

**STATE OF VERMONT  
PUBLIC UTILITY COMMISSION**

Case No. 22-0334-INV

---

In re: Biennial update of the net-metering program	
--	--

---

**THE DEPARTMENT OF PUBLIC SERVICE’S REPLY COMMENTS  
FOR THE NET-METERING BINENNIAL UPDATE**

The Vermont Public Utility Commission (“Commission”) opened this biennial update on February 4, 2022, and directed Vermont’s distribution electric utilities (“DUs”) to file information regarding net-metering in their respective service territories by February 15, 2022. The Vermont Department of Public Service (“Department”) respectfully requests that its reply comments, submitted herein, be considered by the Commission.

The Department and the Vermont Agency of Natural Resources (“ANR”) filed their respective comments and recommendations regarding Vermont’s net-metering program on April 8, 2022. At that time, the Department requested the opportunity to make reply comments by May 9, 2022. The DUs and other participants were asked to make any comments on the recommendations of ANR and the Department by April 25, 2022.

The Department has reviewed these comments and requests that the Commission consider the Department’s reply comments provided herein. The Department’s April 8, 2022, comments comprehensively detailed the data that formed the basis of its recommendation. Therefore, these reply comments address only issues raised by commenters that were not already addressed in the Department’s original

filing and endeavor to focus on high-level concerns. Otherwise, the Department reaffirms its April 8, 2022, filing.

In general, the Department observes that some comments discuss issues, such as proposed changes to Rule 5.100 and legislative concerns, which are outside the Commission's established scope of "any proposed updates to the following: (1) REC adjustors; (2) siting adjustors; (3) the statewide blended residential rate; and (4) the eligibility criteria applicable to Categories I, II, III, and IV net-metering systems." The Department recommends that any issues outside that limited scope be addressed in the net-metering rulemaking, Case No. 19-0855-RULE, or another proceeding, as appropriate.

### **Global Warming Solutions Act and Social Benefits of Net Metering**

Several commenters invoked the Vermont Global Warming Solutions Act of 2020<sup>1</sup> ("GWSA") as supporting increased rates of net-metering. For example, Renewable Energy Vermont, Inc. ("REV") notes that "the success of the net-metering program must be evaluated in the context of the GWSA", and that the "GWSA articulates the imperative to accelerate greenhouse gas emissions reductions and mandates that all State agencies consider 'any increase or decrease in greenhouse gas emissions in their decision-making procedures with respect to the [ . . . ] planning, design, and operation of programs' such as the net-metering program." Renewable

---

<sup>1</sup> VERMONT GLOBAL WARMING SOLUTIONS ACT OF 2020, Act No. 153 (H.688), *An act relating to addressing climate change*, VT 2020, available at <https://legislature.vermont.gov/Documents/2020/Docs/ACTS/ACT153/ACT153%20As%20Enacted.pdf>.

Energy Vermont, Inc. Comments of 04/25/22 in Case No. 22-0334-INV at page 2. The Department agrees with these statements regarding the directives of the GWSA. However, in interpreting the GWSA to justify increased net-metering rates, such comments are inconsistent with the findings of the Climate Council (“Council”) and the Initial Climate Action Plan.

Therefore, any comments recommending increased net-metering rates to meet the directives of the GWSA, do not correctly apply the requirements of the GWSA as they impact this net-metering biennial update.

Progress toward our GWSA requirements – and thus progress toward reducing Vermont’s greenhouse gas (“GHG”) emissions – is measured in Vermont by the Greenhouse Gas Inventory (“Inventory”), which identifies the electric sector in Vermont as largely carbon free. As described by the Climate Action Plan:

On a statewide basis, the electric sector is already relatively low carbon and will be nearly carbon free and largely renewable by 2030 under current utility long-term power supply contracts. The state’s Renewable Energy Standard (RES) is already based upon a percentage of total retail sales/load and therefore is designed to keep pace with electrification . . . .<sup>2</sup>

. . . The [Greenhouse Gas] Inventory maintained by the Department of Environmental Conservation (DEC) bases emissions in the electric sector on the annual power supply portfolio of Vermont’s utilities. This largely reflects the fact that Vermont is part of a regional electric grid where load and generation are balanced in real time; as more carbon-free energy is put onto the system there is less overall generation from fossil-fuel-fired plants. Every kilowatt hour of a clean

---

<sup>2</sup> VERMONT CLIMATE COUNCIL, INITIAL VERMONT CLIMATE ACTION (Dec. 2021), page 102, *available at* <https://climatechange.vermont.gov/sites/climatecouncilsandbox/files/2021-12/Initial%20Climate%20Action%20Plan%20-%20Final%20-%2012-1-21.pdf>.

energy resource that counts in Vermont’s RES and other state’s equivalent policies must actually be delivered and used into our New England region, as tracked annually through a registry and accounting system of Renewable Energy Credits maintained by the NEPOOL GIS.<sup>3</sup>

In the development of the Climate Action Plan, the Inventory was reviewed by the Council’s consultant, Energy Futures Group, who found that “the methods for the current Vermont inventory generally follow guidelines for each sector from the [Environmental Protection Agency] and [Intergovernmental Panel on Climate Change,]”<sup>4</sup> and the Council recommended that the Inventory “[m]aintain Renewable Energy Credit (REC) accounting as the basis for calculating electricity sector emissions.”<sup>5</sup> Thus, Vermont’s electric sector is already largely carbon free, as tracked and measured toward progress toward the GWSA. Therefore, the deployment of net-metering – relative to other clean energy – has little impact on progress toward meeting Vermont’s GWSA requirements.

REV claims that the Department seems to “exclude the social cost of carbon from its assessment of the net-metering program.”<sup>6</sup> On the contrary, the Department’s assessment is that under the current statutory rubric, net-metering has only a minor

---

<sup>3</sup> *Id.* at 103.

<sup>4</sup> ENERGY FUTURES GROUP, INC., *Greenhouse Gas Inventory Review: Vermont’s Current Methods, Comparison with Accepted Practices, and Recommendations* (Aug. 10, 2021), page 9, available at <https://outside.vermont.gov/agency/anr/climatecouncil/Shared%20Documents/GHG%20Inventory%20Report%208-10-2021.pdf>.

<sup>5</sup> VERMONT CLIMATE COUNCIL, INITIAL VERMONT CLIMATE ACTION (Dec. 2021), page 56, available at <https://climatechange.vermont.gov/sites/climatecouncilsandbox/files/2021-12/Initial%20Climate%20Action%20Plan%20-%20Final%20-%2012-1-21.pdf>.

<sup>6</sup> Renewable Energy Vermont, Inc. Comments of 04/25/22 in Case No. 22-0334-INV at page 6.

impact on GHG emissions, while having a negative impact on the ability to make more meaningful GHG emissions reductions. For example, electrification measures that reduce fossil fuel consumption in the transportation and thermal sectors have a much larger impact – and are more cost effective based on \$/ton of carbon saved. The Department’s 2021 Annual Energy Report compared resources in terms of cost of carbon saved – using the same tracking of electric sector emissions used by the Vermont Climate Council in tracking progress toward the GWSA requirements – and found net-metering to be a costly way to save carbon.<sup>7</sup> Moreover, under the current statutory framework of the GWSA and the Renewable Energy Standard,<sup>8</sup> net-metering is one clean source of many. Additionally, it is a high-cost source, and displaces other, less costly sources of clean energy.

### **Renewable Energy Vermont’s Payback Model**

As noted above, and in the Department’s April 8, 2022, comments, net-metering is not the only investment that must be made to meet the State’s climate goals. While REV’s payback model can be a useful tool for understanding the economic payback to solar plant owners from various rates, the impact of net-metering rates on the payback of other technologies should be similarly considered, as well as the relative investment

---

<sup>7</sup> See, VERMONT DEPARTMENT OF PUBLIC SERVICE, 2021 ANNUAL ENERGY REPORT: A SUMMARY OF PROGRESS MADE TOWARD THE GOALS OF VERMONT’S COMPREHENSIVE ENERGY PLAN (Jan. 15, 2021), page 9, available at

[https://publicservice.vermont.gov/sites/dps/files/documents/Pubs\\_Plans\\_Reports/Legislative\\_Reports/2021%20Annual%20Energy%20Report%20Final.pdf](https://publicservice.vermont.gov/sites/dps/files/documents/Pubs_Plans_Reports/Legislative_Reports/2021%20Annual%20Energy%20Report%20Final.pdf).

<sup>8</sup> 30 V.S.A. §§ 8001, 8004, 8005.

Vermont is making to support net-metering relative to other energy programs (which are generally less costly).

For example, to achieve meaningful greenhouse emission reductions, Vermont residents and businesses will need to make significant investments in technologies such as cold-climate heat pumps, which can have substantially longer paybacks than net-metering or may never pay back depending on the Vermonter's existing fuel. Moreover, the incentive amounts available for heat pumps are significantly less than those offered for net-metering, which offers less progress toward GWSA targets than cold-climate heat pumps. Achieving the decarbonization of heating and transportation is made more challenging by higher than necessary RES Tier II costs, such as those presented by net-metering, given the availability of lower cost resources.

### **Distribution of Solar Net-metering Benefits**

Solar net-metering continues to disproportionately benefit wealthier Vermonters at the expense of lower income residents who cannot afford the upfront costs of installing solar or have other barriers to adoption. REV's comments point to increasing adoption of solar net-metering by low-to-moderate income ("LMI") customers. They reference a Lawrence Berkeley National Lab ("LBL") source which shows 13% of Vermont solar adopters in 2020 had an annual income of <\$50,000.<sup>9</sup> However, presenting this statistic in isolation of the full data set is misleading as it

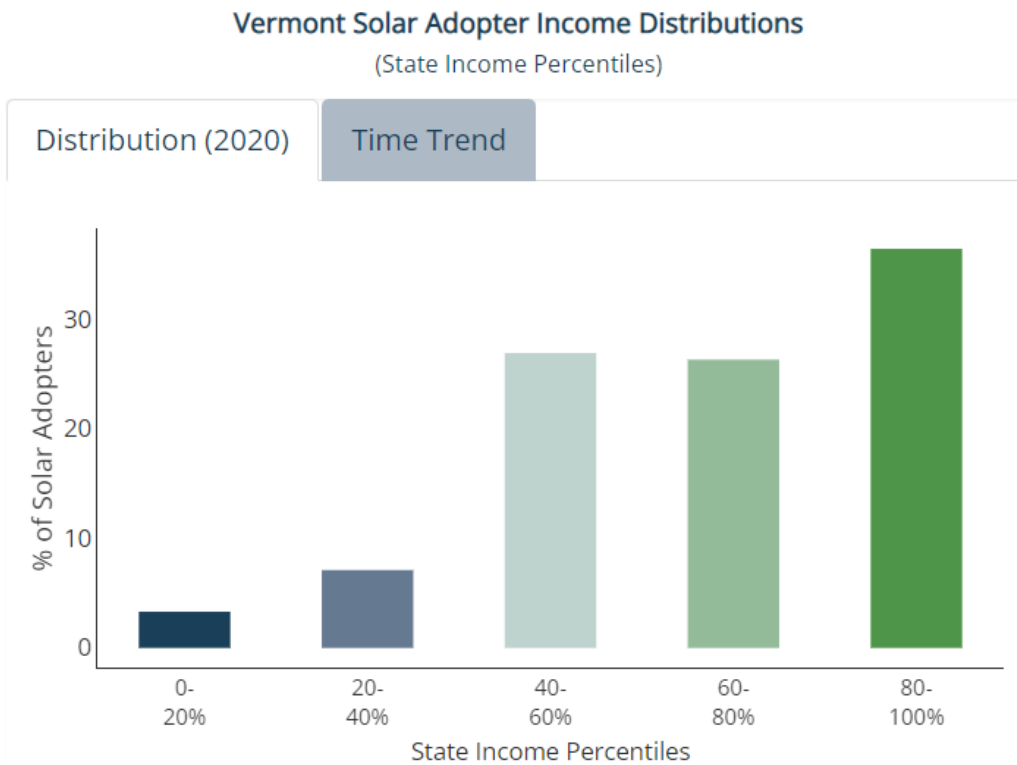
---

<sup>9</sup> LAWRENCE BERKELEY NATIONAL LAB, ELECTRICITY MARKETS & POLICY, *Solar Demographics Tool – Residential Solar-Adopter Income and Demographic Trends: 2022 update*, available at <https://emp.lbl.gov/solar-demographics-tool> (last visited May 6, 2022).

fails to account for Vermont’s specific income distribution, and \$50,000 is an arbitrary line drawn by the LBNL. This same source provides a “Time Trend,” feature which shows the adoption of solar to be essentially flat for this income bracket.<sup>10</sup>

Additionally, as shown below in Exhibit I, LBNL’s data for 2020 shows that Vermont’s top 20% of income earners accounted for 36% of solar adoption, while the bottom 40% account for just 10% of solar adoption.<sup>11</sup> This trend has fluctuated very minimally over time and continues to show that adoption of residential solar in Vermont skews heavily towards the high end of the income distribution.

### Exhibit I. Lawrence Berkley National Lab Solar Demographics Tool



<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

These trends are further corroborated by Efficiency Vermont’s 2019 Energy Burden Report, which found that the most widespread adoption of clean energy technologies appear to be in communities with the lowest energy burdens. Of the 4 “clean energy technologies” (cold climate heat pumps, solar PV, electric vehicles, and weatherized homes), solar PV showed the highest concentration of adoption in the communities with the lowest energy burden, with none of the top 10 towns adopting solar in areas with high energy burdens.<sup>12</sup>

Thank you for your attention and consideration, please do not hesitate to contact me with questions or concerns.

Dated in Montpelier, Vermont on this 10<sup>th</sup> day of May 2022.

VERMONT DEPARTMENT OF PUBLIC SERVICE

By: /s/ Alex Wing  
Alexander Wing, Special Counsel  
Department of Public Service  
112 State Street  
Montpelier, VT 05620-2601  
[alexander.wing@vermont.gov](mailto:alexander.wing@vermont.gov)  
(802) 828-4011

cc: ePUC Service List

---

<sup>12</sup> Justine Sears & Kelly Lucci, *Vermont Energy Burden Report*, EFFICIENCY VERMONT (Oct. 2019), pages 8-9, 23 available at <https://www.encyvermont.com/Media/Default/docs/white-papers/2019%20Vermont%20Energy%20Burden%20Report.pdf>.