losing 1,500 Acres of Forest Every Year*. https://www.uvm.edu/news/story/report-vermont-losing-1500-acres-forest-every-year
[3] Vermont Agency of Natural Resources (2021). Forest Conversion for Net-Metering: Trends & Options to Reduce
[4] Vermont Department of Environmental Conservation (2017). *Environmental Protection Rules, Chapter 18, Stormwater Management Rule* page 5.

phosphorus production.[5] Excluding unpaved parking lots from preferred site eligibility, therefore, reduces opportunities for renewable development but does not provide any clear environmental benefit. Revising this definition to simply read "A parking lot canopy over a parking lot provided that the location remains in use as a parking lot" would expand opportunities for renewable development that have minimal environmental impact and that could even be protective by reducing erosion at unpaved parking lots.

Additionally, because parking lots are such an environmentally advantageous site for solar development, but canopies are more expensive than other types of ground-mounted systems, REV urges the Commission to consider an additional site adjustor to encourage greater utilization of parking canopies.

1.3 Preferred Site (3)&(6): Previously Developed Tracts & Extraction Site

The Commission proposes revising the criterion for previously tracts to mandate that energy generation infrastructure "must be located entirely within the footprint of either the existing structure or impervious surface" rather than simply "including" the existing structure or impervious surface. By limiting development to a subset of the eligible tract, without considering the specific characteristics of the site, this change would limit opportunities for renewable development without providing a clear environmental benefit.

Similarly, limiting development on extraction sites to the previously disturbed area creates similar problems. As discussed previously, mandating that renewable plants are limited to only a portion of a site that is eligible for preferred site status without accounting for site-specific characteristics, will result in less efficient utilization of locations that have marginal value for other purposes. As with the prohibition on tree clearing, a more sensible approach would be to set a rule about the percentage of the project that is located on the existing footprint. REV urges the Commission to revisit these proposed changes and re-engage with stakeholders on these issues.

1.4 Preferred Site (5): Landfills

The Commission proposes adding language requiring "that the landfill is actively maintained under the authority of a post-closure certification, administrative order, or assurance of discontinuance, or in custodial care as recognized by the Agency of Natural Resources." REV believes that this change fails to recognize the development of net-metered facilities can provide an opportunity to bring landfills that have fallen out of compliance back into compliance. Rather than blocking renewable deployment in these cases, the Commission should be encouraging investment in these locations.

[5] Wemple, Beverly (2013), *Assessing the Effects of Unpaved Roads on Lake Champlain Water Quality* http://www.lcbp.org/wp-content/uploads/2013/07/74_Road-Study_revised_June2013.pdf

2 Registration and Application Processes

2.1 5.105 Registration

The proposed change to interconnection requirement 5.105(E) that the applicant must obtain interconnection approval prior to filing a registration runs counter to the intent of the registration process to provide expedited approval for smaller projects. Requiring sequential rather than simultaneous interconnection and registration processes increases project timelines. At a minimum, a size threshold for this proposed change should be established.

2.2 5.106 Application for Facilities Up to and Including 50 kW

The proposed change to 5.106(A) to account for mixed systems ("mixed ground and roof-mounted systems of up to 500 kW where the ground-mounted portion of the system does not exceed 50 kW") does not exclude mixed systems covered in Section 5.105 ("mixed ground and roof-mounted systems of up to 500 kW where the ground-mounted portion of the system does not exceed 15 kW"). It should be modified to specify that it applies to mixed systems where the ground-mounted portion *exceeds* 15 kW but does not exceed 50 kW to ensure that these definitions are mutually exclusive.

The proposed changes to the preferred site documentation requirements 5.106(E)(8) seem excessively burdensome, especially for projects of this size. As discussed previously, limiting development on extraction sites strictly to the extent of the disturbed portion of the site is not an advantageous change so requiring documentation of that extent is also unnecessary. The burden required to meet this requirement discourages consideration of the very types of sites where it should be encouraged.

The proposed requirement that applications document any adjacent projects, 5.106(E)(11) is impractical and raises privacy concerns for adjacent landowners. Information about projects or *planned projects* on adjacent parcels may or may not be accessible to the developer and access to adjacent properties for the purpose of measuring the distance between facilities may or may not be obtainable. Requiring that developers unearth information about the ownership and construction history of systems whose construction and operation they are not involved in places an unreasonable burden on applicants with a clear benefit.

2.3 5.107 Applications for Systems Greater than 50 kW

The Commission's proposed change to 5.107(c)(12) would add a new decommissioning requirement for systems *equal to* 150 kW. This is inconsistent with the size thresholds used throughout the Rule which otherwise divide plants with a capacity *less than or equal to 150 kW* from those that are *greater than 150 kW*, see for example the Category II, III, and IV size thresholds and the setback requirement in Section 5.113. Using differing size thresholds creates

unnecessary confusion and it is unclear what value is achieved by adding a decommissioning requirement for systems that are exactly 150 kW. In practical effect this would likely lead to the elimination of 150 kW systems in favor of 149 kW systems. It is unclear what interest would be served by this change.

The proposed requirement that applications document any adjacent projects, 5.107(C)(15) is impractical and raises privacy concerns for adjacent landowners. Information about projects or *planned projects* on adjacent parcels may or may not be accessible to the developer and access to adjacent properties for the purpose of measuring the distance between facilities may or may not be obtainable. Requiring that developers unearth information about the ownership and construction history of systems whose construction and operation they are not involved in places an unreasonable burden on applicants with a clear benefit.

2.4 5.108 and 5.109 Amendments and Changes to Net-Metering Systems

REV is concerned that the recommended changes to the amendment processes in 5.108 and 5.109 are too vague and rely on a nebulous definition of "substantial impact." Requiring system This introduces new uncertainty into the process and raises significant obstacles for smaller installers. REV recommends additional public engagement to ensure that this process is clear and feasible.

3 Prohibiting Wholesale Market Participation Chills Innovation and Disadvantages Vermont

Section 5.135 provides that "[n]o net-metering system may participate in a wholesale market unless authorized by the Commission." In the *Order Requesting Comments on the Draft Rule*, the Commission states that "[t]his section has been added to prevent net-metering systems from receiving both retail and wholesale compensation unless authorized by the Commission." The Commission's Draft Rule and *Order Requesting Comments* fail to identify a need for establishing this significant barrier for net-metering systems participating in wholesale markets. According to the *Order*, the intent of Draft Rule Section 5.135 is to prevent compensation in wholesale markets for net-metering systems without the Commission's prior consent. A reasonable reader could infer here that the Commission seeks to protect against double compensation (i.e., double-counting for the same services), but the broad language of the Draft Rule goes much further to presume that net-metering systems have no right to wholesale markets to provide any service, even if it is a service that is not already being compensated through the net metering program.

The Commission, of course, has broad discretion over net metering as a retail practice. FERC Order No. 2222 recognizes that states may certainly condition the right to participate in retail programs, like net metering, "on those resources not also participating in RTO/ISO markets,

which should allow them to mitigate any double-compensation concerns." [Order No. 2222, ¶ 162 (p.131)]. But in rejecting a broad presumption or prohibition against dual participation in retail programs and wholesale markets in its final rule, FERC made the following observations:

> We agree with many commenters that the NOPR proposal could undermine the effectiveness of existing retail and wholesale programs, render current RTO/ISO market participants ineligible to continue their participation, and reduce competition in RTO/ISO markets, which could lead to unjust and unreasonable rates. Further, there may be instances in which an individual distributed energy resource could technically, reliably, and economically provide multiple, distinct services at wholesale and retail levels, and therefore preventing it from doing so may undermine the final rule by creating a new barrier to participation in RTO/ISO markets, thereby inhibiting competition and decreasing reliability. [Order No. 2222 ¶ 163, p. 131-32]

Similarly here, creating an additional step–and the uncertainty of whether the Commission will allow even existing wholesale market participation to continue for any net-metering systems so engaged–will serve to discourage potential participation and chill innovation in the market to provide "distinct services" to the wholesale markets as a complement and additional source of value for the net-metering system owner.

Moreover, the Commission need not assume the additional role of being the gatekeeper to the wholesale market for distributed energy resources engaged in net metering. In Order No. 2222 FERC granted "RTOs/ISOs flexibility with respect to the restrictions they propose in their tariffs to minimize market impacts caused by the double-counting of services provided by distributed energy resources in the RTO/ISO markets. If NE-ISO provides an avenue for net-metering customers to participate in the wholesale markets that will further enhance the value proposition of installing and utilizing behind-the-meter solar and solar+storage in this manner, it would seem like only a net positive for Vermont. Greater value streams that could be enabled by dual participation in retail programs and wholesale markets can help make a stronger value proposition to give greater access to low-and-moderate income customers. However, if Vermont is the only state, regionally, that presumptively prohibits wholesale market participation for net-metering systems, it could result in a lost opportunity for Vermont as more customer-sited capacity is built in other states.

The Commission also need not assume the additional administrative burden and work of being the gatekeeper of net-metering customers into wholesale markets in all circumstances. As written, the Draft Rule provides no details about a process that customers who may want to participate in wholesale markets would have to undertake to get permission. The most appropriate time to **clarify** the expectations of interested parties is through a rulemaking where the aggregation review process can be considered in coordination with any potential restriction for net-metered resources. Rather than delay an affirmative determination that net-metering customers can participate under a certain set of conditions in a future rulemaking, it would be far easier to simply strike Section 3.135 and remove the presumptive bar to dual participation,

allowing NE-ISO's process to decide which "distinct services" are capable of being provided under Vermont's net-metering rules without raising the specter of double compensation for providing the same service. Additionally, it may be more effective to identify specific situations where dual participation may be problematic and bar participation in those instances rather than bar participation in all cases unless approved by the Commission. Accordingly REV, respectfully requests that the Commission strike Section 5.135 to avoid unnecessarily chilling innovation and complicating the opportunities that FERC's Order No. 2222 harkens to open up for the distributed energy resource market in Vermont.

4 3. Additional Recommendations

4.1 Updates to Net-Metering Compensation

REV recommends several changes to the calculation of the blended residential rates to ensure that the rate received by net-metered customers is accurate and up to date. First, REV recommends that the blended rate be updated on an annual rather than biennial basis. The calculation of these rates is straightforward and the failure to update these values in a timely manner erodes the values of the electricity provided by net-metered customers. Second, REV recommends that the statewide blended residential rate be calculated using the utilities' actual blended residential rate rather than an estimate of the blended rate calculated by the Department of Public Service. The Department's methodology assumes that all users utilize the full initial rate block in all months which skews their estimate downward. This approach is unnecessary since the utilities' actual blended rate is readily calculable from their billing data. We recommend that the utilities provide this data annually by the end of February. Finally, REV recommends that the Commission require that the Department weight retail sales based on the preceding year's retail sales data. This data is again readily available to the utilities and should be shared with the Department in a timely manner.

4.2 Residential Production Meters

REV recommends that for residential systems the Commission drop the requirement that the applicant install a production meter (5.126(A)(1)). Production meters add cost to net-metered systems and create additional complications when paired with battery storage. As residential systems move increasing to solar plus storage, removal of the production meter will incentive residential customers to utilize their batteries to maximize self-consumption, providing the greatest benefit to the grid and ratepayers.

4.3 Non-bypassable Charges

REV reiterates the recommendation the Commission utilize the rulemaking to establish that non-bypassable charges, including the EEC, apply only to a customer's net consumption; or alternatively, that non-bypassable charges, including the EEC, apply only to a customer's total consumption from the grid.

4.4 Electric Vehicle Charging

Finally, while REV acknowledges that changes to the net-metering definition with regards to electric vehicle charging reflect the language in 30 V.S.A. § 8002 and cannot be changed within the Rulemaking process, we would like to flag for the legislature that we believe this is inconsistent with the efforts to maximize renewable energy usage and conflicts 30 V.S.A. § 8010. Net-metering for electric vehicle charging provides an excellent opportunity to synchronize load and renewable energy generation (both geographically and temporally) to maximize the benefits of solar deployment and vehicle electrification. Prohibiting this application of net-metering deprives Vermonters of these benefits and treats Vermont businesses unequally by discriminating against businesses that provide paid charging opportunities, and thus contradicts 30 V.S.A. § 8010(c)(1)(e) "that all customers who want to participate in net metering have the opportunity to do so."

5 Conclusions

Given the conflict between the stated goals of these revisions and what REV sees as their likely implication for net-metering in Vermont, REV respectfully urges that the Commission revisit the public engagement process for this Rule. The state must take every opportunity to promote renewable development to further its climate goals but several of the proposed changes have the result of slowing renewable development under the net-metering program without a clearly articulated benefit.