



May 17, 2019

Mrs. Judith Whitney, Clerk
Vermont Public Utility Commission
112 State Street, 4th Floor
Montpelier, VT 05620

Re: Proposed revisions to Rule 5.100 (Docket No. 19-0855-RULE)

Dear Commissioners,

Renewable Energy Vermont (“REV”) appreciates the Public Utility Commission’s efforts to clarify and streamline the review process under Vermont’s net-metering program. The success of the current program lies in its simplicity and stability—for customers, regulators, utilities, installers, and lenders. Having operated under the current program for over two years, and having witnessed a marked decline in the volume of net-metering applications to the potential detriment of meeting the 90 by 2050 goals in Act 174 of 2016,¹ REV agrees there are aspects that can be improved. With these overarching goals in mind, REV offers the following comments in response to the Commission’s Order Opening Rulemaking and its proposed draft changes to Rule 5.100, issued on April 16, 2019 (the “Proposed Changes”).

Vermont’s Comprehensive Energy Plan explicitly states that net metering is the appropriate tool to provide a significant portion of the generation necessary to meet Vermont’s Renewable Energy Standard, Tier II statutory requirements. The Renewable Energy Standard Tier II requirement adopted by the legislature is not a ceiling regarding the amount and pace of in state renewable energy generation, but a minimum floor.

REV supports many of the Proposed Changes insofar as they eliminate unnecessary process, codify existing practice, and address recurring issues in net-metering proceedings. For example, REV appreciates the proposal to clarify that registrations and Rule 5.106 applications serve as interconnection applications under Rule 5.500. This change will resolve any lingering confusion around the interplay between these two rules.² REV applauds the proposal to allow parties to transfer certificates of public good (“CPGs”) or merge projects into a single group without obtaining PUC approval. In a similar vein, REV strongly supports the proposal to expand the commissioning deadline from one year to two years. REV appreciates the Commission’s thoughtful approach to these changes as well as others broadly aimed at improving efficiency.

Conversely, some adjustments to the Proposed Changes are necessary to ensure the program continues to serve the interests of customers, host communities, and the state. The remainder of these comments summarize REV’s concerns with other Proposed Changes, describe further adjustments proposed by REV, and respond to miscellaneous issues raised in the Commission’s Order Opening Rulemaking.

¹ See Section III(A), below.

² See Case Nos. 18-2231-NMR & 18-2238-NMR, Order of 10/4/18 at 3-4 (resolving dispute as to whether separate interconnection application is required for registration filing).



I. COMMENTS ON THE PROPOSED CHANGES

A. Maintain Locally Designated Preferred Sites

The Commission should retain the option for municipalities and planning commissions to designate sites suitable for development via letter. The preferred site designation option for communities is an important empowering tool that allows local communities to influence how renewable energy facilities fit into the local landscape. The proposal to strike this option is at odds with the Commission's broader effort to improve local participation in the siting process.³ By eliminating this tool, municipalities would be left to rely solely on existing town plans or the few enhanced energy plans adopted under Act 174. This is inappropriate for several reasons.

As a practical matter, it is unreasonable to expect a municipality to catalogue each and every parcel that may be suitable for net-metering development at some future date. Many plans do not list specific parcels, but instead rely on the separate ability to designate sites suitable for development via letter.⁴ For example, the Colchester Town Plan incorporates a Preferred Site Scorecard for purposes of evaluating which sites should be given this status.⁵ These plans were drafted and approved assuming the letter designation would remain a viable option for municipalities to participate in the siting process. Eliminating this option would nullify an important preferred site category in municipal plans—a result wholly inconsistent with the participatory reform goals of Act 174.⁶

The change would also create hardship and inequity for the many municipalities that do not have an enhanced energy plan. When the current version of Rule 5.100 was adopted in 2017, the Commission agreed that relying solely on municipal plans would “limit the availability of locally preferred sites.”⁷ This concern led the Commission to include the letter option to ensure that local participation would not be stymied.⁸ These legitimate concerns continue to weigh in favor of not relying solely on municipal plans because, as reported by the Vermont Association for Planning and Development Agencies (“VAPDA”), just 24 of Vermont's 255 municipalities have adopted an enhanced energy plan.⁹

³ *In Re: Revised net-Metering program pursuant to Act 99 of 2014*, Order of 8/29/16 at 9 (explaining the program was revised to provide “better opportunities for towns and adjoining landowners to participate in the siting process for net-metering projects”).

⁴ See, e.g., Colchester Town Plan at 67-68 (2019); Richmond Town Plan at 20 (2018); Braintree Town Plan at 59-60 (2017).

⁵ The Scorecard is available at: <https://colchestervt.gov/DocumentCenter/View/4192/PreferredSitesSBDraft?bidId=>.

⁶ See 2015, No. 174 (Adj. Sess.) § 15 (expressing need to promote increased ease of citizen participation in Commission proceedings); Vt. PUC, *Report to the Vermont Legislature on Act 174 Working Group Recommendations* § II(8) (2017) (recommending changes to ensure that petitioners attend public meeting with municipal legislative bodies or planning commissions during advance notice period, and for the Department to consider the comments made and information obtained at public meetings in making recommendations to the Commission on the petition).

⁷ Vt. PUC, *Report to the Vermont General Assembly on the Net-Metering Program Pursuant to Act 99 of 2014*, at 20 (2017) [hereinafter *Act 99 Report*].

⁸ *Id.*

⁹ Current VAPDA data is available here: <https://www.vapda.org/vermont-enhanced-town-energy-plans/>.



For municipalities that have adopted enhanced energy plans, the letter designation provides a complementary process to adjust and fine tune siting decisions. This flexibility has proven to be a useful tool for cities, towns and villages, and is widely supported, as evidenced by the ability to designate via letter being incorporated into many municipal plans. Eliminating this option would be a step in the wrong direction and would not advance the Commission's stated goal of improving the net-metering program.

The Commission suggested this change was based on its review of information presented in a separate preferred site workshop conducted last year.¹⁰ The only comments from a municipality or planning commission on locally designated preferred sites were filed by the Northwest Regional Planning Commission and VAPDA. These entities expressed two primary concerns: (i) the requirement that municipalities and planning commissions submit a "joint letter" and (ii) the language suggesting that the letter must evidence "support" for the project. Neither entity suggested the PUC should eliminate this option; instead, VAPDA proposed changes for the PUC to consider. REV agrees that the rule can be improved and proposes to resolve these concerns by incorporating the following revisions:

. . . or a specific location that is identified as suitable for development in a ~~joint~~ letter or letters of support from the municipal legislative body, municipal planning commission, and the regional planning commission in the community where the plant will be located.

This change addresses the limited concerns raised while preserving an important process that allows municipalities—acting through their elected and appointed representatives who have great receptivity to local concerns—to respond to projects constructively. This is a much preferable approach to restricting future development of net-metered projects to predetermined sites.

B. Remove Timing Requirement for Gravel & Other Extraction Preferred Sites

REV opposes the Proposed Change reducing eligibility of extraction sites. Requiring extraction within three years of when a petition is filed to qualify for preferred site status is too restrictive and unrealistic considering the actual supply of extraction sites suitable for solar in Vermont.¹¹ As a practical consequence, many abandoned extraction sites around the state would no longer be eligible productive reuse for renewable generation. The proposed timing requirement would hinder the use of one of the more successful preferred site categories for solar deployment.

REV is unaware of any controversy around how project owners are utilizing this preferred site category to justify imposing a three-year limitation. Equally important, extraction sites typically remain impacted and in a disturbed state for decades after operations cease. REV members found this to be the case even where a site may be subject to reclamation requirements under a land use permit. Solar development on these sites has significantly contributed to bringing these sites into compliance with Act 250 requirements. These sites are also desirable for development

¹⁰ Case No. 19-0855-RULE, Order of 4/16/19 at 3 (citing Case No. 17-5202-PET).

¹¹ See Proposed Rule 5.103, Preferred Site (6). To facilitate citation to the definitions in Rule 5.100, REV suggests that the Commission include subsections for each term under Rule 5.103.



because, in most cases, they are out of public view and result in minimal if any aesthetic impacts. For these reasons, REV urges the Commission to eliminate the proposed timing restrictions.¹²

C. Avoid Additional Preferred Site Documentation for Extraction Sites

While REV is generally supportive of clarifying that a petition must include evidence of the limits of disturbance together with the existing permits for extraction sites, it requests that the PUC not require documentation from the permitting agency stating that reclamation requirements “have been or *will be satisfied* prior to operation of the plant.”¹³ It is unrealistic to expect a permitting agency to confirm that a site will be reclaimed in the future because it has no way to predict when (or even if) reclamation will occur. Ultimately, it is the landowner or site operator that dictates that pace at which a site is closed down and reclaimed.

In addition, REV respectfully submits that it is unnecessary to obtain affirmative reclamation evidence at the commencement of a CPG proceeding. The Commission’s current practice of imposing CPG conditions requiring site reclamation effectively reinforces the requirements under Rule 5.100.¹⁴ REV is unaware of any problems with this current practice that would warrant the need for affirmative evidence at the outset of a proceeding.

D. Retaining the Expedited Registration Process for CPGs and Interconnection

REV urges the PUC to maintain the timing distinctions for issuance of CPGs for systems that are less than or equal to 15 kW and those greater than 15 kW. Retaining the eleven business day window for systems at or below 15 kW is appropriate given that these projects have little if any impacts under the Section 248 criteria. The Commission’s proposal to more than double the review period for these small projects is not warranted and would introduce unnecessary delay.

REV is not opposed to relying on the interconnection review process under Rule 5.500 for registrations provided the timeframes in that rule are modified for small projects (≤ 15 kW). Under Rule 5.500, the electric company has a total of twenty five business days to complete its initial review of a project.¹⁵ This time frame is excessive for small systems. Maintaining the current review period of eleven business days for small projects would be in line with best practices throughout the region. For example, New York uses an expedited review period of ten

¹² REV also proposes a clarifying edit to subpart (c) of the extraction site definition, which requires that “all state and local permit conditions related to reclamation *of the site* are satisfied prior to the operation of the plant.” (emphasis added). In order to clarify that only the project area needs to be reclaimed rather than the entire site—which sometimes includes ongoing extraction in other phases—REV suggests that the definition be revised as follows: “all state and local permit conditions related to reclamation of the portion of the site occupied by the energy generation component of the plant prior to operation of the plant.” This change conforms to the PUC’s interpretation of similar language in the current rule. See, e.g., Case No. 17-5016-NMP, CPG of 2/22/18 ¶ 11.

¹³ Proposed Rule 5.106(D)(9)(b)(ii) & 5.107(C)(14)(b)(ii) (emphasis added).

¹⁴ See Proposed Rule 5.103, Preferred Site (6)(c) (requiring reclamation “of the site . . . prior to operation of the plant”).

¹⁵ See Rule 5.504(D)(2) & 5.505(A) (allowing 10 business days for completeness review and an additional 15 business days to complete fast track analysis).



business days for systems below 50 kW.¹⁶ In the event a small project raised interconnection issues, the utility could always move it off fast track review and “require whatever study is necessary under the provisions of Rule 5.500.”¹⁷ For these reasons, REV proposes modifying Proposed Rule 5.105(D) to include the following language:

In the case of a net metering system with a capacity of 15 kW or less, the electric company shall provide the results of its Fast Track Screening under Rule 5.505 within 14 calendar days of the date the registration is filed under this rule.

On a related matter, REV appreciates the PUC’s decision to no longer require an applicant response to interconnection requirements of the utility—followed by an order from the Commission—in order for a CPG to issue.¹⁸ REV agrees that this process is unnecessary because applicants most often agree to the utility’s interconnection requirements.

REV is nevertheless concerned that the Proposed Changes may not operate as intended. Under Proposed Rule 5.105(E)(a), a CPG would not be deemed issued if the utility requested CPG conditions to address interconnection concerns.¹⁹ Under this scenario, the PUC would have to issue an order resolving the comments for the CPG to be approved.²⁰ This appears to be an unintended consequence of the Proposed Changes, given the PUC’s stated intention to eliminate this process from the current rule.²¹ To address this concern, REV suggests that the PUC exclude interconnection conditions requested by the electric company from the scope of Rule 5.105(E)(a).

E. Maintaining the Minor Amendment Process

REV supports retaining the minor amendment process under Rule 5.108. Certain adjustments to a project’s design and equipment are inevitable as the plans become more refined and the development cycle reaches the construction phase. Project development is a dynamic process, taking into account community preferences, landowner requirements, natural resource constraints, contractor limitations, and market changes. This dynamic process results in minor adjustments notwithstanding diligent efforts to finalize plans before filing a CPG application. The current approach to minor amendments strikes the appropriate balance between process and efficiency. This process is a strength of the current program that should be retained. In the

¹⁶ See *New York State Standardized Interconnection Requirements*, [http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/DCF68EFCa391AD6085257687006F396B/\\$FILE/October%20SIR%20Appendix%20A%20-%20Final%2010-3-18.pdf](http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/DCF68EFCa391AD6085257687006F396B/$FILE/October%20SIR%20Appendix%20A%20-%20Final%2010-3-18.pdf) (providing that, for systems 50 kW or less, “[t]he utility has ten (10) Business Days upon receipt of the original application submittal to determine if the application is complete, project is eligible for the expedited process, and whether it is approved for interconnection if eligible for expedited process.”).

¹⁷ Case Nos. 18-2231-NMR & 18-2238-NMR, Order of 10/4/18 at 4.

¹⁸ See Case No. 19-0855-RULE, Order of 4/16/19 at 2.

¹⁹ This rule is limited to “party” requests, but the interconnecting utility will have automatic “party” status under Proposed Rule 5.117(B)(1).

²⁰ See Proposed Rule 5.105(E) (providing that if a request is filed within 30 days, “a CPG will not be deemed issued” and the “Commission will conduct such process as necessary to determine whether a CPG should be deemed issued”).

²¹ See Case No. 19-0855-RULE, Order of 4/16/19 at 2.



alternative, the Commission should convene a workshop designed to produce guidelines as to field changes that will not require review, and trigger mechanisms for clearly indicating when additional review by the Commission is required.

II. REV'S SUGGESTED CHANGES TO RULE 5.100

REV respectfully requests that the Commission use this rulemaking process to incorporate additional changes to strengthen the program and enhance its benefits to the state.

A. Incorporating Electricity Storage

The Commission should include an adder for net-metering systems paired with energy storage systems. For instance, in Massachusetts, customers are eligible for an adder of roughly \$0.045 per kWh to their base compensation rates if they add an energy storage system under the SMART program.²² The benefits of energy storage are numerous and incentive programs targeted to spur customer investment will encourage additional deployment to facilitate the critical mass of storage capacity needed to deliver system wide benefits. Indeed, in adopting the storage adder under the SMART program, Massachusetts identified specific benefits of energy storage when implemented in conjunction with solar photovoltaic systems including improved power quality, mitigating otherwise unnecessary substation upgrades often associated with installing solar, and the ability to shift solar energy production to peak demand.²³

Adopting a similar adder to Vermont's program would incentivize customer adoption of energy storage device to provide additional opportunities to leverage solar and storage to provide significant customer and system benefits, such as those identified above, through the aggregation of customer sited resources. Various utility programs, such as demand response programs, can be adopted to incorporate customer sited solar-plus-storage resources through, for instance, bring-your-own-device tariffs. A storage adder incentive is a critical first step, however, to ensure that the critical mass of storage capacity is deployed facilitate these types of programmatic benefits.

B. Residential Community Solar

REV again strongly encourages the Commission to ensure that traditional residential community solar becomes viable in Vermont once again. Prior to 2017, Vermont had one of the most dynamic virtual net-metering policies in the region, widely recognized as a model for energy democracy and local renewable generation deployment. Since implementation of the 2017 net metering rule, residential community solar participation and development in Vermont is virtually non-existent.

²² See 225 CMR 20.07(3)(c) (referencing Mass. Dept. of Energy Resources Storage Guideline that provides the energy storage adder calculator); *see also* Mass. Dept. of Energy Resources, Solar Massachusetts Renewable Energy Target Program (225 CMR 20.00) Guideline on Energy Storage (Effective Sept. 13, 2018), <https://www.mass.gov/files/documents/2018/09/13/Energy%20Storage%20Guideline%20FINAL%20091318.pdf> [hereinafter "DOER Guideline on Energy Storage"].

²³ See DOER Guideline on Energy Storage.



Community solar and virtual group net metering enables all electricity customers to access and choose to directly participate in and benefit from local renewable energy generation, especially those unable to host on-site generation. Residential group net metered projects – referred to as community solar in these comments should be prioritized for revitalization. A community solar-specific adjuster should be considered and the Commission should streamline the permitting process for residential community solar projects per the Legislature’s directive.

“Preferred Site” Community Solar Projects:

Project Definition: A net-metering project that is located on one of the previously identified “Preferred Sites” (landfills, gravel pits, etc.) in place at the time of the biennial review, up to 500kW and has 50 percent of the net-metering system’s electrical output allocated to residential customers.

Applicable Adjuster: Projects that meet the above criteria shall receive a \$.01 per kWh siting adjuster in addition to any other siting adjusters applicable to the project for a period of 10-years.

Other Community Solar Projects:

Project Definition: A net-metering project that is up to 150kW in size and has 50 percent of the net-metering system’s electrical output allocated to residential customers.

Applicable Adjuster: Projects that meet the above criteria shall receive a \$.005 per kWh siting adjuster for a period of 10-years.

C. Energy Efficiency Surcharge

Rule 5.100 should clarify that energy efficiency surcharges should apply only to a net-metering customer’s net consumption (i.e., grid imports) rather than the customer’s gross consumption (i.e., grid imports plus self-generated and consumed energy). Assessing the charge on gross consumption will likely have a chilling effect on customer adoption of on-site distributed generation going forward. According to Green Mountain Power (“GMP”), a “GMP residential net metering customer, who is being billed for 50 kWh of net consumption and is shifted to EEC billing based on 550 [kWh] gross consumption, will experience a nearly 30% total bill increase” if the EEC is applied to the customers gross consumption.²⁴ The Commission should adopt clarifications in this rulemaking to ensure that net-metering customers are not penalized for reducing their grid consumption. In particular, REV members recommend the PUC clarify 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.

III. REV COMMENTS ON MISCELLANEOUS TOPICS

A. Retaining the Retail Rate Foundation

REV strongly supports maintaining the retail rate design model. Retail rates are a logical, appropriate foundation for a net-metering rate structure because they are highly regulated and

²⁴ See Case No. 17-4697-INV, Proposed Revision of Commission Rule 5.300, Memorandum of Green Mountain Power Regarding the Interaction of Commission Rule 5.300 with Commission Rule 5.126; and Additional Comments at 4 (Jul. 20, 2018).



provide a simple, stable framework for customers and regulators alike. A retail rate model for net metering is an appropriate benchmark because the electricity that is consumed from self-generating net metered systems is an all-in product – it internalizes the cost to generate the electricity to the customers who decide to self-generate their electricity. Using retail rates as a foundation does not mean that all projects receive the retail rate. To the contrary, many projects receive less than retail as a result of negative siting adjusters. The retail model used in Rule 5.100 is designed to be flexible and adaptable to changes in the pace of development.

Just last year the Commission completed its first biennial review of the net-metering rates, resulting in a significant decrease to the REC adjuster and the siting adjuster applied to community scale projects. This rate reduction, combined with the expiration of the solar adder, has significantly reduced the pace of deployment in Vermont. Systems sized 150 to 500 kW a dramatic reduction in applications and installed systems since the Commission's 2017 rule revisions. REV anticipates further decline in the pace of new net metering applications later this year as given the Commission's adjuster decline; a new application fee (\$100 minimum to \$5/kW), and in GMP's territory a new \$37/kW TGFOV tariff all take effect July 1, 2019 or sooner. The federal Investment Tax Credit reduction in 2020 is also anticipated to reduce the amount of new solar projects that year and in future years as it continues to step down.

Stakeholders, including the many Vermont customers that own their net metering systems, are working hard to overcome these financial hurdles, and to ensure that the net-metering program remains a viable option for Vermonters. Abandoning the retail rate model would exacerbate these challenges and jeopardize the stability of the program. As the Commission has observed, such a shift would be complicated by the challenges with devising a workable model for estimating the future value of power produced by net-metering systems.²⁵ Even if such a model were to be designed, customer participation levels would decline if the new rate structure was difficult to understand and apply.

Fundamentally, decoupling net metering from the retail rate means eliminating net metering. Other states that have decoupled net metering from retail rates have experienced significant contractions in their solar markets. For instance, after numerous issues arising from the "gross" metering construct, Maine reverted to the retail construct in April of this year.²⁶ Similarly, following dramatic contractions in the solar market after the Nevada Public Utilities Commission eliminated retail net-metering in 2015,²⁷ Nevada enacted legislation restoring retail net-metering in 2017.²⁸ REV strongly recommends the Commission retain the retail-rate design model for net-metering in Vermont.

²⁵ *Act 99 Report* at 15.

²⁶ See H.P. 77 - L.D. 91, An Act To Eliminate Gross Metering, enacted Apr. 2, 2019, <http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP0077&item=4&snum=129>.

²⁷ Nevada Pub. Utils. Comm'n, Docket Nos. 15-07041 and 15-07042, Order of 12/22/15, http://pucweb1.state.nv.us/PDF/AxImages/DOCKETS_2015_THRU_PRESENT/2015-7/8305.pdf.

²⁸ See Nevada Assembly Bill 405, enacted June 15, 2017, <https://www.leg.state.nv.us/App/NELIS/REL/79th2017/Bill/5487/Text>.



Furthermore, it is imperative that current customers be grandfathered from any potential changes to the rate structure. Net-metering systems require significant up-front capital often financed through long-term debt from the Vermont Economic Development Authority, Vermont State Employees Credit Union, and other Vermont banks. Most homeowners and commercial customers who adopt solar can only do so by securing long-term loans. These loans were made on the reasonable assumption that the projects would continue to receive the retail rate over the project's useful life. Altering the rate structure for existing customers would undermine the legitimate investment-backed expectations of homeowners, schools, municipalities, lenders, and investors. Changing the rates on which financing, construction, and operation were predicated could very well result in stranded assets throughout Vermont. Such action would substantially impair existing contracts, violate the prohibition of retroactive regulation under 1 V.S.A. § 214, and offend vested rights principles. A retroactive change of this magnitude would threaten customer confidence in the program writ large, while undermining the 90% renewable by 2050 goals in Act 174 of 2016.

B. Locational Pricing

The Commission should avoid incorporating locational pricing and maintain the retail structure. The retail foundation in the current program is one that customers understand and that is familiar to the other suite of stakeholders that make net metering a reality: service providers, installers, banks and other financiers, Vermont's distribution utilities, and regulators. Including a locational value would introduce challenges and complexities associated with modeling locational values into the future. Introducing these complexities would undermine core strengths of Vermont's program—its simplicity and stability. Locational pricing would also lead to disparate rates for customers, which would conflict with the legislative mandate that the program be designed to ensure all customers have the opportunity to participate.²⁹

Locational pricing is a wholesale market pricing mechanism that has no place in the retail net metered space. Moreover, in New England, location prices are set by the fossil fuel prices of natural gas generation, not clean renewable energy. Natural gas prices are artificially low because they fail to reflect the full externalities of the carbon emissions they contribute to the destruction of the planet.

While locational pricing should be avoided, as a component of the net-metering program, we encourage the PUC to ensure the program allows customers to participate in other programs to provide grid services and receive compensation for their performance in those programs. These should include services to provide locational benefits in grid-constrained areas as well as provide system wide benefits. Bring-your-own-device programs offer an administratively simple mechanism to integrate customer sited solar and storage as part of utility demand response and other dynamic load management programs, among other participation pathways to deliver grid value from these resources. To unlock these benefits, REV recommends that the Commission require utilities to institute programs with mechanisms that allow net-metering customers to participate in and receive compensation for providing these valuable grid services through third-party aggregators.

²⁹ See 30 V.S.A. § 8010(c)(1)(E).



C. Grid Constraints

Consistent with the comments above, net-metering compensation adders for preferred sites should retain the current adjusters and avoid incorporating pricing. A grid related rate reduction or prohibition on preferred site applicability would operate as a practical barrier that customers have no control over and in contravention of the requirement that all customers must have an opportunity to participate.³⁰ The status of grid constraints often fluxuates and is also not always known or mapped by some utilities in Vermont.

Other pricing signals are already in place to steer development where it is most economical and beneficial for the state. Proposing a project for a grid constrained area could require additional interconnection costs associated with grid upgrades (such as GMP's proposed TGFOV tariff, Case 19-0441-TF), or the installer could agree to curtail output during the limited number of hours that generation coincides with the constraints (as proposed for the Dairy Air Wind Project—with the support of VEC and GMP, Docket 8887). If an installer bears the economic costs to mitigate grid impacts, there is no reason to prevent a suitable site from receiving preferred status.

REV submits that the utilities, regulators, and other stakeholders must be proactive and modernize the electrical grid, both to sustain the net metering program and to meet the State's renewable energy commitments. As the Comprehensive Energy Plan observes, "Proactive grid design and planning can address integration concerns before they serve to limit generation interconnection."³¹ REV's members are committed to doing their part to achieve these goals, including through investments in grid upgrades across the state focused on enabling substations to accept two-way flows of electricity and information. These are meaningful benefits that will advance the State's goals to transform Vermont's electrical network into a smart grid.

During the April 2019 quarterly meeting of the Vermont System Planning Committee meeting, it was reported that "existing congestion could largely be addressed with a limited package of solution steps."³² The solution package also has a strong cost effectiveness for Vermont customers—with a simple payback period of 2 to 5 years.³³ In light of these efforts and for the reasons summarized above, the preferred site adders should not be expanded to include grid constraints.

D. Parking Canopies

In reviewing ePUC data, it appears that only 4 parking lot canopy "preferred sites" projects applied for CPGs over the last two years. Due to extremely low permit volume the Commission should reduce the permitting burden and review process for parking lot canopies. The current permit process for a solar canopy greater than 50 kW requires legal testimony on a number of issues that do not apply to existing parking areas (prime ag soils, wetlands, etc.). REV requests

³⁰ *Id.*

³¹ Comprehensive Energy Plan at 243.

³² See *Screening of Potential Screening Solution Steps*, Slide 4 (4/24/19), https://www.vermontspc.com/library/document/download/6560/20190424_SHEIupdate.pdf.

³³ *Id.*



that the Commission permit canopies through a registration type process, with the exception that the notice period is 45 days, to allow for adequate local input on aesthetics.

E. Vegetation Management

Vegetation removal should have no bearing on preferred site status. The review process under Section 248 allows the Commission, ANR, and the Department to evaluate the potential natural resource and aesthetic impacts associated with tree clearing before a CPG is issued. In this context, regulators can carefully analyze “the character and values of the forest in question and other case-specific facts such as mitigation.”³⁴ In contrast, conditioning preferred site status on some maximum level of clearing would result in an overly inclusive rule that fails to account for actual impacts. Such a requirement would also create tension with the state’s broader effort to steer development away from greenfields and toward developed sites concealed from public view. As Vermont looks to maximize the re-development potential for its former extraction sites, some vegetation management and clearing will be necessary. Imposing blanket clearing limitations would limit the number of viable sites in Vermont.

Clearing a few acres beyond the footprint of an array is predominantly to benefit production, reducing the impact of shading or danger trees. The amount of tree clearing related to installation of a clean, renewable energy resource as solar, is insignificant when viewed cumulatively with all Vermont timber harvest related activities (development, timber harvests, biomass generation, etc) in Vermont’s 4.5 million acres of forestland.

The ANR 2017 Forest Action Plan indicates that Vermont’s forests are still growing. It’s only the rate of that growth that has slowed down and only slightly. The Plan states:

Vermont has over 4.5 million acres of forest land. While Vermont’s area of forest land has been relatively stable since the late 1990s, there has been a gradual decline in forest area since 2010 that has resulted in a 1.5 percent decrease.

The 280 acres referenced by the Commission is only about 0.006% of the 4.5 million acres of Vermont forestland. It is insignificant. As well, the Action Plan states that the rate of growth exceeds the rate of removal by a 2.1/1 ratio. The Plan indicates from 2010 to 2015 there has been a net 69,000-acre loss due to development. The Plan further states:

Private landowners own 80% of Vermont’s forest land and there is more growth than removal. The current level of removal is sustainable, barring any significant increase in tree mortality.

Vermont law allows forest clear cuts (40 acres or more) with only a filing to the Vermont Department of Forests, Parks and Recreation of an ‘Intent to Cut Notification’ if a landowner plans to cut 40 or more acres at one time. Otherwise, these silvicultural activities are exempt

³⁴ *Petition of Otter Creek Solar LLC*, Case Nos. 8797 and 8798, Order of at 20-21 (observing that the Commission approved a project that required clearing “38.5 acres of ‘managed forest,’ meaning forest that has been cleared within the past 20 years”).



from permit, only perhaps the need of a stormwater discharge permit and to follow the Acceptable Management Practices (AMPs) for streams wetlands and erosion control.

Vermonters burn over 850,000 tons of firewood each year for heating or about 22,000 acres of clearing. Pollution from burning that firewood is 12,000,000 lbs of particulates per year -- the highest state rate of particulate pollution per capita in the U.S. for wood burning due to old stoves and outdoor boilers. Rutland has the highest rate of asthma in over 18 year olds in the entire US. Clean solar electricity from a forested site hosting a 500kw solar array, if used for heat pump heating, would offset 200,000 to 300,000 lbs of particulates from being omitted while preventing ~400 acres of land from being cleared for inefficient wood stove and outdoor boiler heating. The particulates are about 5% priority pollutants (10,000 to 15,000 lbs of those) and about 0.5% carcinogens (1,000 to 1,500 lbs of carcinogens).³⁵

F. Next Steps

REV requests that the Commission hold a series of workshops before proposing a revised draft rule. It would be particularly helpful for the Commission to first host an overview workshop that walks through it's proposed changes and enables open dialogue of understanding of the intent of the Proposed Changes and the problem that the Proposed Changes aim to address, particularly as it relates to Proposed Changes related to the major/minor amendment process and the registration process.

REV requests that the Commission hold specific workshops to discuss the lack of viability of residential community solar projects in Vermont; parking lot canopies; and electricity storage. It may be helpful for the Commission to visit a commercial parking lot canopy site recently constructed to have a sense of both the process and the project itself.

We would also appreciate an opportunity to provide comments on the Commission's next draft revised rule prior to formally filing a proposed rule.

IV. CONCLUSION

Vermont's net metering program was widely considered a national model due to its original simplicity, accessibility to all customers, and success catalyzing local, customer-based renewable electricity. A keystone to long term energy resilience and distributed clean energy grid transformation, net metering must continue to enable all Vermonters equitable access to local renewable energy choices and direct, meaningful contribution towards achieving the State's renewable energy and climate commitments.

REV supports many of the Proposed Changes and believes they can enhance the program, if combined with other changes. Above all, REV believes that maintaining the town/RPC letter designation for preferred sites, subject to the changes proposed in these comments, is critical to

³⁵ John A. Cooper, Environmental Impact of Residential Wood Combustion Emissions and its Implications, *Journal of the Air Pollution Control Association*, 30:8, 855-861, <https://www.tandfonline.com/doi/pdf/10.1080/00022470.1980.10465119>



strengthening community participation in the siting process, while achieving Vermont's objectives for renewable energy.

Most Sincerely,

A handwritten signature in green ink, appearing to read "OCA", is written over a faint, circular green stamp.

Olivia Campbell Andersen
Executive Director
Renewable Energy Vermont