



December 6, 2019

Filed via ePUC

Mrs. Judith Whitney, Clerk
Vermont Public Utility Commission
112 State Street, 4th Floor
Montpelier, VT 05602

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

Dear Commissioners:

In its August 22, 2019 Order, the Commission identified three “common themes” that it found in the comments initially provided in this docket: (1) the net-metering compensation structure, (2) issues related to “preferred sites” and siting standards generally, and (3) administrative issues, including how the Commission processes applications for certificates of public good. The Commission since issued information requests and stated its intent to schedule a series of workshops. Should the Commission propose to change the compensation structure in Rule 5.100, Renewable Energy Vermont again requests that the Commission hold at least two workshops for discussion. REV supports the Department of Public Service and GMP’s recommendation for the Commission to hold workshops on resiliency, opportunities for realizing benefits of storage, and value of solar calculations.

Many entities and individuals have submitted follow-up comments and information, presenting the Commission with a potentially dizzying array of opinions and analysis. It is REV’s hope that the Commission will conduct a robust investigation of the legal, economic, and policy frameworks within which it takes its next steps, and explore in detail the claims made by the some utilities and the Department. REV requests that once the workshop period has been completed, the Commission should open a contested case, allowing for sworn testimony, expert witness presentation, discovery, and cross-examination.

REV and its nearly 200 business and non-profit members are proud of the incredible progress that we are making, with the Commission and Legislature’s support and legal direction to furthering Vermont’s energy transition to a near fully renewable portfolio, growing Vermont’s economy, lowering overall energy and climate crisis costs, and reducing the greenhouse gas impacts of Vermont’s power supply.

These comments are intended to respond to specific points raised or made by commenters in their November responses to the Commission’s information requests. Section A briefly addresses the “joint letter” preferred site criteria and Section B addresses comments on the net metering rate structure and analysis of costs and benefits.



REV has also engaged the services of Karl Rabago of Rábago Energy LLC, and former director of Pace Law School's Energy and Climate Center, who is provided independent expert comments in the form of testimony, and REV respectfully refers the Commission to that analysis as well.

A. Preferred Sites

The vast majority of commenters favored retaining the “joint letter” preferred site as a valuable planning tool. REV supports the continuation of the “joint letter” preferred site criteria in its current manifestation, and believes strongly that the Commission does not have the authority to review such a preferred site designation. Such authority lies with local jurisdictions.

Comments that “projects located in transmission-constrained areas should be disqualified” from being designated as “preferred sites,”^{1&2} are contrary to the legislative requirement that all ratepayers who want to participate in net metering should be allowed to, 30 VSA § 8010, and also seeks to obviate the existing mechanism in 30 V.S.A. § 248 for determining whether a project actually has any undue adverse impacts given the potential costs and benefits of each individual project. VEC is obviously referring to the constrained Sheffield-Highgate Export Interface (“SHEI”), which covers most of VEC’s service territory. This position also obfuscates the proposed near term solutions - line and substation upgrades – by several utilities, which are designed to reduce if not eliminate existing congestion in the SHEI.³ It is worth noting that the Department of Public Service “is not currently suggesting locational adjustments.”⁴

B. Net Metering Compensation Structure – Response to Comments

Even without further analysis and based on the utilities’ own comments, the impact of the net metering program on rates has been minimal – in the case of the smaller utilities represented by BED/VPPSA, the rate impact attributable to net metering was, in 2018, between 0% and 1.2%.⁵ The 2020 rate impact quoted by GMP for 20 MW of incremental net metering capacity is approximately \$2.5M, a fraction of one percent of GMP’s budget.

In other proceedings, it has been established that a prime driver of rate increases is utility capital expenses, ISO-NE charges, and increasing response to climate change caused events.⁶ To lower

¹ Comments of Vermont Electric Cooperative, 11/1/2019 at 11.

² Comments of Washington Electric Cooperative, 11/1/2019 at 16-17.

³ *Petition of Green Mountain Power for a Certificate of Public Good pursuant to 30 V.S.A. § 248 authorizing the rebuild of the Lowell Substation and the upgrade of 18.1 miles of the B20 line from Johnson to Lowell, and Joint Petition of GMP, the Village of Morrisville Water and Light Department, and the Village of Johnson Water and Light Department for a CPG pursuant to 30 V.S.A. § 248 to authorize the upgrade of 1.5 miles of the B22 line, in the Towns of Lowell, Eden, Johnson, and Morristown, Vermont*, Case No 19-4464-PET.

⁴ Comments of the Department of Public Service, 11/1/2019 at 3.

⁵ BED/VPPSA Comments, 11/1/2019, Appendix 3

⁶ Case No. 18-0974-TF, GMP Rate Case, PSD Direct Testimony of Brian E. Winn, August 10, 2018, at 11-12; Case No. 18-1633-PET, MYRP, GMP Direct Testimony of James M. Coyne, June 4, 2018 at 3-4.



rates over the long term, we request that the Commission primarily focus its limited time and attention to these capital expenses and factors truly driving rate increases of which net metering is not a significant one.

With respect to the net metering numbers, it is crucial that the Commission fulfill its role as an independent fact-based arbiter and create a rigorous process that supports the full explanation and vetting of the utility's data. This is explicitly required by statute to ensure that policies fully in the state's best interest are pursued. As part of a full rigorous analysis, at least two aspects of the claimed cost shift require further exploration.

First, any considerations of cost must be done in the context of a full societal cost benefits analysis, also explicitly required by statute. To consider the costs and not all the corresponding benefits would necessarily lead to a policies that are not socially optimized. The Commission's process must support a full independent cost/benefit analysis conducted according to recognized industry best practices.

Second, the asserted costs of Net Metering need to be fully and independently analyzed.

For example, GMP's numbers for the 25 year costs for 20 MW of incremental Net Metering, a significant fraction of the expenses are lost sales (\$16.7M). It is widely recognized that lost sales should not be considered a "cost" of net metering. To do such would set dangerous precedent and be directly counter to socially optimized policy. For example, such considerations would assert that customers who reduce their loads by installing energy efficient lighting, or by simply turning off lights, should be prevented from such measures because they are imposing a "cost shift" on their neighbors. In addition, unlike other neighboring markets in which customer choice exists, Vermont is controlled by monopoly utilities and net metering represents the only option for Vermont electric customers to choose their power source, in particular, to choose to generate their own power. When the "cost" of lost sales is excluded, the net cost drops by almost half from \$2.5M to \$1.3M.⁷

It is clear that much more rigor and transparency is required in terms of the purported costs associated with net metering, especially if these costs are being used to justify dramatic and potentially devastating changes to arguably one of the most incredibly successful climate solutions and community resilience law and effort deployed by Vermont.

Costs of the historic impact of the net metering program are largely irrelevant to the question of what costs and benefits arise from the program as it exists today for newly added capacity. We appreciate and highlight GMP's comments to this effect which acknowledge that "Like other power sources, as net metering has evolved the benefits and costs of additional net metering should be analyzed in the context of the then-current market conditions and forecasts."⁸

It is crucial to put GMP's claimed cost shift number of \$2.5M in context. With approximately 250,000 customers, this purported cost shift is on the order of \$10 per year per customer, or less

⁷ Attachment GMP.1.2 – 25 Year Net Metering Benefit/Cost

⁸ Green Mountain Power Response to PUC Information Requests, 11/1/2019 at 3.



than three cents per day. **It bears repeating that we are facing an existential environmental crisis. In the face of this, net metering which has demonstrated the greatest success of any program or law to enable Vermonters do their part in adopting true renewable energy, reduce greenhouse gas emissions, and create community resilience is being put at risk for pennies per day.**

VEC indicates that under the current net metering rates, it is experiencing a budget increase of \$286,000.⁹ This is a marginal compared to the benefits provided to the community, customers, and economy and its overall budget. Commendably its first in six years, VEC recently requested a rate increase of only 3.29%, due largely to increases in regional energy charges.¹⁰ This is not a dire predicament caused by net metering.

VEC also states that there will be an increase in costs “when all of the systems currently pending in the queue to be built but not yet online” are commissioned, but does not indicate which of those projects have received all approvals or are likely to actually be installed and commissioned.¹¹ VEC also relies on past rates, past projects and past impacts, which analysis has no relevance to informing the Commission’s determination on future rates compared to current rates. The only number of any relevance in VEC’s analysis is that any purported cost shift attributable to existing projects under the current compensation structure, is less than a half a percent.¹²

The Commission must focus on the program as it stands today, and what potential impacts might result from a reduction in today’s bill credit compensation.

The Department of Public Service’s conclusion that “the compensation for the portion of net-metering that is exported to the grid, rather than used on-site, has resulted in a significant cost shift to non-participating customers”¹³ simply is not borne out by the utilities’ own data. There has been no “significant” cost shift by any reasonable economic measurement.

Net Metering Benefits All Ratepayers

Net metering shifts benefits from participating to non-participating ratepayers. In its November filing in this case, REV estimated the annualized benefits of an additional megawatt of net metering to be almost \$200,000 before environmental and stimulated economic activity are considered, almost double the \$125,000 cost estimated by GMP.

Vermont’s enabling legislation requires that the PUC create a framework that “ensures that all customers who want to participate in net metering have the opportunity to do so. 30 VSA

⁹ Comments of Vermont Electric Cooperative, 11/1/2019, at 1.

¹⁰ Gribikoff, Elizabeth, *Two rural electric co-ops seek rate increases*, VTDigger, 11/19/2019, <https://vtdigger.org/2019/11/18/two-rural-electric-co-ops-seek-rate-increases/>

¹¹ *Id.*

¹² *Id.* at 2.

¹³ Comments of the Department of Public Service, 11/1/2019 at 3.



8010(c)(1)(E). With that in mind, a residential net metering project (e.g., a roof or yard-sized array) allows one ratepayer to participate and to directly benefit through the receipt of credits. A project at that scale (generally less than 50 kW) also fulfills the important goals of providing customer choice in an otherwise vertically integrated utility marketplace, and contributing in a small way to the reduction of greenhouse gases, providing a commensurate societal benefit. In addition the State has clear renewable energy goals and customers who adopt solar are helping all customers achieve the utilities statutory renewable obligations.

A false narrative seems to have been propagated that virtual net metering projects do not have the same “participation” benefits. A virtual net metering project has all the significant and far-reaching benefits as a rooftop or “load-sited” project, plus it also allows many non-participating ratepayers to passively enjoy the benefits of net metering without having to invest a penny and often uses land not used for other local economic benefit (closed gravel pits, closed landfills, brownfield sites, etc.). Using the utilities’ own numbers, it can be clearly shown that 150kW or virtual net metered systems are not more expensive on a per-kWh basis.

As has been stated, calculating the benefits of net metering projects of whatever size must be a holistic exercise and cannot exclude societal benefits such as jobs and tax payments to name a few. The utilities themselves recognize that projects generate many benefit streams that are often allocated amongst ratepayers, some who will benefit directly and some who will not. This was succinctly stated by Green Mountain Power’s Doug Smith in Case 19-4464-PET one month ago in describing a utility infrastructure upgrade project:

[A]dditional property tax and state income tax payments associated with the Project ... are treated ... as a cost that electric customers would pay as a result of the Project. On the other hand, these tax expenses also represent direct payments to local and state governments, so they provide additional economic benefits for Vermont and its residents as a whole. Additionally ... the Project will result in other positive economic benefits associated with increased jobs and other activity associated with the construction.¹⁴

Similarly, a 150 kW or 500 kW virtual net metered solar project generates lease revenue to the landowner, a variety of state and local tax benefits, and economic (e.g. jobs) benefits. Net metering public benefit entities such as towns, schools, the State of Vermont, hospitals and non-profits apply their energy bill savings to reducing taxpayer costs or improving their other benefits to our communities. The Legislature explicitly recognized the wisdom of this structure, and in 2019 increased the maximum size of a net metering group that schools can participate in from 500 kW

¹⁴ *Petition of Green Mountain Power for a Certificate of Public Good pursuant to 30 V.S.A. § 248 authorizing the rebuild of the Lowell Substation and the upgrade of 18.1 miles of the B20 line from Johnson to Lowell, and Joint Petition of GMP, the Village of Morrisville Water and Light Department, and the Village of Johnson Water and Light Department for a CPG pursuant to 30 V.S.A. § 248 to authorize the upgrade of 1.5 miles of the B22 line, in the Towns of Lowell, Eden, Johnson, and Morristown, Vermont, Case No 19-4464-PET, Direct Testimony of Douglas C. Smith at 44.*



to 1 MW.¹⁵ When government entities save money, all of the ratepayers and taxpayers in that jurisdiction participate in that benefit. In fact, through various procurements, the State of Vermont itself is a purchaser of net metering credits¹⁶ and thus, every ratepayer and taxpayer in the State derives a benefit from that participation.

Similar logic applies when net metering credits are purchased by a large employer, such as a ski resort or hospital – that business becomes healthier and contributes to the economic strength of the region and the State.

REV is perplexed by VEC's comment that "For commercial-scale projects specifically, net metering can artificially inflate the rates of other solar projects or cause utilities to enter into power purchase agreements that they otherwise would not have pursued simply because the cost of a net metering project at the same location would be higher."¹⁷ REV would like to understand the basis and legal rationale for this comment.

Attacking net metering and creating a false economic divide around cost shifting is a technique that has been employed by anti-renewable organizations funded by the Koch organization and others in several states.¹⁸ In addition to truly environmental fact based policy being reflective of Vermont's collective ethos, there is also an economic aspect to this. Vermont's brand as a truly progressive state committed to clean energy is an important association for many Vermont businesses, and the current thrust of state policy has been moving Vermont from being a progressive leader on energy to one in which political talking points are parroted while our emissions are increasing.

REV supports the Institute for Energy and the Environment's recommendation that the PUC conduct a "thorough, transparent, and independent value of distributed solar study,"¹⁹ a request that was mirrored by other commenters as well.²⁰

Other Comments

Some have falsely opined that the benefits of distributed generation projects, particularly solar, are not unique to net-metered projects.²¹ This is a red herring and is belied by the anemic deployment of distributed generation prior to the advent of the revamped net metering program in 2014. The renewable energy economy in Vermont, along with its thousands of jobs (notably keeping and

¹⁵ Act 81 of 2019.

¹⁶ See, e.g., *Petition of Weed Fish Hatchery Solar, LLC for a certificate of public good*, Docket No. 17-4995-NMP.

¹⁷ Comments of Vermont Electric Cooperative, 11/1/2019 at 10.

¹⁸ See, e.g., <https://www.rollingstone.com/politics/politics-news/the-koch-brothers-dirty-war-on-solar-power-193325/>; <https://energynews.us/2019/03/04/midwest/utility-linked-group-seeks-to-dismantle-net-metering-in-michigan/>; <https://environmentamerica.org/sites/environment/files/reports/AME%20BlockingTheSun%20Nov17%201.2.pdf>

¹⁹ Institute for Energy and the Environment Comments, 11/1/2019 at 4.

²⁰ See, e.g., Response of Norwich Technologies, 11/1/2019 at 5-6.

²¹ See, e.g., BED/VPPSA Comments, 11/1/2019 at 11.



brining new young workers to Vermont), would simply not exist without the resources deployed by private citizens and solar companies in the form of investment tax credits and private capital. These 2,000 direct solar jobs represent on the order of at least \$100,000,000 in annual salaries²², a vital part of Vermont's economy. Over the past 4 years, over 16% of these jobs have been lost.

Furthermore, it is obvious – but at this point appears to be unquantified – that if the utilities were building solar projects at the same rate as net metered projects, 100% of the costs of construction, operation, interconnection, grid upgrades, and TGFOV upgrades would not have been borne by private capital – all of these expenses would have been borne by ratepayers, with a guaranteed rate of return for the investor utility owners built in.

The Department's straw proposal, set forth in Section IV of its comments, appears to require on-site generation and load – generation to offset on-site usage and excess injection into the grid.²³ Frankly, this would end net metering in Vermont.

The amount of proposed net metering projects has significantly slowed due to constraints and costs that the Commission has imposed on siting, the continued reduction in rates, and the imposition of additional fees, complexity, and costs for permits, applications, amendments, and TGFOV mitigation. Net metering projects are funded by private parties, and with the sunset of the federal investment tax credit, Trump tariffs and economic uncertainty, the increased expenses associated with permitting and interconnecting, the annual reductions in incentives, the shrinking value of the credit itself, and the 500 kW cap (which does not permit very good economies of scale for development and construction), the financial returns on such projects will continue to shrink and at some point, capital will no longer be available. The pace of solar distributed generation deployment may likely return to pre-2014 levels if trends continue.²⁴

Without the net metering program, the pollution reduction benefits of distributed renewable electricity generation in Vermont would not have happened at all and – as in the years preceding the net metering program – there is no direction within law or the regulatory framework or certainty, outside of the meager 10% RES Tier II, for utilities to proceed in the direction that the Department hypothesizes. In addition, for Vermont to meet its clean energy goals with a resilient modern grid providing locally produced power, systems of all sizes will be required. Simply from a permitting and aesthetic perspective, multi-megawatt projects are challenging to achieve and for many towns are simply not an option, or not a desired one.

Distributed generation projects have resulted in significant private, non-utility investments to the grid that would simply not have occurred without the rapid deployment of net-metered projects. For just one example, net metering customers are nearly exclusively financing GMP's persistent

²² 2019 Vermont Clean Energy Industry Report, Vermont Clean Energy Development Fund, Department of Public Service, at 11 to 18 (using average wages).

²³ Comments of the Department of Public Service, 11/1/2019 at 14-18.

²⁴ . The Commission and the Department must ask themselves, who benefits from such a scenario, and how does that align with the advocacy before them?



transmission ground-fault overvoltage (“TGFOV”) problems throughout the state and virtual net metered projects are paying for fiber throughout the state.

Vermont Leapfrogged, More Local Renewables Needed

It is important to be clear that Vermont’s adoption rates are not unique as many states have gone from virtual no solar to several percentage points. For example, Massachusetts currently gets about 4% of its power from solar (not much different from Vermont) and has instituted the Mass Smart program that is designed to double that number in the next couple of years. In other states net metering and behind the meter renewable generation has not been halted or slowed drastically as soon as the first objective of peak shaving was achieved. They have continued far beyond this point.

In addition, comparing the 300 MW of installed capacity to the average load of 470 MW is nonsensical. What matters is the actual power produced by these panels on a given day relative to that day’s peak load. The 300 MW is not the power produced by these panels. A simplistic capacity measure of solar is not informative. What matters is the fraction of Vermont’s annual electricity sales that is supplied by locally generated solar. With respect to the peak discussed by GMP, the crucial metric is missing - power on the peak load day of 730 MW that came from solar (in particular, in-state).

It is true that on a sunny summer day, Vermont is getting good production from solar. As this production frequently corresponds to times of regional high power costs, it would be helpful if utilities specified the savings to all customers from this production. These are quantifiable benefits needed as part of a balanced analysis of net metering.

REV appreciates the opportunity to provide these comments to the Commission.

Respectfully submitted,

Olivia Campbell Andersen
Executive Director