



October 29th, 2021

Ms. Holly Anderson, Clerk
Vermont Public Utility Commission
112 State Street, 4th Floor
Montpelier, VT 05602

Re: 19-0855 -Rule

Dear Clerk Anderson,

Please accept this filing as Renewable Energy Vermont's ("REV") reply to comments submitted regarding the third workshop for case 19-0855-Rule held on September 16th. The workshop covered compensation changes to Rule 5.100.

OVERVIEW:

REV appreciates the opportunity to respond to comments regarding proposed changes to Net Metering Compensation (NM).

In general, REV appreciates that most comments from all parties express widespread support for the fundamental role renewable energy (RE) must play in addressing global warming, and providing low- and moderate-income (LMI) Vermonters greater access to clean local RE. REV believes the context in which we look at our objectives, and the approach we take to achieving our common goals are critical.

REV believes the comments, and the proceeding in general, would benefit from taking a step back and looking at things from a broader perspective. Absent a broader framework it is impossible to fairly analyze the tradeoffs that are inherent in developing and maintaining good public policy. Lacking the proper framework, debates about NM have been reduced to a narrow comparison of NM rates to that of fossil fuel generation. Net metering was never intended to be the only renewable energy program in the state of Vermont. However, with Standard Offer fully subscribed and wind generation effectively banned, NM is in fact now the only local RE program. Utilizing fossil fuel avoided costs as a basis for net metering compensation will effectively end net metering.

REV's conclusion about the future of Net metering, if it is forced into an avoided cost paradigm, is based on the results of a similar change made to PURPA in Vermont. In 2016 the Commission amended the PURPA Rule by adopting a pricing mechanism for avoided cost rates tied to the locational marginal price ("LMP") of power on the wholesale electricity market (now set by natural gas units). **REV was not able to identify a single PURPA project or contract proposed for Vermont since this regressive pricing mechanism was put in place.** Commission Rule 4.100 – Vermont's Public Utility Regulatory Policy Act ("PURPA") is stated to implement the provisions of 30 V.S.A. § 209(a)(8), 16 U.S.C. § 824a-3 (the federal PURPA statute), and 18 C.F.R Part 292 (the federal PURPA Rule). See Commission Rule 4.100 (amended 2016).

REV's review of the comments made by other workshop participants is informed by broad principles that are either identified in statute, or known to be core values for an overwhelming majority of Vermonters. REV suggests that all potential changes the Rule 5.100 be put through the following screens.

- Does the proposed change impact the right for Vermonters to **meaningfully** generate their own power (participate in net metering programs as clearly stated in 30 VSA § 8010)
- Does the proposed comment/approach **frustrate** Vermonter's participation
- Does the proposed change reflect **true legislative intent**
- Are comments based on **foundationally accurate carbon accounting**
- Are environment related comments supported by **peer reviewed facts and data**
- Are rate impact and cost shift related comments supported by fact-checked empirical data **as opposed to agency, Department, or utility claims.**

GENERAL RESPONSE TO COMMON COMMENTS:

The Hazards of Viewing Programs That Create Societal Good Through a Singular Cost Only Lense

Good public policy is based on thoughtful balanced tradeoffs. Segregating NM from a broader discussion on energy procurements, and associated societal benefits, does not benefit Vermonters or create robust sound public policy.

Many of the commentors voiced support for implementing higher fixed monthly charges to keep rates lower, use of Tier III incentives, and lower rates for electrification initiatives. Each of these initiatives when viewed in isolation creates a cost shift to some ratepayer group. Absent a broader framework or discussion, every individual initiative can be challenged as a cost shift. The focus should be on whether the net metering program serves the public good – to which the answer is a resounding yes.

With respect to LMI customers, REV shares the broad consensus that LMI customers should fully participate in NM and other cost saving mechanisms. REV believes, however, that we can do better than slowing or stopping NM to prevent a potential cost shift. LMI Vermonters care about the environment, climate, and saving money. Focusing on a single element of the cost benefit equation, and further reducing the incentives of the NM program makes it less, not more inclusive.

A simple step that could be taken immediately to help LMI Vermonters would be to lift the 500kW cap for affordable housing agencies. Removing the cap would ensure that LMI residents of larger housing organizations could fully participate.

Procuring Cheaper Renewable Energy

Net metering was not intended to be evaluated solely on whether it provides the cheapest rate. If procuring the cheapest form of RE was the only goal, then Vermont would continue to have a robust wind energy program. Comparisons of NM to solar projects that have (i) > 4X scale to cover fixed costs, (ii) no preferred siting requirements, and (iii) guaranteed power offtake by the State of Vermont or a utility, renders these comparisons meaningless. With Standard Offer being fully subscribed, NM remains the only program available for local RE procurement and it is the only program that allows Vermonters to generate their own power as provided in 30 VSA § 8010.

Use TOU to Price Net Metering at Avoided Fossil Fuel Generation

Other comments supported using a Time of Use (TOU) approach to compensate Vermonters for excess generation. This approach would be devastating to the entire Net metering program.

As an example, if some of the suggestions to use avoided costs for excess generation were implemented:

A family (that had front line facing employment and did not have the opportunity to work from home) that used the bulk of their energy after hours with an 8kWDC array might have 60% of their solar generation as excess credits priced at the avoided cost.

In this scenario, the family would see a simple payback in 18 years* and their investment of \$24,000** would have a NPV (4% discount) of \$13,200. **Simply stated – the family would be penalized \$11,000 for going solar at a time when >99% of new solar generation in New England offsets a kWh from fossil fuel generators.** Few

individuals could afford to install solar under this scenario, even if it is the right thing to do.

It should be noted that the California NEM 3.0 proposal by NRDC discussed in the comments also included a cost of carbon as a basic component of avoided cost.

* assumes full tax credit use and avoided costs increase at 1.5%

** pricing for illustrative purposes and not reflective of current significant supply chain cost increases

Elimination of “Larger” Remote Systems

There were several comments that siting systems at the load for customers was critical. While the comments may sound reasonable, the premise ignores that a significant number of Vermonters will be disenfranchised. The limitations to locating solar at a customer site include the fact that open space at industrial parks is typically earmarked for future industrial facilities, many customers face “filled” circuits which cannot accept more solar, residential and commercial customers may have inadequate structural capacity, and many sites simply have poor solar access. Remote or virtual net metering is the only way for these customers to own a system and participate in Net Metering as is clearly stated in 30 VSA § 8010. These systems currently have the lowest NM rates and no lost sales which should align with the consistent focus of comments on rates.

SPECIFIC RESPONSES TO COMMENTS:

Response to PSD’s Comments on Climate Policy

The Department’s comments begin with the assertion: “This proceeding is not about whether the Commission should implement policy in a manner that addresses the climate crisis” Department Comments at 1. While the Department acknowledges that everyone involved agrees that the climate crisis is a priority, it then dismissively suggests that this proceeding is directed only to “the business practice associated with but one specific way of developing new renewable generation in Vermont.” Id.

Accepting such an overly narrow framing of this proceeding is squarely at odds with the urgency of action mandated by the Vermont Global Warming Solutions Act of 2020 (“GWSA”), Act No. 153, §§ 2 & 3 (2020). The GWSA modified the greenhouse gas (“GHG”) reduction targets of Vermont’s air quality statute, 10 V.S.A. § 578, and mandates aggressive near term GHG reductions. See Act No. 153, § 3 (2020). The GHG reduction mandates of the GWSA are expressly embedded in the Vermont net metering

statute, which requires that the net metering program “advance [] the goals and total renewables targets of ... 10 V.S.A. § 578 (greenhouse gas reduction).” 30 V.S.A. § (c)(1)(A)(emphasis added).

The Commission’s review of recommended rule changes in this case must be significantly informed by whether a recommended change accelerates the rate of deployment of additional new renewable electric generation and will mitigate climate change in the electric sector consistent with the GWSA and protocols required by the Paris Agreement. **The GWSA warns that “[d]elaying necessary policy action to address the climate crisis risks significant economic damage to Vermont.”** Act No. 153, § 2(3).

The Department’s recommendation to ignore the climate crisis, ignore the importance of rapid deployment of GHG mitigating projects in the electric sector, and impose regressive pricing that will effectively kill the net metering program is not responsible. Net metering is the only remaining viable renewable energy program in the state, killing it will result in significant economic damage to the state and its residents.

The Department also claims that the primary strategies for achieving the GWSA GHG reductions will be electrification of the transportation and thermal sectors. DPS claims the emissions of the thermal and transportation sectors far exceed the electric sector GHG emissions and pushes the narrative that Vermont’s electric sector is nearly 100% renewable. The Department conflates the hundreds of millions of MWh Hydro Quebec (“HQ”) carbon offsets purchased by Vermont utilities, with the reduction in GHG emissions required by Article 6 of the Paris Agreement and the GWSA. This is false. The HQ carbon offsets may be considered “renewable” under Vermont’s unique definition, but they cannot be applied to measure or reflect GHG emissions in the electric sector. The very DNA of HQ “carbon offsets” violate Articles 4 and 6 of the Paris Agreement, and therefore the GWSA. They have no additionality or environmental integrity, fundamental preconditions required by the Paris Agreement and GWSA to claim emission reductions credit. See REV September 16, 2021 slide materials prepared by Attorney Kimberly Hayden. If the Vermont Climate Action Plan (“CAP”) permits the continued use of these HQ carbon offsets, the CAP will also be in violation of the additionality requirements of the GWSA. See, e.g., *Golden Door Props., LLC v. Cnty. of San Diego*, 50 Cal. App. 5th 467, 513-14 (Cal. Ct. App. 2020). There a California Court held that San Diego’s Climate Action Plan violated the California law implementing California’s Global Warming Solutions Act, because San Diego’s Plan failed to require additionality:

GHG emission reductions must be additional "to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur." "Additionality is an important requirement because if non-additional (i.e., 'business-as-usual') projects are eligible for carbon [offset] ... then the net amount of greenhouse gas emissions will continue to increase, and the environmental integrity of carbon reduction projects will be called into question.

Id. (citations omitted). The Court of Appeals further noted that

Although additionality is "a critical component of any environmental market" it is "often seen as expensive [and] onerous " (Karen Bennett, *Additionality: The Next Step for Ecosystem Service Markets* (2010) 20 *Duke Env't'l. L. & Pol'y F.* 417, 419.) Perhaps this explains why M-GHG-1 seemingly goes out of its way to not require additionality.

Id. at 514. The same conclusions apply with respect to Vermont's HQ carbon offsets.

Response to PSD's Comments on California's NEM 3.0

The PSD comments drew much material from California's NEM 3.0 proceeding and attempted to apply them to Vermont.

California is a dramatically different solar market than Vermont for several obvious reasons. The solar irradiance in California and the investor-owned utility rates are significantly higher than in Vermont. Due to those factors, a solar system in California provides a much higher potential value to customers to the point that the simple payback period for a net metering system is only a few years under the NEM 2.0 structure.

The Department supports the concepts included in the NRDC proposal in the California NEM 3.0 proceeding, specifically that all instantaneous exports be valued at an avoided costs rate, the assessment of a monthly grid benefit charge, the creation of an equity fee, and required electrification-friendly time-of-use rates. **To be clear, this framework would not be substantially dissimilar to the one instituted in Nevada that decimated all distributed solar development in the state.** There is no doubt that such a framework in Vermont would have the same effect.

The NRDC proposal is also structurally equivalent to the proposal of the Joint Utilities in that proceeding. The Joint Utilities' proposal was found by E3's analysis in that proceeding to result in a 15-19 year simple payback period. In reality this simple payback period would be closer to 23 years when using an accurate system cost input.¹ Importantly, accounting for the differences between California and Vermont mentioned above, such a structure in Vermont would likely result in a simple payback period that exceeds the life of the solar system. The key difference in the NRDC proposal compared to that of the Joint Utilities was the inclusion of a "market transition credit" which

¹ The Joint Utilities used a \$2.34 per watt cost value based on the NREL Annual Technology Baseline which fails to capture all relevant costs and California-specific market conditions. The Solar Energy Industries Association derived the 23 year payback using \$3.63 per watt based on the Lawrence Berkeley National Lab's 2020 *Tracking the Sun Report*.

would be provided as an upfront incentive for systems to achieve a 10 year simple payback. The NRDC described the importance of this component by saying:

“The Commission should set the MTC to ensure that customers can achieve a simple payback within ten years on their initial investment. This will provide a viable product to sell and will help ensure that rooftop solar continues to grow sustainably in California.”²

The NRDC proposal cannot be discussed without highlighting this critical underlying principle. They do not believe that lengthy payback periods would lead to a viable solar market that could grow sustainably. To put into context for Vermont, Energysage estimates a simple payback range between 8.4-11.4 years.³ Simply put, the current compensation structure in Vermont produces a similar outcome to the one NRDC is seeking in California. The difference is that NRDC would move compensation to an upfront incentive, though NRDC provides no clear funding source, structure, methodology for determining the incentive, or how it would be administered. While the Department cites the MTC language regarding any incentives being transparent and removed from rates, **it is not clear whether the Department is also supportive of a large upfront incentive to maintain a 10-year payback period for Vermont customers as NRDC proposes.**

While the overall NRDC rate structure is quite complicated and would undoubtedly not be understood by most solar customers, the end result is fairly straightforward: an avoided costs value for all energy produced, regardless of whether it is used on-site or exported to the grid. The grid benefit charge in the NRDC proposal is specifically designed to recover transmission and distribution costs for energy that the customer produces and uses behind the utility’s meter. *Charging customers for energy that the utility never had to provide violates cost causation principles and should not be considered.* Customers who reduce their load through behavioral change or energy efficiency upgrades are not charged for the energy the utility no longer has to deliver, and on-site use of solar should be no different. Arizona Public Service, which

² Post Hearing Brief of the Natural Resources Defense Council at 34. Submitted to the California Public Utilities Commission in Rulemaking 20-08-020, Order Instituting Rulemaking to Revisit Net Energy Metering Tariffs Pursuant to Decision 16-01-044, and to Address Other Issues Related to Net Energy Metering. (Filed August 31, 2021), available at <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M406/K567/406567711.PDF>.

³ <https://www.energysage.com/solar-panels/vt/>

implemented a grid benefit charge in 2017, had their charge eliminated by the Arizona Corporation Commission on October 27, 2021 after APS's cost of service study showed that the charge was not justified.⁴

While we support expanding access to solar for disadvantaged communities, the equity fee proposed by the NRDC would be problematic. As designed, all new and existing solar customers would be charged a new monthly fee that goes into an Equity Fund which is then used to help fund projects supporting disadvantaged communities. Applying new fixed monthly fees to existing solar customers jeopardizes the economics of their solar system and would create a significant amount of regulatory uncertainty for all solar customers. It would be difficult to sell systems under such a precedent. Incentivizing customers to install solar panels on their homes and businesses with a certain value proposition, and then after the systems are installed applying new fees or structures which undermine the initial value proposition that led to the participation in the first place would be a regulatory bait and switch. There are better ways of increasing access than a fee on existing solar customers as REV has previously highlighted.

As discussed at the workshop and in written comments, most states have retained monthly netting and several states in New England have specifically rejected the viability of instantaneous netting for residential and small commercial systems. Coupling instantaneous netting with an export value of avoided costs would make it extremely difficult for projects to make sense economically without storage - whose value is entirely negated by the grid benefits charge. Beyond the significant decrease in customer value, instantaneous netting raises consumer protection issues due to the fact that residential customers have wildly different consumption profiles and that it would be impossible for installers to incorporate that variability into an accurate value proposition.

REV thanks all participants and the Commission for their attention on this matter and hopes that further discussion of changes to Net metering compensation can continue at a broader scale that evaluates the full societal cost and benefits of our energy procurement.



Peter Sterling
Executive Director
Renewable Energy Vermont (REV)

⁴ <https://www.solarpowerworldonline.com/2021/10/arizona-corporation-commission-eliminates-grid-access-fee-for-solar-customers/>