STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Docket No. 19-0855-RULE

Proposed revisions to Vermont Public Utility Commission Rule 5.100	)))

DEPARTMENT OF PUBLIC SERVICE COMMENTS IN RESPONSE TO ORDER OPENING RULEMAKING

The Department of Public Service ("Department") offers the following comments in response to the Order Opening Rulemaking issued by the Vermont Public Utility Commission ("Commission") regarding Commission Rule 5.100, which governs the construction and operation of net-metering systems.

I. Responses to the Commission's Questions

1) Changes intended to clarify and streamline the registration of net-metering systems

Commission action related to interconnection issues

The Order Opening Rulemaking states:

> *[T]he Commission would like to streamline the process for net-metering registrations for which the applicant has agreed to any interconnection requirements specified by the utility. Under the current rule, the applicant must respond to all interconnection issues identified by the utility and the Commission must determine that the response satisfactorily resolves those issues. The Commission proposes to revise the rule so that Commission action would only be necessary when there is a dispute about interconnection requirements. A customer would dispute any interconnection requirement by filing a request with the Commission.*

The Department recommends that the rule be clarified by adding language stating that an applicant, the Department, or an affected utility must file a dispute request within a time certain after receiving notice of a utility decision. Failure to file a dispute request will be interpreted as agreement with any and all documented interconnection requirements. The parties need to be able to identify interconnection issues within this time period for it to afford process in a fair and timely manner.

The Department has seen multiple instances where a net-metering registration has been deemed approved and an interconnection issue was identified after the fact. Some of these disputes have been brought to the Commission's attention for resolution and some have been resolved more informally. Because interconnection issues relate to the 30 V.S.A. § 248(b)(3) requirement that a facility not adversely affect system stability and reliability, the Department believes that the registration process should be streamlined while improving the identification of interconnection issues within the designated timeframe and also clearly harmonizing Rules 5.100 and 5.500. The Department will provide additional comments on this issue in section (3), below, and welcomes stakeholder feedback over the course of this rulemaking.

Procedure for amendments

The Order Opening Rulemaking states:

> *Under the current rule, the applicable procedure for making changes to a net-metering registration depends on whether the change is a "major" or a "minor" amendment. . . . The Commission proposes to end this distinction between major and minor amendments and have a single procedure for all amendments.*

The Department supports the concept of a clarified and streamlined approach to amendments and would further encourage the Commission to consider formally adopting – and potentially expanding – the category of "De Minimis Change," as presented in its April 11, 2019 Net-Metering Registration Guidance: Amendments and FAQs. Maximizing the types of changes that can reasonably be included in this category (i.e., factual information that is important to record but does not cause material impacts under the relevant 30 V.S.A. § 248 criteria) could provide a degree of flexibility in the business operations of Vermont's renewable energy installers that ultimately benefits consumers. An example of one such change might be modifications to the brand or model of solar photovoltaic modules used in an installation, provided the AC nameplate inverter capacity and Rule 5.500 compliance remains the same.

The Department also recommends that the adopted language provide applicants some indication of when and how the Commission will exercise its discretion in affording review of potentially significant impacts under 30 V.S.A. § 248(b).

2) Recommendations pertaining to "preferred sites" identified in Case No. 17-5202-PET

Preferred-site status for projects located in grid-constrained areas
The Order Opening Rulemaking states:

> *In regard to preferred sites, the Commission requests comments on whether preferred-site status is appropriate for areas of the grid that are constrained.*

The Department maintains that projects located in constrained areas or circuits should not be given preferred site status. Preferred site status should guide projects toward locations that are realistically expected to be easier, faster, and less expensive to review regulatorily, as well as less prone to legal disputes. Steering projects toward (or alternatively, not affirmatively steering projects away from) constrained areas know to be problematic from an interconnection perspective would be counterproductive to the broader objectives of the preferred site construct.

The Department can work with utilities and other stakeholders to develop a common framework for identifying, updating, and posting constrained areas in a manner that is clear and transparent.

<u>*Simplified process for solar canopies*</u>

The Order Opening Rulemaking states,

> *The Commission also seeks comments on whether there should be a simplified process for obtaining a CPG for a solar canopy over an existing parking lot. The Commission has heard that these projects have minimal environmental impacts and should be eligible for filing as registrations like rooftop systems. The Commission seeks comments on this type of approach.*

While solar canopy installations over an existing parking lot may serve to narrow the potential for environmental impacts (the Department defers to ANR's comments for a more fulsome discussion of this concept), from the Department's perspective, there is a key non-environmental difference, which relates to safety. Rooftop installations are difficult for unauthorized persons to access, whereas canopy-mounted installations are much vulnerable to unauthorized access. Accordingly, requirements for, and assessments of, minimum height, scrim, or other barriers for energized equipment should not be waived in streamlining canopy installations.

In general, the Department supports the concept of a regulatory review process commensurate with the breadth and depth of potential project impacts on the applicable criteria. While a registration-like process may be warranted for solar canopy projects, they should not be reviewed as if they were rooftop projects of the same size. In addition to potential safety issues, solar canopies may have greater aesthetic impacts, and may thus warrant broader notice requirements (e.g. the municipality, regional planning commission, adjoining property owners, and possibly additional state agencies including the Agency of Natural Resources and the State Historic Preservation Office).

Option for a joint "preferred site letter" from the municipal legislative body and the municipal and regional planning commissions

For practical reasons, the Department recommends retaining the option for a joint letter of support as an alternative to the designation of a site in a duly adopted municipal plan. While municipalities have been developing enhanced energy plans, in practice, many preferred sites are only being identified categorically (if at all) and not geographically, certainly not down to the parcel level. It is the Department's understanding that regional planning commissions and municipalities generally support keeping this provision, with modifications. The Department suggests requiring that locations identified in the joint letters need to be in areas identified as suitable in the regional plans, to address concerns that this particular category of preferred site might not reflect environmental concerns. It may also be beneficial to clarify that the letter is in support of the site, not necessarily the project, and that the town and regional planning commission will preserve the right to comment on the specifics of the project later in the process.

3) Changes that clarify the relationship between the Rule 5.100 certificate of public good ("CPG") application process and the Rule 5.500 interconnection application process

The Order Opening Rulemaking states,

> *The Commission is considering changes to Sections 5.105, 5.106, and 5.107 that are intended to clarify the relationship of the CPG application process and the interconnection application process. For example, the draft clarifies that registration forms filed pursuant to Section 5.105 and application forms filed pursuant to Section 5.106 constitute Rule 5.500 interconnection applications. The Commission requests that comments address whether the registration form and application form need to be amended to include any information relevant to the subject of interconnection.*

> *Applicants proposing large, ground-mounted net-metering systems pursuant to Section 5.107 will need to demonstrate that they have filed a separate, complete Rule 5.500 interconnection application with the interconnecting utility. The Commission requests comments on whether the Commission should require applicants to provide the results of any interconnection studies with a Section 5.107 CPG application."*
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> (Also, *"the Commission proposes to standardize the time provided to utilities to raise an interconnection objection to a registration by providing 30 days for objections [rather than 10 business days for some and 30 days for others, depending on size]."*)

The Department recommends that if, as proposed, the net-metering registration application is to also serve as the interconnection application, then additional information (akin to what would otherwise be required in Rule 5.500 interconnection application) should be provided to the interconnecting utility and the Department at the time the registration is submitted. This will allow for adequate review of the potential impacts of the project to system stability and reliability. If an approach where registrations or applications also served as an interconnection application were adopted, the Department understands that the net-metering comment period may not readily reconcile with the timelines for interconnection reviews (for example if a 500 kW roof mounted system warranted a system impact study). The Department seeks to ensure that adequate interconnection information is available before the comment, or deemed approved, period has lapsed. Another option to ensure timely and adequate interconnection review would be for the process to begin at an appropriate stage in the prefiling period. The Department believes that system stability and reliability is an important issue and that the review currently afforded by Rule 5.500 be required irrespective of the approach. The Department recommends that the agenda in the Rule 5.500 rulemaking proceeding, in case number 19-0856-RULE, also seek harmonization between these two rules.

In the Department's experience interconnection study results are already filed with most 5.107 applications. As such, the Department would support the addition of that filing requirement. Moreover, requiring all projects at, or above, 150 kW (for both 5.105 and 5.107) to file the results of the Rule 5.500 interconnection process may be a practical approach to identifying and addressing interconnection disputes. Another option could be to amend the various registration and application categories to be more sensitive to potential system stability and reliability impacts. For example, a category could be added for larger roof mounted systems that allows sufficient time for an adequate 5.500 review before a CPG is deemed approved. The Department looks forward to further discussion of the best pathway for ensuring projects, especially larger ones with commensurately greater potential impacts on system stability and reliability, receive adequate review.

4) Recommendations pertaining to the net-metering rate structure, linking rates to beneficial electrification, locational pricing, and biennial review process

The Order Opening Rulemaking states,

> *….the Commission is interested in hearing from stakeholders about whether any changes to the net-metering rate structure would be beneficial. For example, should net-metering credits continue to be based on the blended residential rate or should credits be based on some other measure, such as avoided system costs and environmental benefits? Participants should also offer ideas about how to leverage net-metering to reduce fossil fuel consumption. For example, net-metering rates could be linked with requirements for beneficial electrification of what would otherwise be fossil-fuel-based heating and transportation.*
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> *The Commission recently examined the possibility of using locational pricing in the context of the standard-offer program. While the Commission determined that locational pricing was not practical in that context, the Commission would like to know whether locational pricing would be appropriate for the net-metering program. Finally, the Commission would like to know whether the biennial update process described in Section 5.128 should be changed to better accomplish the goal of ensuring that the costs and benefits of net-metering are well balanced."*

Blended residential rate structure

While net-metering brings significant value to participants and developers, it remains the most expensive policy path for acquiring resources in order to meet the Renewable Energy Standard (and electricity service framed more broadly). Alternatives exist that will mitigate impacts to non-participants and ratepayers in general. The main alternative involves moving toward a rate structure that is based on a more complete set of values such as those related to the system and its attributes (including time, location, and the environment). It is likely that this will require use of market-based elements combined with some more static calculations of system avoided-costs, ideally differentiated by time and location. A system-based rate design structure can be structured in many ways, for instance through a framework that differentially compensates net excess production from production consumed on-site (the latter being the most valuable from a system perspective). Net excess production can be further differentially priced based on avoided costs to utilities, with higher values for production coinciding with higher prices for utilities to otherwise purchase power. Hawaii has recently moved in this direction with their net-metering program, with the introduction of a "Customer Grid Supply Plus" option and a "Smart Export" option as successors to the original net-metering program.[1]

The Department supports review of the rate structure. The Department acknowledges, however, that the scope of the effort it envisions would be significant and would potentially delay other Rule changes that can be addressed in relatively short order. The Department recommends that the potentially more involved discussion of how best to reflect system value in net-metering

[1] http://programs.dsireusa.org/system/program/detail/596

rate design be included as part of this current rulemaking effort, but possibly through a separate track that permits more time and engagement around the establishment of framework with a greater basis in system value.

Reducing fossil fuel consumption

Net-metering is a useful policy tool, but as with any tool, it should not be expected to perfectly achieve a bundled solution for multiple policy aspirations. Rather, the Department recommends that the Commission be mindful of the manner in which net-metering can be bundled with other policies to foster overlapping and beneficial policy objectives. Attempting to achieve too many objectives through one policy tool not only complicates the rule development but also ultimately complicates efforts to unwind and reform rule changes that are needed in the future. Therefore, the Department does not support linking net-metering rates to beneficial electrification measures. However, in discussions related to the establishment of a more comprehensive value-based rate structure, it would be useful to examine the potential for an avoided-cost compensation framework, or compensation based on time and locational system values, and to also evaluate the potential for compensation that is, in part, based on environmental benefits.

Locational pricing

The Department's view is that compensation should be based on value of net-metered production to the system (at least for the net flow of electrons to the system differentiated by timing and location). Moving toward a system value-based rate-design structure would ideally implicate the time and locational value of generation. To the extent that this concept is furthered under the current rule construct, it will be important to distinguish between transmission and distribution level constraints.

Biennial review process

The Department requests that the Commission consider modifying Rule 5.128(D) so that, rather than specifying the information required of utilities by February 1 of each even-numbered year, the PUC instead reference a template that contains a broader set of required information (fields), in standardized form, that can be modified if needed. During the 2018 biennial review, the Department requested supplemental data from the utilities that was necessary to respond to the questions posed by the Commission.[2] Obtaining at least the information the Department requested, in a common format across utilities, will make evaluation of the statewide pace of net-metering much more manageable. The Department also recommends that the information be submitted annually, so that stakeholders can have a common and useful reference source for understanding the pace of deployment on a more frequent basis.

Role of preferred sites in the rate structure

The Department has concerns related to tying the compensation for net-metering to the concept of preferred sites to the exclusion of system cost considerations. Increasing the compensation paid to a resource located on a preferred site provides a land-use benefit and may increase regulatory efficiency by reducing the likelihood of litigation during the siting process. While the increased compensation may loosely reflect some land-use benefit or the increased cost tied to building projects on certain types of preferred sites, the fact that a proposed project is located on a preferred site does not affect the value that the project provides to the electric system and to ratepayers. Further, the preferred sites concept results in benefits that accrue to residents in one geographic area which are paid for by all customers of the interconnecting utility. From a ratepayer

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[2] *See* Supplemental Information Request in Response to PUC's 1/12/18 Order and PSD Suggested Information Submittal Template in docket 18-0086-INV.

perspective, providing different rates to projects located in different areas would be reasonable if the geographic distinctions better reflected the value (or detriment) that a resource provided to the grid, rather than giving a credit based solely on land-use perspectives.

While it may be outside the scope of this current rulemaking, the Commission should consider removing the preferred site concept from the rate structure entirely, or at least balance it, and instead provide incentives for resources on preferred sites through the permitting process or otherwise considering them in the context of grid constraints.

Compensation for new capacity added to existing systems

As stated in the Commission's *Report to the Vermont General Assembly on the Net-Metering Program Pursuant to Act 99 of 2014* and further clarified in the draft rule changes, Sec. 5.108(C), when an existing system is amended, the compensation for production will remain at the original rate.[3] While this makes sense from a practical perspective (it would be difficult to separately meter production from the older and newer parts of the system), and may be mitigated by the 10-year limit on positive adjustors, the Department would nevertheless urge the Commission to at least impose a limit on the size of project or scale of expansion entitled to "original" rate treatment. For instance, while a residential, 5 kW system doubling in size and receiving an extra cent or two for excess production may not be a substantial impact in overall compensation, the same cannot reasonably be said for a 150 kW directly interconnected system tripling in size to 450 kW.

[3] *Report to the Vermont General Assembly on the Net-Metering Program Pursuant to Act 99 of 2014*, Vermont Public Service Board, 31-32 (January 20, 2017). Available at https://puc.vermont.gov/sites/psbnew/files/doc_library/FINAL%20Report%20to%20Legislature%20Pursuant%20to%20Act%2099%201-20-17.pdf

II. Additional Issues for Consideration by the Commission

Resources should not be able to receive net-metering rates and participate in ISO New England wholesale electricity markets

There are hydroelectric resources in Vermont that are receiving both net-metering rates and payments from the ISO New England, Inc. (ISO-NE) Forward Capacity Market. A list of all resources that have received a Capacity Supply Obligation can be found at: https://www.iso-ne.com/markets-operations/markets/forward-capacity-market.

One of the significant benefits of distributed resources is the ability of the interconnecting utility to reduce its ISO-NE load and capacity obligations. To the extent that a generator is participating in the ISO-NE Forward Capacity Market, the interconnecting utility cannot reduce its capacity obligation by that amount of capacity. Consequently, generators that are receiving both net-metering rates and capacity payments from ISO-NE are "double-dipping" and Vermont consumers are not getting the full benefit of what they pay for.

ISO-NE conducts monthly and annual reconfiguration auctions whereby a resource can sell off its capacity supply obligation. Rule 5.100 should include prospective language that any resource entering the net-metering program cannot also participate in any wholesale electric market conducted by ISO New England, Inc. or its successor. In addition, the rule should make clear that any resources that are already in the net-metering program must terminate its capacity supply obligation within a certain time period.

The use of and role of energy storage in net-metering should be explored and clarified.

With tens of megawatts, and hundreds of installations, of energy storage projects now deployed in Vermont it is becoming increasingly urgent to explore the role of energy storage in the net-metering program. Discussions related to the net-metering rate structure with an emphasis on the time-value, and potentially even location-differentiated value, of generation will likely implicate storage. Other states including Massachusetts, Colorado, and Rhode Island are in the process of investigating solar-plus-storage in the context of net-metering. This includes issues such as eligible storage size, requiring that the storage system be charged only from the solar net-metering facility, and restricting the ability of the storage component to export to the grid.

Procedural Considerations and Rule Clarifications.

While the proposed rule changes generally make great steps toward ameliorating areas of the rule that are often disputed procedurally, the Department would like to explore parts of the rules that are frequently problematic or confusing from an administrative or procedural aspect. Some examples include CPG extension requests; post-CPG disputes; enforcing the net-metering size limit; the construction and interpretation of definitions, such as non-bypassable charges; changing preferred site designations to other types; and non-physical changes.

III. ***Process and Scheduling***

The Department recommends that the Commission allow for three to five workshops around discrete topic areas, with each workshop preceded and followed by a round of comments, and then a final two rounds of comments would be held in response to any substantial proposed revisions to the draft rule at the close of the rulemaking proceeding. The Department further recommends that the proposed workshops scheduled for each of the major topic areas, addressed by the Commission's proposed changes to the rule, possibly include:

a. Preferred sites (particularly changes proposed by the Commission since the last workshop in docket 17-5202-PET);

b. Registration process changes (particularly parking canopies and larger system interconnection information/timelines);

c. Rule 5.100/Rule 5.500 relationship (potentially as part of the 5.500 rulemaking in docket 19-0856-PET);

d. Rate structure and mechanisms; and,

e. Procedural concerns, rule clarifications, closing remarks, and recommendations.

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