

STATE OF VERMONT  
PUBLIC UTILITY COMMISSION

Petition of Green Mountain Power for approval )	
of a multi-year regulation plan pursuant to 30 )	
V.S.A. §§ 209, 218, and 218d )	Case No. 18-1633-PET

**Renewable Energy Vermont's Responses to the First Set of Information Requests  
Served by the Department of Public Service**

This is the response of RENEWABLE ENERGY VERMONT ("REV") to the First Set of Discovery Requests ("Discovery Requests") of THE DEPARTMENT OF PUBLIC SERVICE ("DPS" OR "the Department") on December 21, 2018.

**General Objections**

The following General Objections of REV are incorporated by reference into its responses to each Interrogatory, Request to Produce, and Request for Admissions reproduced below, whether or not an objection is stated in any particular response. Any response to one of the Interrogatories, Requests to Produce, or Requests for Admission given below is given without waiver of any objection, whether or not an objection is stated.

1. REV objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it is overbroad, irrelevant, unduly burdensome, or not proportional to the needs of the case.
2. REV objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it calls for the disclosure of information or production of material privileged under the attorney-client, work-product, or any other applicable privilege.
3. REV objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it is unreasonably cumulative or duplicative, or calls for the disclosure of information or production of material that is obtainable from some other source that is more convenient, less burdensome, or less expensive, including, but not limited to, information or material that is publicly available or that has already been disclosed or produced to you in connection with another proceeding.
4. REV objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it calls for the disclosure or production of confidential or proprietary information, trade secrets, or material.
5. REV objects to each Interrogatory, Request to Produce, and Request for Admission reproduced below to the extent that it is vague, unintelligible, requires

speculation as to the information being sought, or is otherwise incapable of a reasonable answer.

6. REV objects to each Instruction and Definition listed in the requesting party's discovery requests to the extent that it exceeds the bounds of permissible discovery or is unduly burdensome.

7. REV objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request exceeds the scope of REV's testimony and exhibits.

8. REV objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request would require REV to conduct extensive document review, additional studies, analyses, and/or tests as part of its response.

9. REV objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request exceeds the scope of the requesting party's intervention.

10. REV objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request exceeds the scope of the issues on review.

11. REV objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that it calls for a legal conclusion.

**RESPONSES TO INTERROGATORIES AND REQUESTS TO PRODUCE**  
**Caldwell-Campbell Andersen**

**Q.PSD.REV.1.1** Please refer to page 10, lines 4–7 of the prefiled direct testimony Leslie A. Cadwell and Olivia Campbell Andersen, where the witnesses testify that “[w]e recommend that as part of the MYRP, the Commission require GMP to provide competitive market participants with transparent and nondiscriminatory access to the Company’s DER platform and allow customer and third-party ownership arrangements.” With respect to this recommendation, please respond to the following requests:

- a. Please describe in detail what “transparent and nondiscriminatory access to the Company’s DER platform” would require of GMP to satisfy this recommendation. If practicable, please provide examples.
- b. Please state whether REV is aware of any similar requirements from jurisdictions outside of Vermont. If so, please identify those jurisdictions.
- c. Please describe how REV believes GMP should charge for access to its DER platform. For example, if access should be cost-based, how should cost be calculated (e.g. marginal or embedded costs)? If access would be charged on a marginal cost basis, should the cost be based on long-run or short-run marginal cost?

**A:PSD.REV.1.1.**

- a. Transparent and nondiscriminatory access to the company’s DER platform means GMP may not favor itself or its affiliates in meeting customer demand for goods and services available in competitive markets. For example, a customer premises battery program could not provide more favorable terms and conditions to a customer using a GMP-owned and installed battery unit rather than an equivalent unit installed and owned by the customer or third party(ies). Transparent and nondiscriminatory access also means that GMP would be not permitted to develop service offerings in competitive markets unless a clear market failure exists.
- b. Please see examples of best practices for PBR discussed in Exhibit REV-Joint-6. Please also see Exhibit REV-Joint-8 for more information on the importance of encouraging competition in the provision of non-basic (e.g. non-wires) energy services.
- c. Please see the response to a. above. GMP is the exclusive retail electricity franchise holder in the geographic areas it serves, and REV’s proposal assumes that legal status remains in effect throughout the duration of the MYRP. Therefore, as indicated in a. above, transparent and nondiscriminatory access is another way of saying that GMP should not be allowed under the MYRP to use its

monopoly status and statewide presence to compete in the markets for energy goods and services that are, unlike retail electric service, subject to competition.

Person(s) Responsible for Response: Olivia Campbell Andersen, Executive Director, Renewable Energy Vermont; Leslie A. Cadwell, Vice-Chair to the Board of Directors, Renewable Energy Vermont  
Date: January 11, 2019

**Q.PSD.REV.1.2** Please refer to page 10, lines 7–10 of the prefiled direct testimony Leslie A. Cadwell and Olivia Campbell Andersen, where the witnesses testify that “[a]lthough GMP may maintain a lawful monopoly to provide retail electric service, it does not have either a legal or a natural monopoly in the provision of other energy goods and services that are available in competitive markets, such as customer battery storage.” With respect to this testimony, please identify any specific recommendations that REV has regarding appropriate regulatory mechanisms to ensure that third-parties and regulated utilities have access to the market for energy goods and services on a fair and equivalent basis.

**A:PSD.REV.1.2** The issue of concern to REV is not whether GMP has access to energy goods and services on a fair and equivalent basis to third parties who do not enjoy a state-sanctioned monopoly. The issue is whether GMP's customers will be able to access energy goods and services from third party providers, and whether the terms and conditions of that third party access will be fair and not favor GMP over its competitors in services other than retail electric service.

GMP should only be permitted to participate in competitive service offerings for commercially available products and services like air source heat pumps, electric water heaters, electric storage devices, and EV charging via a structurally separate affiliate. Structural separation should be required for any pilots and any other non-traditional electric utility service offerings GMP may wish to pursue.

Further, a transparent and collaborative review, documentation, and approval process for any pilots or tariffs for non-traditional utility energy services must be established. Clear limits or caps on any pilots or non-traditional utility energy services (i.e. those available or potentially in the market) must be established. GMP should be prohibited from signing any exclusivity or non-compete agreements or contractual obligations for non-traditional electric utility energy services or products. In addition to the above recommendations, GMP should be prohibited from offering any pilots or tariffs for non-traditional utility energy services or products without a) also simultaneously offering an identical benefit to customers choosing non-GMP energy service providers or products; and b) providing equal promotion of non-GMP energy service providers similar offerings or products.

Person(s) Responsible for Response: Olivia Campbell Andersen, Executive Director, Renewable Energy Vermont; Leslie A. Cadwell, Vice-Chair to the Board of Directors, Renewable Energy Vermont  
Date: January 11, 2019

**Q.PSD.REV.1.3** Please refer to pages 10–11 of the prefiled direct testimony Leslie A. Cadwell and Olivia Campbell Andersen, where the witnesses discuss the Powerwall “subsidy.” With respect to the witnesses’ use of the word “subsidy,” please define or explain in detail the witnesses’ understanding of the word “subsidy” within the context of this testimony.

**A:PSD.REV.1.3** The term is provided using its common meaning – offering the consumer a price at below market levels. GMP does not recover the installed per-unit capital cost of each Powerwall from participating customers, which GMP estimated to be \$8,857 per unit in Exhibit BO-3 submitted in Case No. 18-0974-TF, resulting in a subsidy from GMP/non-participating ratepayers to participating customers. This is true for the 10-year life of the Pilot; the capital costs for each participating customer’s Powerwall unit are shared with other ratepayers.

Person(s) Responsible for Response: Olivia Campbell Andersen, Executive Director, Renewable Energy Vermont; Leslie A. Cadwell, Vice-Chair to the Board of Directors, Renewable Energy Vermont  
Date: January 11, 2019

**Q.PSD.REV.1.4** Please state whether REV believes that GMP customers that do not participate in net-metering projects provide any form of a financial subsidy (whether directly or indirectly) to GMP customers that do participate in a net-metering project. If not, please explain how the net-metering program differs from GMP's Tesla Powerwall program regarding financial subsidies for non-participating customers.

**A:PSD.REV.1.4** The differences between the Powerwall program and the net-metering program are substantial. The capital, interconnection, billing, maintenance, and repair costs of a net-metered electric generation project are paid by the customer who owns the system whereas a Powerwall customer pays only a portion of the costs and does not own the equipment. GMP or its ratepayers may pay for the energy, capacity, and renewable attributes (when RECs are transferred to the utility) produced by a net-metered electric generation station through bill credits that expire if unused. Unlike the Powerwall program, customers who participate in net-metering are *penalized* for siting their facilities in certain locations through a deduction to the compensation rate, including locations deemed to be "preferred" sites.

Person(s) Responsible for Response: Olivia Campbell Andersen, Executive Director, Renewable Energy Vermont; Leslie A. Cadwell, Vice-Chair to the Board of Directors, Renewable Energy Vermont  
Date: January 11, 2019

**Q.PSD.REV.1.5** Please refer to page 19, lines 9–10 of the prefiled direct testimony Leslie A. Cadwell and Olivia Campbell Andersen, where the witnesses testify that “customer self-supply through net-metering represented only 3% of total GMP electric load.” Please confirm that the 3% figure refers only to a portion of electric load (in terms of MWh) and does not reflect the cost of self-supplied energy.

**A:PSD.REV.1.5** As stated in the testimony, the 3% is the percentage of electric load. As discussed in the response to PSD.REV.1-9, the costs of net metering represent a small portion of GMP's power costs.

Person(s) Responsible for Response: Nathan Phelps, Regulatory Director, Vote Solar; Olivia Campbell Andersen, Executive Director, Renewable Energy Vermont; Leslie A. Cadwell, Vice-Chair to the Board of Directors, Renewable Energy Vermont  
Date: January 11, 2019



**Q.PSD.REV.1.6** Please refer to page 22 of the prefiled direct testimony Leslie A. Cadwell and Olivia Campbell Andersen, where the witnesses testify that “[t]he Department also reported that the 2017 changes to the net-metering program led to a significant decline in new projects compared to 2016 levels.” With respect to this portion of testimony, please respond to the following:

- a. Please state whether REV believes “2016 levels” of new net-metering projects to be appropriate and sustainable.
- b. If yes, please state whether REV has conducted any analyses of how the “2016 levels” of new net-metering projects would affect residential utility rates under current net-metering rules. If so, please provide a copy of such analysis.

**A:PSD.REV1.6**

- (a) Objection on the grounds that the question is vague and ambiguous in that it fails to clarify what is meant by “appropriate and sustainable”. Without waiving the objection, Yes.
- (b) Objection to the extent the question requires REV to perform analysis not already performed.

Person(s) Responsible for Response: Olivia Campbell Andersen, Executive Director, Renewable Energy Vermont; Leslie A. Cadwell, Vice-Chair to the Board of Directors, Renewable Energy Vermont  
Date: January 11, 2019

**Phelps**

**Q.PSD.REV.1.7** Please refer to page 27, lines 13–18 of the prefiled direct testimony of Nathan Phelps, where Mr. Phelps testifies that “once the Commission has approved target revenue for each year of the MYRP, any over- or under-recoveries in comparison to the approved target revenue can be collected in the following year. This approach is a fully reconciling revenue decoupling mechanism. Under this approach, there is no risk to the Company or customers that GMP will over- or under-recover the approved yearly target revenue.” With respect to this portion of Mr. Phelps’s testimony, please respond to the following requests:

- a. Please describe generally Mr. Phelps’s definition or understanding of over- or under-recovery. Does it include significant over or under earning relative to the targeted ROE?
- b. If a utility significantly reduces its capital expenditures and reduces its depreciation expenses and property tax levels to earn at higher than required returns, would that constitute over- recovery? Please explain.
- c. If a utility were to temporarily reduce or defer certain expenses or expenditures on maintenance, such as tree trimming, in order to artificially earn at higher levels, would that constitute over- recovery? Please explain.

**A:PSD.REV.1.7** Objection on the grounds the question calls for speculation and to the extent the questions seeks to have the witness perform analysis not already performed. Without waiving the objection, Mr. Phelps responds as follows:

- a. My usage of over- or under-recovery is independent of ROE. Stated differently, the ROE should be used to determine the target revenue for the year, but the under- or over-recoveries are determined based on the predetermined target revenue not ROE. See below for an illustrative formula of over- or under-recoveries.

$$\begin{aligned}X &= \text{Target Revenue for year } A \\Y &= \text{Revenue recovered in year } A \\Z &= \text{Reconciling amount for year } A + 1 \\Z &= (Y - X) + \text{interest rate}(Y - X)\end{aligned}$$

- b. In order to best answer this question, I’ll provide answers for a cost-of-service paradigm and a performance-based regulation paradigm.
  1. **Cost-of-Service.** In a cost-of-service paradigm reduced capital expenditures, depreciation expenses, and property taxes could be considered an over-recovery *in the short term*. In the long-term, the utility would reduce future target revenues as a result of lower capital

expenditures, depreciation expenses, and property taxes. As such, these actions could be considered an over-recovery in the short term and an under-recovery in the long-term.

2. **Performance-based Regulation.** Under PBR, revenue is determined by outputs (*e.g.*, performance) as opposed to inputs. As such, if the utility finds a way to deliver desired performance (or even exceed desired performance) with fewer inputs, then the utility is able to increase earnings *by design*. This approach is meant to encourage the utility to become innovative and become indifferent as to who owns infrastructure. Over time, if the regulator determines that the desired performance does not merit the previous target revenue, then the regulator can adjust the target revenue. The change in utility behavior should drive adoption of lower-cost options and lower operating expenses in the near-term and provide downward pressure on future target revenues.

**Q.PSD.REV.1.8** Please refer to page 28 of the prefled direct testimony of Nathan Phelps, where Mr. Phelps discusses the costs net-metering.

- a. Please state the system or societal value (in dollars) of a new solar net metering project placed on the roof of a residential home in Vermont in 2018. If the specific value is not known to or definable by REV, please identify and itemize the categories of material system and social values provided by a solar residential net-metering facility. To the extent possible, assign an approximate monetary amount to these values.
- b. Please state the utility cost per kWh of a residential solar net-metered facility.
- c. Please state whether REV believes the system and/or societal value of a net-metered system (in terms of dollars) exceeds the utility's cost per kWh of a residential solar net-metered facility. If so, please describe in detail the basis of your response.
- d. Please state whether REV believes alternative mechanisms for promoting distributed generation other than net-metering should be implemented in Vermont. If so, please describe any such mechanisms.

**A:PSD.REV.1.8.** Objection to the extent the question seeks to have the witness conduct analysis not already performed. Further objection on the grounds that the term "categories" is vague and requires speculation. Without waiving the objections, Mr. Phelps responds as follows:

- a. I have not conducted a system or societal cost test for this testimony. The point of the testimony is to point out that the societal test has long been used in Vermont as the primary method for conducting least cost analyses for planning, and therefore the MYRP should as well. The following documents provide examples as to how the societal test has been applied in resource planning:

Regulatory Assistance Project and the Vermont Housing Conservation Board (2012). Energy Efficiency Cost-Effectiveness Screening: How to Properly Account for 'Other Program Impacts' and Environmental Compliance Costs. Prepared by Tim Woolf et al., Synapse Energy Economics, Inc. Available at: [http://www.synapse-energy.com/sites/default/files/SynapseReport.2012-11.RAP\\_.EE-Cost-Effectiveness-Screening.12-014.pdf](http://www.synapse-energy.com/sites/default/files/SynapseReport.2012-11.RAP_.EE-Cost-Effectiveness-Screening.12-014.pdf)

National Action Plan for Energy Efficiency (2007). Guide to Resource Planning with Energy Efficiency. Prepared by Snuller Price et al., Energy and Environmental Economics, Inc. Available at: [https://www.epa.gov/sites/production/files/2015-08/documents/resource\\_planning.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/resource_planning.pdf)

- b. I have not conducted this analysis.
- c. I have not conducted an analysis that would provide an answer to this question.
- d. Objection on the grounds that the question exceeds the scope of Mr. Phelps' testimony and is overbroad. Without waiving the objection, yes. There are additional mechanisms for promoting distributed generation in addition to net metering which include deregulation to allow customer choice of energy suppliers, a move to a 100% RES, a reduction in the amount of large hydro and old vintage resources (old meaning greater than 15 years in age from commissioning) in Tier I of the RES, and that significantly expands Tier II. Other examples include adopting mechanisms like those included in the Massachusetts SMART program.

**Q.PSD.REV.1.9** Please refer to page 28, lines 8–11 of the prefiled direct testimony of Nathan Phelps, where Mr. Phelps testifies that “over the past 5 years when net-metering in Vermont saw significant growth, GMP’s power costs decreased by over \$33 million. This fact alone undercuts claims that net-metering is driving up GMP electric rates.” With respect to this portion of testimony, please respond to the following:

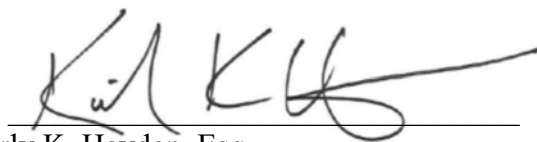
- a. Please admit or deny that net-metering constitutes a portion of GMP’s overall power costs
- b. Please state whether Mr. Phelps or REV have conducted an analysis of how net-metered projects affected utility rates during the five year period referenced by Mr. Phelps in his testimony. If so, please provide a copy of that analysis.
- c. If no such analysis has been conducted, assuming that Mr. Phelps’s assertion that “GMP’s power costs decreased by over \$33 million” is accurate, please admit or deny that the net decrease could have been greater in the absence of net-metered projects. If denied, please state the basis of your response.

**A:PSD.REV.1-9** Objection to the extent the question seeks to have the witness conduct analysis not already performed. Without waiving the objection, Mr. Phelps responds as follows:

- a. Admit that net metering constitutes a small portion of GMP’s overall power costs.
- b. I have not conducted the analyses requested. The aforementioned quote is a reference to Case No. 18-0974-TF, GMP Rate Case, PSD Direct Testimony of Brian E. Winn, August 10, 2018, at 11-12.
- c. I have not conducted the analysis requested.

DATED at Burlington, Vermont this 11th day of January, 2019.

**AS TO OBJECTIONS:**

A handwritten signature in black ink, appearing to read 'Kim K Hayden', written over a horizontal line.

Kimberly K. Hayden, Esq.  
Paul Frank + Collins P.C.  
One Church Street  
P.O. Box 1307  
Burlington, VT 05402-1307  
khayden@pfclaw.com