

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 18-0974-TF

Tariff filing of Green Mountain Power Corporation requesting a 5.45% increase in its base rates effective with bills rendered January 1, 2019, to be fully offset by bill credits through September 30, 2019	
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DEPARTMENT OF PUBLIC SERVICE’S POST-HEARING BRIEF

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I. Background

In this traditional cost-of-service rate case, the Green Mountain Power Corporation (“GMP”) requests that the Public Utility Commission (the “Commission”) approve a 5.43% base rate increase. The Department of Public Service (the “Department”), after conducting multiple rounds of comprehensive discovery and filing detailed prefiled direct and surrebuttal testimony, now recommends that the Commission approve a 5.30% rate increase. Assuming the Commission allows GMP’s proposed rate year credit for tax savings, the Department’s recommendation would result in a 1.03% rate decrease for the nine-month period commencing January 1, 2019.

While the difference between these recommended rate levels appears to be narrow, the Department and GMP have fundamental disagreements regarding appropriate ratemaking

treatment of several key components of GMP's rate filing. The two primary areas of disagreement relate to the appropriate ratemaking treatment of capital spending associated with GMP's Tesla Powerwall 2.0 innovative pilot (the "Powerwall Program") and various transmission and distribution ("T&D") costs. This brief focuses on the areas of remaining dispute between GMP and the Department.

The most significant disagreement between the Department and GMP in this case relates to appropriate rate base treatment of GMP's innovative services, with the Powerwall Program generating the strongest disagreement. To be clear, as the Department's testimony in this case indicates, the Department is supportive of GMP's attempts to respond to challenges inherent in the modern electricity and energy marketplaces through innovative service offerings. The Department recognizes that GMP is operating in a rapidly evolving industry and is tasked with addressing not only stagnant sales, but must also respond to legislative mandates and state policies that promote increased reliance on small-scale renewable generation and mitigate reliance on fossil-fuel based technologies. GMP's attempts to respond to these challenges, which present a host of financial, engineering, and operational constraints, are laudable. However, with respect to innovative service offerings, especially those services that involve the sale of products and services that are generally available to consumers from other third-parties, it is imperative that regulators remained focused on maintaining an appropriate balance of risk between GMP's customers and shareholders. While change in Vermont's electric industry is a necessary inevitability, and GMP should continue to seek the implementation of technologies that reduce peak-consumption and promote environmental sustainability, regulatory policy should not depart from ensuring that regulatory investments reflect appropriate least-cost planning principles and

provide actual value to rate payers. Regulatory policy and standards must also evolve to ensure that GMP, and other utilities, are not able to utilize their natural monopoly market position to develop an unfair competitive advantage in providing non-traditional unregulated services.

At the outset, it is also important to clarify that although this is a traditional cost-of-service rate review, the majority of GMP's expenses are not subject to Commission review in this proceeding. Specifically, the vast majority GMP's operations and management (O&M) expenses are fixed for ratemaking purposes as a result of the Base O&M Cost Formula (commonly referred to as the "O&M Platform") that the Commission approved in Docket 7770.¹ Likewise, the bulk of GMP's power supply and transmission costs, which account for more than half of the company's overall cost-of-service,² are subject to adjustments pursuant to the alternative regulation plan approved by the Commission in Docket 17-3232. The Department and GMP also agree that GMP's proposed rate of return on equity ("ROE") of 9.3% is reasonable. The Department's review in this case, therefore, primarily focused on GMP's proposed capital spending. The Department found that the majority of GMP's proposed capital spending relates to necessary and justified projects that satisfy traditional cost-of-service ratemaking principles. However, the Department recommends that the Commission disallow rate base treatment of capital projects that total approximately \$25.67 million, which would reduce GMP's proposed allowed rate base by approximately \$13.72 million. Each of the Department's recommended adjustments are discussed below.

¹ Winn pf. at 6.

² Exhibit GMP-ER-1 (Rev).

The Department has also included two attachments to this brief to demonstrate the cost-of-service calculations utilized by the Department to calculate its overall rate recommendation. Attachment 1 includes revised calculations for Exhibit PSD-KJM-10, which details the Department's recommended reductions to GMP's transmission and distribution blanket work orders.³ Attachment 2 the includes a version of the Department's cost-of-service model (most recently filed as Exhibit PSD-JMT-3-REV) that has been revised to account for the modified recommendation on blanket work orders.

II. Tesla Powerwall Program

In this case, GMP seeks approval for placing capital costs associated with the Powerwall Program into rate base. The total Powerwall Program innovative pilot cost is expected to be approximately \$15.22 million, though GMP seeks rate base treatment of slightly less than that amount due to expected delays in the project completion date.⁴ The Department recommends that the Commission defer rate base treatment of the Powerwall Program costs until after GMP receives approval from the Commission to offer the Powerwall Program as a permanent tariffed service offering.

GMP's current Temporary Limited Regulation Plan (the "17-3232 Plan"), as approved by the Commission in Docket 17-3232, authorizes GMP to pursue so-called innovative pilots on a non-tariffed basis for up to an 18 month term.⁵ Under the 17-3232 Plan, GMP is not required to receive express approval from the Commission prior to commencing a non-tariffed innovative

³ See Tr. 10/25/18 (addressing the need to revise Exhibit PSD-KJM-10 to account for the nine-month rate year that is the basis of GMP's overall proposed cost-of-service).

⁴ Ryan pf. reb. at 4.

⁵ *Petition of Green Mountain Power Corporation for approval of a temporary limited regulation plan pursuant to 30 V.S.A. §§ 209, 218 and 218d*, Case No. 17-3232-PET, Order of 11/29/2017.

pilot. Instead, GMP is only required to provide written notice to the Department, the Commission, and Efficiency Vermont at least 15 days prior to commencing the pilot.⁶ GMP is then required to make periodic updates at six month intervals regarding the progress of a pilot program.⁷ If GMP seeks to offer the product or service beyond the 18 month pilot term, it must receive approval from the Commission to offer it as a tariffed service. However, the “innovative pilot program does not guarantee rate recovery for any innovative services.”⁸

GMP’s authority to pursue the Powerwall Program derives from this innovative pilot mechanism, which was approved by the Commission as part of the 17-3232 Plan. The 17-3232 Plan itself was approved by the Commission pursuant to 30 V.S.A. § 218d, which governs alternative regulation plans generally. Since the authority to implement the Powerwall program ultimately derives from § 218d, then the substantive regulatory review provisions of § 218d should govern the Commission’s review of GMP’s innovative services, including the Powerwall Program. In relevant part, § 218d(d) provides that

Alternative regulation may include such changes or additions to, waivers of, or alternatives to traditional ratemaking procedures, standards, and mechanisms, including substantive changes to rate base-rate of return rate setting, as the Commission finds will promote the public good

The Powerwall Program is a creature of alternative regulation, and is accordingly subject to the legal standards applicable to alternative regulation plans under § 218d. With respect to those standards, the General Assembly established requirements that the Commission “establish a system of regulation in which [GMP has] clear incentives to provide *least cost* energy service”⁹

⁶ *Id.* at 16.

⁷ *Id.* at 8.

⁸ *Id.* at 18.

⁹ 30 V.S.A. § 218d(a)(1) (emphasis added).

and “establish a reasonably balanced system of risks and rewards.”¹⁰ The Department recognizes the necessity of enabling electric distribution utilities to develop and sell non-traditional services that generally would not be permitted under traditional cost-of-service regulation. Regulatory review of these projects, however, should correspondingly also not be constrained by the rigid precepts of traditional regulation. Indeed there may be innovative services that do not yield a net financial benefit for ratepayers, but nonetheless may be justified by providing ancillary environmental or other non-monetary benefits that directly promote state energy policies.

With respect to the Powerwall Program, to be clear, the Department is not opposed to this project as a general matter. The Department recognizes that if successfully implemented and managed, the Powerwall Program has the potential to provide meaningful benefits to ratepayers, including those who do not directly participate in the Powerwall Program. The Department, however, has concerns that the overall scale of the project coupled with uncertainty in GMP’s financial modeling does not allow for regulators to make an informed decision as to whether this project places a disproportionate share of risk on ratepayers at this time. The Department, accordingly, recommends that the Commission defer rate base recovery on the Powerwall Program until GMP fully completes the 18 month pilot period and presents data and information sufficient to justify offering the program as tariffed service offering on a permanent basis. It is the Department’s expectation that completing the pilot period will allow GMP to provide the Commission with actual data and information regarding Powerwall Program performance to determine whether risks associated with the project are appropriately balanced between GMP’s ratepayers and shareholders. Indeed, the pilot programs are deliberately established as a test

¹⁰ 30 V.S.A. § 318d(a)(7).

phase prior to full implementation of a more robust program. If GMP decides to not to pursue a tariffed offering for the Powerwall Program or is unable to receive authorization from the Commission to provide the service under a tariff, then the Department recommends that the Powerwall Program be treated as a below-the-line expense.

The primary benefit of the Powerwall Program is that it will allow for GMP to reduce load during peak events. This “peak-shaving,” if successful, will allow for GMP to reduce its Forward Capacity Market (“FCM”) and Regional Network Services (“RNS”) costs.¹¹ The Powerwall Program is expected to provide other ancillary benefits, including energy “arbitrage” and voltage and reactive power management.¹² However, based on the financial modeling completed by GMP that accounts for projected FCM and RNS savings, the Powerwall Program is not expected to yield a positive net present value (“NPV”) for non-participating ratepayers for ten years.¹³

As noted above, the Department does not dispute that the Powerwall Program has the potential to provide ratepayer benefits. However, the Department is concerned that GMP has not adequately considered variables and/or potential unanticipated occurrences and events that could affect the financial viability of the project. First, GMP has not adequately considered how degradation of the Powerwall batteries can affect the ability to successfully track peaks in future years. Battery degradation will not affect GMP’s ability to draw on the full capacity of the batteries during a peak event, but as GMP recognizes, battery degradation will limit the length of time that GMP can draw on the batteries.¹⁴ GMP’s own testimony acknowledges that the

¹¹ Castonguay pf. reb. at 5.

¹² *Id.*

¹³ Winn pf. reb. at 14; Tr. 10/25/18 at 67 (Castonguay).

¹⁴ Tr. 10/25/18 at 72 (Castonguay).

batteries will likely need to be utilized for up to four hours to allow for GMP to successfully hit peaks.¹⁵ GMP's witnesses also acknowledged that if other utilities in ISO-New England territory pursue significant residential and utility-scale storage buildout, then peak periods in the ISO New England market will likely be "wider" and require that GMP draw on the Powerwalls for longer periods than are reflected in the modeling.¹⁶ As the Department's testimony reflects, battery degradation (even at the 3% rate expected by GMP) can have a substantial negative impact on the overall financial performance of the project, even in periods where GMP is only required to draw on the batteries for up to four hours.¹⁷ However, it may be necessary for GMP to draw on the batteries for even longer periods than four hours to successfully track peaks, which would exacerbate the negative financial impact of battery degradation.

Similarly, GMP's modeling did not consider potential changes to the rules governing the calculation of FCM and RNS charges over the life of the Powerwall project.¹⁸ Nor did GMP conduct any sensitivity analysis to determine where the break-even point, with respect to net-present value, would be for this project if actual RNS and FCM costs fall below projections. Such information would provide immense value to regulators, because it would clearly demonstrate the extent of market variances that would need to occur to result in the project generating a net financial loss. For an innovative service that is justified primarily on yielding financial benefits to ratepayers, providing this information should be a necessity. Moreover, as noted above, GMP's own projections demonstrate that the Powerwall Project is not anticipated to

¹⁵ Castonguay pf. reb. at 15.

¹⁶ Tr. 10/25/18 at 118–19 (Smith) ("I think we have some margin for that in our model. But no, that's a downside risk").

¹⁷ Dawson pf. reb. at 8–11; Exhibit PSD-CCD-2.

¹⁸ Tr. 10/25/18 at 118 (Smith).

yield a positive net-present value for approximately ten years. Therefore, if actual RNS and/or FCM savings are lower than projections, then the positive net present value “flip” will necessarily not occur until after ten years, if ever. This ten year period is important, because not only does it demonstrate that non-participating customers will provide an indirect subsidy to support the project for almost a decade (under presumed market and performance conditions), but the Tesla performance guarantee only lasts for a ten year period.¹⁹ Therefore, any performance drops from battery degradation or other operational problems with the Powerwalls would compound net losses that would result if actual RNS and FCM costs are lower than expected.

It is important to clarify that the Department does not challenge the validity of GMP’s FCM and RNS cost projections. Although the Department’s testimony indicates that the Department finds the projections to be questionable,²⁰ the Department has not conducted its own independent projections of RNS and FCM costs.²¹ The Department’s primary concern with the projections is not tied to their accuracy, but rather is directed at GMP’s lack of consideration for how potential variability in those projections could affect the overall viability of the project. For a project that is expected to generate only marginal benefits under ideal circumstances, these types of analyses should have been conducted to provide the Commission with a better understanding of the magnitude of risk that will be placed on ratepayers if the Powerwall Project

¹⁹ Tr. 10/25/18 at 62 (Castonguay).

²⁰ Dawson pf. at 29, 39.

²¹ Tr. 10/25/18 at 163 (Dawson).

is rate based. The Department, however, expects that this type of analysis could be conducted by GMP if and/or when it seeks to tariff this service.²²

Additionally, the overall scope of this innovative pilot exacerbates the ratepayer risk. The total cost of the pilot is expected to be \$15.22 million (though GMP currently seeks rate base treatment for slightly less than the full \$15.22 million due to delays in the buildout²³). For context, in its pending multi-year rate plan proposal (Case No. 18-1633-PET), GMP requests that the Commission approve annual capital spending at an average amount of \$85 million for the next three years.²⁴ In other words, this one innovative pilot program has a total capital cost that amounts to approximately 18% of GMP's proposed annual capital budget for the next three years. The Department recognizes that the 17-3232 Plan, which authorizes innovative pilots, does not contain an overall project cost cap. However, the cost of the Powerwall Program substantially dwarfs the aggregate cost of all other innovative pilots that GMP has pursued to date.²⁵ Moreover, GMP's own analysis indicates that the Powerwall Program will yield a substantially lower net benefit per dollar invested (based on \$/kW-month) than the utility-scale storage projects and other pilot programs that are included in this case.²⁶ Although the

²² Indeed, during the evidentiary hearing, GMP witness Douglas Smith indicated that he conducted an informal analysis to test downside risk associated with reduced RNS costs shortly in advance of the hearing. Tr. 10/25/18 at 121 (Smith). While Mr. Smith may be correct that reduced RNS costs will have minimal impact on the financial performance of the project, neither the Department nor the Commission have been able to evaluate this analysis. Tr. 10/25/18 at 133 (Smith). Indeed, this is precisely the type of analysis that the Department would expect to see from GMP if it seeks to permission from the Commission to offer the Powerwall Program as a tariffed service.

²³ Castonguay pf. reb. at 4–5).

²⁴ Tr. 10/25/18 at 37–38 (Otley).

²⁵ Castonguay pf. at 4.

²⁶ Tr. 10/25/18 at 73–75 (Castonguay); Castonguay pf. reb. at 25 (listing the net benefit/(Cost) of the following programs: Curtailable Load Rider - \$6.96/kW-month; Sensibo Heat Pump Controls - \$6.34/kW-month; Pilot Demand Response Rider - \$5.68/kW-month; Milton Solar-Battery Project - \$5.19/kW-month; Critical Peak Rider - \$4.40/kW-month; Aquanta Water Heater Controls - \$3.76/kW-month; EV Car Chargers – \$3.59/kW-month; Tesla/Sonnen Residential Batteries - \$1.67/kW-month; Water Heater Program - \$(16.68)/kW-month).

Department recognizes the need for a portfolio approach to tackling environmental and statutory mandates, such as Renewable Energy Standard (“RES”) compliance, it is challenging to reconcile GMP’s rationale for making its largest investment into the project that is expected to yield the narrowest return — especially where that project’s success is largely dependent on market forces outside of GMP’s control.²⁷ In any event, the overall scale of this project will magnify the risk that is carried by ratepayers once the project is placed into rate base.

Based on the numerous uncertainties and unknown variables that have the potential to affect the Powerwall Program’s overall financial performance, the Department recommends that the Commission defer allowing rate base recovery at this time. Section 218d(a)(7) mandates that the Commission establish a reasonable balance of risk between GMP’s shareholders and ratepayers. The Powerwall Program is justified largely by its potential FCM and RNS savings. If it is placed into rate base, GMP’s ratepayers will shoulder virtually all financial risk that could manifest if the batteries and market forces do not perform as projected. While the Department does not believe that it is necessary or appropriate to require that GMP shield ratepayers from all risk associated with this investment, the overall scope of that risk is unknown based on the evidentiary record in this case. Accordingly, the Department believes that the Commission should require that GMP complete the pilot phase for the Powerwall Program and seek rate base recovery only after GMP receives permission to offer the Powerwall program as a tariffed service. Data and performance information generated during the pilot phase should provide the Department and the Commission with a clearer understanding of the performance and market

²⁷ A more limited-scale pilot for the Powerwall Program and staggered build-out of the batteries may have been a more reasonable approach. However, the Department recognizes that GMP has already made significant progress in its attempt to install 2,000 Powerwall batteries through its partnership with Tesla.

risks and make a more informed decision as to whether this service should be treated as an above-the-line expense covered by ratepayers. Deferring recovery is also not a punitive measure. Instead, the result would be regulatory lag, but GMP would still be able to receive full ratepayer recovery assuming it can demonstrate with more certainty the benefits of the project. This approach yields an appropriate balancing of risk that is consistent with the 17-3232 Plan and 30 V.S.A. § 218d. Also, assuming the Powerwall Program is removed from rates, then it would also be appropriate to remove benefits and revenues associated with the program within GMP's cost-of-service, which are accounted for in the Department's cost-of-service modeling and ultimate rate recommendation.

III. Heat Pump Hot Water Heater Program

The Department also recommends that the Commission require that GMP remove costs and revenues associated with the Heat Pump Hot Water Heater ("HPHW") innovative pilot from its cost-of-service. When a regulated natural-monopoly public utility, such as GMP, offers products or services that are available in the commercial marketplace, there is a risk that the utility's monopoly position will allow it to gain unfair competitive advantage within that marketplace.²⁸ To counter this risk, the Department believes it is necessary to establish regulatory safeguards that protect both ratepayers and competitive service providers. In this case, the Department has proposed a list of factors that it believes should be considered by the Commission when evaluating whether to allow rate base treatment of a service or product that is generally available within the commercial marketplace,²⁹ including:

²⁸ Winn pf. at 17.

²⁹ Winn pf. at 17-18.

- Whether the utility can demonstrate the ability to load-control the usage of the service in a manner that benefits all ratepayers and not just the program participants;
- Whether financial benefits of the program exceed the costs to non-participating ratepayers;
- If cost of the program exceed monetary benefits for non-participating customers, whether any non-monetary benefits (such as environmental attributes) achieved by the program are necessary to satisfy legislative or regulatory mandates and the net financial loss to ratepayers is justifiable based on those non-monetary benefits.

In addition, the Commission should require that any bad debt associated with the program is borne by the program participants or the utility's shareholders. The Commission should also require the utility to open its billing system to third-party entities that offer similar competing products.³⁰

With respect to the HPHW innovative pilot, the Department's concern is that because GMP lacks the ability to load control the HPHWs installed during the pilot phase, there is no basis to differentiate GMP's service offering from other third-party entities that provide the same service. There is no peak shaving or other direct or discernable non-participant benefit that would justify allowing GMP to put costs and revenue from this program in rates. The Department accordingly recommends that the HPHW innovative pilot costs and revenues receive below-the-line treatment and be removed from GMP's cost-of-service. The Department recognizes that unlike the Powerwall Program, the HPHW innovative pilot has generated positive financial returns that will benefit GMP's non-participating ratepayers in the 2019 rate

³⁰ Winn pf. at 18.

year. Thus, removal of the HPHW program will actually put some slight upward pressure on GMP's regulated revenue requirement. Nonetheless, since there is no discernable non-participating ratepayer benefit (other than revenues) for this pilot, the Department does not believe there is a sufficient basis to overlook the competitive marketplace concerns and allow its costs into rate base.

In testimony, GMP indicated that it intends to make load-control a requirement for the HPHW program if it is offered as a tariffed service in the future.³¹ Assuming that load-control is technically feasible and included in a future tariff for this program, the Department would not object to including costs and revenues derived from the tariffed services in rates in the future.

IV. Transmission and Distribution Blankets

The Department recommends that the Commission reduce GMP's requested costs for transmission and distribution ("T&D") blanket work orders ("blankets") as follows: (1) Regulators and Capacitors blanket by \$253,954; (2) Transformers blanket by \$665,495; and (3) Distribution Lines blanket by \$8,199,387. In total the Department recommends that the Commission reduce GMP's blanket spending by \$9,118,835.

In GMP's 2018 rate case, Case No. 17-3112-TF, the Department and GMP reached a broad Memorandum of Understanding (the "17-3112 MOU") that established, *inter alia*, documentation standards for capital projects to satisfy the known and measurable standard and a requirement that GMP not include any individual capital projects with a total cost in excess of \$250,000 in its blankets.³² The 17-3112 MOU resolved the Department and GMP's respective

³¹ Tr. 10/25/18 at 58 (Castonguay).

³² *Investigation into GMP's tariff filing requesting an overall rate increase in the amount of 4.98%, to take effect January 1, 2018*, Case No. 17-3112-INV, 11/09/17 MOU, ¶ 27, Exhibit 2.

arguments about blanket spending in that case. However as stated in Paragraph 22, “[e]xcept where expressly stated otherwise” the 17-3112 MOU resolved issues related to blanket spending “without establishing precedent in future cases.”³³ The only other reference to blankets in the 17-3112 MOU is contained in Paragraph 27, which establishes the requirement that individual projects that exceed \$250,000 be removed from blanket. The substantive provisions of the 17-3112 MOU are otherwise silent with respect to blankets. Likewise, the known and measurable documentation standards codified through Exhibit 2 to the 17-3112 MOU have no express requirements related to blanket spending.

In this case, the Department presented testimony from an outside expert witness who opined that blanket spending does not satisfy known and measurable requirements.³⁴ Under the Commission’s precedent, the known and measurable standard is defined as “changes that are measurable with a reasonable degree of accuracy and have a high probability of being in effect in the adjusted test year.”³⁵ However, the Department’s witness did not recommend that the Commission remove all of GMP’s blanket spending under the known and measurable standard. Instead, he developed a set of criteria to reduce a portion of GMP’s proposed blanket spending for the rate year.³⁶ Specifically, he recommended that:

- Forecasted blanket spending attributable to new customers should be allowed because GMP based its rate period off of forecasted loads, which includes revenues associated with new customers;³⁷

³³ *Id.* at ¶ 22.

³⁴ Mara pf. at 31.

³⁵ Docket 17-3112-INV, Order of 12/21/17, at 12 (citing Dockets 6946/6988).

³⁶ Mara pf. at 45–46.

³⁷ Mara pf. at 45.

- Replacement of failed equipment, including poles in need of replacement, be allowed.³⁸
- Costs associated with work required to “do upgrades and relocate joint facilities in order to accommodate joint-use parties on GMP’s pole” as part of its pole attachment tariff (i.e. make-ready work) be allowed.³⁹
- Reliability upgrades, relocation of lines to road, preparing structures for distribution automation be disallowed.⁴⁰

The Department does not dispute that the Commission has traditionally allowed the use of blanket spending in rate cases under the known and measurable standard. The Department also does not seek to have the Commission modify its longstanding definition for the known and measurable standard or otherwise modify the standards agreed to by the Department and GMP in Exhibit 2 to the 17-3112 MOU. However, the Department has repeatedly raised concerns regarding the continued growth of blanket spending and GMP’s overreliance on blankets for capital expenditures.⁴¹ The 17-3112 MOU and its requirement regarding individual projects that exceed \$250,000 helps to provide regulatory transparency over costs that were previously buried within blankets. However, GMP’s distribution blanket for the 2019 fiscal year, even when excluding projects that exceed \$250,000, totals \$17,016,601.⁴² That single blanket covers a substantial amount of GMP’s overall proposed capital investment without any detailed regulatory review of the actual spending within the blanket. While the blanket is developed based on historical averaging (which is a methodology long-accepted by the Commission), it still

³⁸ *Id.*

³⁹ *Id.* at 46.

⁴⁰ *Id.*

⁴¹ *See e.g.*, Case No. 17-3112, Schultz pf.

⁴² Exhibit PSD-KJM-10.

leaves a significant amount of capital spending essentially unchecked by the regulatory review process. Also, the Department's testimony, which evaluates trends in T&D blanket spending over the past five years, demonstrates that many of GMP's T&D blankets show significant annual variances without any clear explanation or justification.⁴³

The Department does not believe that a wholesale departure from the Commission's traditional approach to allowing blanket spending under the known and measurable standard is warranted. GMP should be allowed significant flexibility in its T&D spending to ensure safe and reliable service. However, based on the recent trajectory of the blankets, the underlying necessity of which is not clearly documented, it is imperative that regulators take a more detailed review of cost-drivers of each blanket, many of which are exceeding inflation. The criteria outlined by the Department's expert witness achieve a fair balance of allowing GMP to prospectively include necessary portions of blanket spending in rates, but would defer recovery of portions of the blanket spending over which GMP retains a fair degree of discretionary control.

Like the Department's recommendation on the Powerwall Project, this recommendation is not punitive. It would result in regulatory lag, but it would not prohibit GMP from recovering prudently incurred T&D costs. Importantly, the recommendation is also bound by clearly defined criteria that should allow the Department and the Commission to better understand and review the cost-drivers for GMP's T&D capital investments in the future. Accordingly, the Department recommends that the Commission reduce GMP's blanket spending by \$9,118,835 consistent with the calculations detailed in Attachment 1 to this brief.

⁴³ Mara pf. at 37-42.

V. Other T&D Adjustment Recommendations

The Department recommends that the Commission disallow capital costs associated with two Motor Operated Air Break (“MOAB”) switches that GMP proposes to install in the rate year. Specifically, the Department recommends that Commission disallow spending for the Newbury MOAB project (GMP Project No. 159729) and the Castleton MOAB project (GMP Project No. 159730). Together, these projects account for \$767,055 of proposed capital spending.⁴⁴

GMP’s MOAB switches are:

Connected to SCADA which allows for remote operation of the switches. However, to be clear, these switches do not reduce the frequency of outages. Rather, the remote operation helps to reduce the duration of an outage. Most of the projects have existing gang operated air break (GOAB) switches in place that require manual operation but serve the same purpose as the MOAB switches.⁴⁵

The Department’s concern with these projects is two-fold. First, GMP has not sufficiently demonstrated a need for replacing the existing GOAB switches. GMP represents that replacing the GOAB switches with MOAB switches will yield reliability and safety improvements.⁴⁶ However, GMP has not produced evidence to demonstrate any notable reliability concerns that demand immediate attention for the Newbury and Castleton MOAB projects.⁴⁷ Moreover, the switch to MOAB’s has the potential to limit downtime durations, but it will not necessarily reduce outage frequency. Second, GMP has not provided any evidence that the existing GOAB switches have physically degraded to the extent that replacement is necessary. Indeed, during the evidentiary hearing, a GMP witness acknowledged that the existing GOAB switches are not

⁴⁴ Exhibit PSD-KJM-4.

⁴⁵ Mara pf. at 16.

⁴⁶ Fiske pf. at 6.

⁴⁷ Mara pf. at 16.

being replaced because they are at the end of their useful life.⁴⁸ The existing, functional GOAB switches have been paid for by ratepayers, and GMP's general assertions regarding improved reliability without specific underlying data regarding historical reliability of these switches do not justify replacement of these switches at this time.

The Department also recommends that the Commission reduce the cost for the Line 74, Section I project (GMP Project No. 153588), which involves rebuilding GMP Line 74, by \$13,871. The Department's recommendation is based on the following testimony:

Project 153588 includes using 336 tree wire on a single phase line. A more appropriate design would be to use 1/0 tree wire on a single-phase line. A single-5 phase line should carry no more than 50 to 70 amps, and a 1/0 single-phase line is 6 rated for over 200 amps. Using 336 tree wire adds to the cost with no benefit to the 7 rate payers.⁴⁹

Although this reduction is relatively small, the Department maintains that it should be adopted by the Commission because GMP has not demonstrated how the full cost of this project is justified by ratepayer benefit.

VI. Conclusion

Based on the evidentiary record in this proceeding, the Department recommends that the Commission allow GMP to raise its base rates by 5.3%, effective January 1, 2018, based on the following recommended adjustments:

- Removal costs and revenues associated with the Powerwall Program;
- Removal of costs and revenues of the HPHW innovative pilot program;
- Reduction of GMP's proposed T&D blanket spending by \$9,118,835;

⁴⁸ Tr. 10/25/18 at 139 (Fiske).

⁴⁹ Mara pf. at 26.

- Removal of the Newbury and Castleton MOAB switch projects;
- Reduction of costs for the Line 74, Section I project.

Adoption of each of these recommendations will result in just and reasonable rates. Adopting the Department's recommendations on the Powerwall and HPHW heaters will also establish a regulatory framework under which risk associated with innovative services will be appropriately balanced between GMP's ratepayers and shareholders and concerns regarding unfair competition will be mitigated. Additionally, if the Commission approves GMP's proposed tax savings credit, adopting these adjustments will result in a 1.03% rate decrease for the nine-month period commencing January 1, 2019.

Dated at Montpelier, Vermont, this 9th day of November, 2018

Vermont Department of Public Service

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PSD Brief Attachment 1

GREEN MOUNTAIN POWER CORPORATION

Exhibit PSD-KJM-10 (Revised)

Summary of Modified Cost Reductions - Blanket Work Orders

<u>Project Category</u>	<u>Proposed Total Cost</u>	<u>Total Cost Reduction</u>	<u>Final Cost</u>
Meters	\$1,696,412	\$0	\$1,696,412
Regulators and Capacitors	\$2,074,865	(\$253,954)	\$1,820,911
Transformers	\$7,320,969	(\$665,495)	\$6,655,474
Distr. Lines Blanket	\$33,814,825	(\$8,199,387)	\$25,615,438
Substation	\$1,752,964	\$0	\$1,752,964
Transmission	\$2,770,787	\$0	\$2,770,787
	<u>\$49,430,822</u>	<u>(\$9,118,835)</u>	<u>\$40,311,987</u>

Summary of Cost Reductions - Meters

<u>Project #</u>	<u>Project Title</u>	<u>Proposed Total Cost</u>	<u>Total Cost Reduction</u>	<u>Final Cost</u>
153691	2018 Meters, CTs, VTs	\$861,346	\$0	\$861,346
159517	2019 Meters, CTs, VTs			
159517	Oct 2018-Dec 2018	\$208,768		\$208,768
159517	Jan 2019 - Sept 2019	\$626,298		\$626,298
	TOTAL	\$1,696,412	\$0	\$1,696,412

Summary of Modified Cost Reductions - Regulators and Capacitors

<u>Project #</u>	<u>Project Title</u>	<u>Proposed Total Cost</u>	<u>Allowable Cost</u>	<u>Total Cost Reduction</u>	<u>Final Cost</u>
141719	2018 Regulators and Capacitors	\$1,030,733		\$0	\$1,030,733
141719	2019 Regulators and Capacitors				
	Oct - Dec 2018	\$261,033			\$261,033
	Jan-Sept 2019	\$783,099		(\$253,954)	\$529,145
	Jan-Sept 2019				
	9 new 300 kVAR Banks		\$54,702		
	4 failed capacitor banks		\$24,312		
	2019 Regulators				
	3 new sets of regulators		\$192,913		
	4 failed sets of regulators		\$257,218		
TOTAL		\$2,074,865	\$529,145	(\$253,954)	\$1,820,911

Summary of Modified Cost Reductions - Transformers

<u>Project #</u>	<u>Project Title</u>	<u>Proposed Total Cost</u>	<u>Allowable Cost</u>	<u>Total Cost Reduction</u>	<u>Final Cost</u>
141720	2018 Distribution Transformers Instal	\$3,713,335		\$0	\$3,713,335
141720	2019 Distribution Transformers Install				
	Oct - Dec 2018	\$901,908		\$0	\$901,908
	Jan-Sept 2019	\$2,705,726		(\$665,495)	\$2,040,231
	Jan-Sept 2019				
	New Customers				
	276 new single phase residential xmfr		\$412,376		
	292 new single phase comm. Xmfr		\$653,561		
	40 new three phase padmount xmfr		\$611,720		
	Failed Transformers				
	120 single phase transformers		\$179,058		
	12 three phase transformers		\$183,516		
TOTAL		\$7,320,969	\$2,040,231	(\$665,495)	\$6,655,474

Summary of Modified Cost Reductions - Distribution Lines Blanket Projects

<u>Project #</u>	<u>Project Title</u>	<u>Proposed Total Cost</u>	<u>Allowable Cost</u>	<u>Total Cost Reduction</u>	<u>Final Cost</u>
153389	2018 Distr. Lines Blanket	\$16,798,224		\$0	\$16,798,224
153389	2019 Distr. Lines Blanket				
	Oct - Dec 2018	\$4,254,150			\$4,254,150
	Jan-Sept 2019	\$12,762,451		(\$8,199,387)	\$4,563,064
	Jan-Sept 2019				
	Reconstruction/Rebuild Lines				
	Road Relocation			\$0	
	Planned Reliability Projects			\$0	
	Replace 310 failed poles		\$1,358,340		
	Distrib. Lines Line Ext - 2018		\$2,588,045		
	Road Relocation			\$0	
	Comply with 3rd Party Att. Tariff		\$616,680		
TOTAL		\$33,814,825	\$4,563,064	(\$8,199,387)	\$25,615,438

Summary of Cost Reductions - Substations

<u>Project #</u>	<u>Project Title</u>	<u>Proposed Total Cost</u>	<u>Total Cost Reduction</u>	<u>Final Cost</u>
153545	2018 substation	\$870,822		\$870,822
153545	2019 substation	\$882,142		\$882,142
	TOTAL	\$1,752,964	\$0	\$1,752,964

Summary of Cost Reductions - Transmission

<u>Project #</u>	<u>Project Title</u>	<u>Proposed Total Cost</u>	<u>Total Cost Reduction</u>	<u>Final Cost</u>
153540	2018 Transmission	\$1,361,245	\$0	\$1,361,245
153540	2019 Transmission	\$1,409,542	\$0	\$1,409,542
	TOTAL	\$2,770,787	\$0	\$2,770,787

GREEN MOUNTAIN POWER CORPORATION
COST OF SERVICE
TEST PERIOD ENDED September 30, 2017

5-Nov-18

RATE PERIOD: January 2019 - September 2019	PER BOOKS BALANCES (1)	ADJUSTMENT COL3-COL1 (2)	9 MONTH PROFORMA BALANCES (3)	PSD ADJUSTMENTS (4)	DPS ADJUSTED PROFORMA BALANCES (5)
COST OF SERVICE - \$ in 000s					
Operating Expenses:					
Purchased Power, Net	\$197,507	\$19,211	\$216,718	\$90	\$216,808
Production	19,360	676	20,036		20,036
Other Power Supply	941	1,541	2,482		2,482
	-----	-----	-----	-----	-----
Purchased Power and Production	217,808	21,428	239,235	90	239,325
Transmission	71,630	14,253	85,883	464	86,347
Transmission - Other	2,641	1,739	4,380		4,380
Distribution	27,131	7,503	34,634		34,634
Customer Accounting	3,720	4,239	7,958		7,958
Customer Service and Information	1,866	159	2,025		2,025
Sales	73	(73)	0		0
Administrative and General	28,664	14,237	42,900		42,900
Non Base O&M Costs - AMI	1,405	(1,333)	72		72
Non Base O&M Costs - KCW	608	(3)	605		605
Non Base O&M Costs - VMPD	43	(43)	(0)		(0)
Acct 929	(203)	-	(203)		(203)
Business Development	570	0	570		570
Depreciation & Amortization	43,199	(17,776)	25,423	(942)	24,481
Taxes - Federal and State	29,139	(14,536)	14,603	(183)	14,420
- Municipal	19,930	2,322	22,252		22,252
- Other, excluding Revenue Taxes	2,067	(99)	1,968		1,968
Accretion Expense	186	16	202		202
Capital Costs (Carrying Costs on Rec Inventor)	0	79	79		79
Capital Costs (Credit Facility Fees)	446	(354)	92		92
	-----	-----	-----	-----	-----
Total Operating Expenses	450,921	31,757	482,679	(661)	482,108
Return on Utility Rate Base	70,121	11,791	81,912	(722)	81,190
	-----	-----	-----	-----	-----
Total Cost of Service Before Credits	521,043	43,548	564,591	(1,383)	563,298
Less:					
Equity in Earnings of Affiliates	70,749	(15,565)	55,184		55,184
Other Operating Revenues	18,292	(3,596)	14,696	(717)	13,979
Business Development	821	(0)	821		821
	-----	-----	-----	-----	-----
Total Credits	89,862	(19,161)	70,700	(717)	69,983
Cost of Service to Ultimate Consumers	431,181	62,709	493,890	(666)	493,315
Gross Revenue & Fuel Gross Receipts Taxes	4,565	7	4,572		4,572
	-----	-----	-----	-----	-----
Total Cost of Service to Ultimate Consumers	435,746	62,716	498,462		497,887
Merger savings			(13,875)		(13,875)
Total Cost of Service to Ultimate Consumers			484,587		484,012
Revenue from Ultimate Consumers			461,056		461,056
Revenue Deficiency from Ultimate Consumers			\$ 23,531	(576)	\$ 22,955
Base Rate Revenue Adjustment Percent Reflecting GF Base Rate Freeze			5.43%		5.30%
Return of One Time Bill Credit for Corporate Tax Reform			\$ (27,407)		(27,407)
Net Revenue Adjustment Reflecting GF Base Rate Freeze			\$ (3,876)		\$ (4,451)
Net Revenue Adjustment Percent			-0.90%		-1.03%

Bolded, italicized text indicates functional categories in Base O&M Costs.

GREEN MOUNTAIN POWER CORPORATION
RATE BASE INVESTMENT
TEST PERIOD ENDED September 30, 2017
\$ in 000s

5-Nov-18

	10 MONTH AVG BALANCES (1)	ADJUSTMENT COL3-COL1 (2)	10 MONTH AVG BALANCES (3)	PSD ADJUSTMENTS (4)	DPS ADJUSTED BALANCES (5)
Production	\$539,888	\$63,876	\$603,764		\$603,764
Transmission	202,287	(7,622)	194,665		194,665
Distribution	793,122	71,228	864,350	(4,055)	860,295
General	199,161	17,828	216,989	(12,104)	204,885
Utility Plant in Service	1,734,458	145,310	1,879,768	(16,160)	1,863,608
Community Energy & Efficiency Development Fund	16,141	(2,598)	13,543		13,543
Subtotal	1,750,599	142,712	1,893,311	(16,160)	1,877,151
Construction Work in Progress	57,992	(51,864)	6,128		6,128
Investment in Affiliates					
Generation Vermont Yankee	939	(0)	939		939
Generation Maine Yankee	39	(0)	39		39
Generation Connecticut Yankee	36	0	36		36
Generation Yankee Atomic	52	(0)	52		52
Green Lantern	957	0	957		957
Transmission NE Hydro Trans	209	0	209		209
Transmission NE Hydro Trans Electric	1,149	(0)	1,149		1,149
Transmission VELCO - Common	10,253	0	10,253		10,253
JV Solar / Battery	-	31,632	31,632		31,632
JV Solar	55,140	(1,851)	53,290		53,290
Transmission TRANSCO LLC	490,508	114,657	605,164		605,164
SUBTOTAL	2,367,873	235,286	2,603,159	(16,160)	2,586,999
Special Deposits	3,780	-	3,780		3,780
Unamortized Debt Discount and Expense	4,898	(37)	4,861		4,861
Millstone 3 Energy and Capacity	331	(331)	0		0
17420-Renewable Energy Certificates	4,295	(4,295)	(0)	0	(0)
18225-GORGE REPOWERMENT	208	(208)	0		0
18230-REGULATORY ASSET-ASSET RETIREMENT OBLIGATI	290	(62)	228		228
18235-REG ASSET - VMPD VALUE SHARING POOL	192	(192)	(0)		(0)
18236-REG ASSET - DEPRECIATION STUDY	34	(12)	21		21
18238-REG ASSET - DEERFIELD WIND COSTS	411	(411)	0		0
18250-REG ASSET - RETIRED METER COST	3,080	(3,080)	0		0
182xx-REG ASSET - JV MICROGRID ASSET	0	1,865	1,865		1,865
18611-JV SOLAR ABANDONED SITES	98	(82)	15		15
18612-DEF ASSET-LOW INCOME DISC PAYMENTS	238	(200)	38		38
18613-DEF ASSET-EFFICIENCY FUND PAYMENTS	2,957	(1,667)	1,290		1,290
18605-DEF ASSET-NO RATE CHANGE	0	640	640		640
18652-VTEL SMARTGRID PAYT	2,360	(532)	1,828		1,828
Tax FAS 109	4,657	(1,850)	2,807		2,807
Subtotal	27,828	(10,454)	17,374	0	17,374
Working Capital Allowance:					
Material and Supplies Inventory including	22,842	-	22,842		22,842
Millstone III Nuclear Fuel Inventory (Net	1,935	593	2,528		2,528
Prepayments	5,840	-	5,840		5,840
Lead -Lag Working Capital Allowance	5,259	(3,144)	2,115		2,115
Subtotal Working Capital	35,876	(2,551)	33,325	0	33,325

	10 MONTH AVG BALANCES	ADJUSTMENT COL3-COL1	10 MONTH AVG BALANCES	PSD ADJUSTMENTS	DPS ADJUSTED BALANCES
PSD-JMT-3 REV 2					
Schedule 2					
Page 2 of 2					
DEDUCT:					
ACCUMULATED DEPRECIATION/AMORT.	625,216	78,390	703,606	(181)	703,425
Customer Advances for Construction	286	-	286		286
DEFERRED CREDITS					
Accumulated Deferred Income Taxes and Tax Ref.	348,408	31,173	379,581	(2,247)	377,334
Accumulated Deferred Investment Tax Credits	1,391	(208)	1,183		1,183
25352-Unclaimed Prprty-Cust Refunds	9	0	9		9
25358-Reg Liab-Earnings Sharing	21	-	21		21
25392-Contingency Reserves	3,180	-	3,180		3,180
25393-Health Insurance Reserve	1,297	-	1,297		1,297
25387 Reg Liab-Plant Removal	4,813	(4,813)	-		0
25361-Reg Liab-Neil Vy	350	-	350		350
25377-Vmpd Rate Phase In	130	(130)	-		0
25378-Ciac Reg Liability	1,988	(1,988)	-		0
25382 Reg Liab Cvps/Cis Net Meter Cre	42	(42)	-		0
23000-Asset Retirement Liability	5,676	-	5,676		5,676
23480-Nothorn Water Res- Accounts Payable	67	-	67		67
24206-Misc Cur Workers Comp Major	2,108	-	2,108		2,108
25379 Reg Liab Synergies	2,458	(2,458)	-		0
25402 Reg Liab Production Tax Credit	464	(464)	-		0
25403 Reg Liab Gmp Vt Solar Devel Fee	2,746	(2,746)	-		0
25404 Reg Liab Gmp Vt Solar Partnersh	5,167	(5,167)	-		0
25407 REG Liab Transco Utopus Gain Deferral	0	2,554	2,554		2,554
Deferred Comp	3,639	(236)	3,639		3,639
SERP	3,848	77	3,925		3,925
Accrued Pension Expense	(13,037)	1,832	(11,205)		(11,205)
Acc. Post-Ret. Medical Expense FAS 106	44	(1,974)	(1,930)		(1,930)
Acc. Other Post-Employment Ben. Exp. FAS 112	1,055	(236)	819		819
SUBTOTAL	1,001,364	93,565	1,095,165	(2,427)	1,092,738
TOTAL RATEBASE INVESTMENT	1,430,213	128,716	1,558,692	(13,732)	1,544,960

PSD-JMT-3 REV 2
Schedule 3

RATE PERIOD: January 2019 - September 30, 2019
 COST OF CAPITAL
 TEST PERIOD ENDED September 30, 2017

GREEN MOUNTAIN POWER CORPORATION
 5-Nov-18

Effective Tax Rate = 0.27715

AS FILED BY GMP

\$ in 000s	Invested Capital Per Books	Proforma Adjustments	Invested Capital Proforma	Proportion of Total Percentage	9 month Cost Rate Percentage	Cost of Component Percentage	Cost of Pre Tax % Percentage
Long-Term Debt Bonds	663,737	74,434	738,170	44.35%	3.77%	1.67%	1.67%
Short-Term Debt Bank Loans	55,231	41,325	96,556	5.80%	1.83%	0.11%	0.11%
Total Debt	718,968	115,759	834,726	50.15%	3.55%	1.78%	1.78%
Common Equity	750,065	79,734	829,800	49.85%	6.98%	3.48%	4.81%
Total Capital	1,469,033	195,493	1,664,526			5.26%	6.59%

PSD ADJUSTED

\$ in 000s	Invested Capital Per Books	Proforma Adjustments	Invested Capital Proforma	Proportion of Total Percentage	9 month Cost Rate Percentage	Cost of Component Percentage	Cost of Pre Tax % Percentage
Long-Term Debt Bonds	663,737	74,434	738,170	44.35%	3.77%	1.67%	1.67%
Short-Term Debt Bank Loans	55,231	41,325	96,556	5.80%	1.83%	0.11%	0.11%
Total Debt	718,968	115,759	834,726	50.15%	3.55%	1.78%	1.78%
Common Equity	750,065	79,734	829,800	49.85%	6.98%	3.48%	4.81%
Total Capital	1,469,033	195,493	1,664,526			5.26%	6.59%

GREEN MOUNTAIN POWER CORPORATION
CALCULATION OF INCOME TAX EXPENSE
TEST PERIOD ENDED September 30, 2017

05-Nov-18

\$ in 000s	GMP FILED PRO FORMA (1)	PSD ADJUSTMENTS (2)	DPS ADJUSTED (3)
Total rate base investment	1,558,692	(13,732)	1,544,960
Return % (Total Cost of capital)	5.26%		5.26%
	-----	-----	-----
Return on utility rate base	81,912	(722)	81,190
Add back:			
Federal income tax	8,754	(127)	8,627
State income tax	5,849	(56)	5,793
	-----	-----	-----
Return before taxes	96,515	(905)	95,610
Less interest (Wtd. Cost of Debt X Rate Base)	27,716	(245)	27,471
	-----	-----	-----
Subtotal	68,799	(660)	68,139
Additions & deductions for income tax purposes:			
Non-taxable portion of equity in earnings of VELCO	(199)	0	(199)
Non-taxable portion (100%) of equity in earnings of Vermont Yankee	(53)	0	(53)
Non-taxable portion (70%) of equity in earnings of MY, CY, YA, NEHT and NEHTE	(41)	0	(41)
Non-deductible AFUDC-equity	398	0	398
Non-depreciable ITC basis reduction	89	0	89
Non-deductible meals expense	51	0	51
Domestic production activities deduction	0	0	0
	-----	-----	-----
Total additions & deductions	246	0	246
	-----	-----	-----
Balance	69,045	(660)	68,385
Less state income tax	5,868	(56)	5,812
	-----	-----	-----
Taxable income	63,177	(604)	62,573
Federal Income Tax Calculation:			
Federal income tax before credit at 21%	13,267	(127)	13,140
Investment credit amortization	(3)	0	(3)
Production Tax Credit	(3,055)	0	(3,055)
Return of Recurring Level -Excess Deferred Tax	(1,428)	0	(1,428)
CAFC Perm	(37)	0	(37)
FAS 109 ITC Basis Adjustment	5	0	5
AFUDC Deferred Tax Adjustment	4	0	4
	-----	-----	-----
Federal income tax	8,754	(127)	8,627
	-----	-----	-----
Total Federal Income Taxes	8,754	(127)	8,627
State Income Tax Calculation:			
Taxable income at 8.5%	5,869	(56)	5,813
Vermont income tax rate change adjustment	0	0	0
Vermont Solar ITC	(24)	0	(24)
ITC Basis Adj	2	0	2
AFUDC Deferred Tax Adj	2	0	2
	-----	-----	-----
Total State Income Taxes	5,849	(56)	5,793
	-----	-----	-----
TOTAL STATE AND FEDERAL INCOME TAX	14,603	(183)	14,420

GREEN MOUNTAIN POWER CORPORATION
COST OF SERVICE ANALYSIS
TEST PERIOD ENDED September 30, 2017
\$ in 000s

GREEN MOUNTAIN POWER CORPORATION
05-Nov-18

Adj. No.	Description	Transmission Costs	Purchased Power	Renewable Energy Cert.	Other Revenue	Distr. Plant In Service	Gen. Plant in Service	Accumulated Depreciation	ADIT	Depreciation Expense	Pre-Tax Return	9-Mo. Rate for LTD
1	Adj PSD 1 - Tesla PowerWall 2.0				(392)		(15,229)	(1,306)		(957)		
2	Adj PSD 2 - Heat Pump Water Heaters				(149)		(534)	(21)		(15)		
3	Adj PSD 3 - Distribution Line Blankets					(12,158)		(117)		(110)		
4	Adj PSD 4 - Distribution Lines Large					(4,595)		(114)		(70)		
5	Adj PSD 5 - Transmission Lines					(1,482)		(8)		(8)		
6	Adj PSD 6 - Capital Structure											
7	Adj PSD 7 - Power Supply Cost	(398)										-0.023%
8	Adj PSD 8 - Renewable Energy Certificates			(4,080)								
9	Adj PSD 9 - ADIT Adj. on PSD Adjustments 1-5								(2,434)			
10	Adj PSD 10a - Tesla PowerWall 2.0 Revision 1				392		15,229	1,306		957		
11	Adj PSD 10b - Tesla PowerWall 2.0 Revision 2	464	90		(568)		(11,570)	(668)	(828)	(867)		
12	Adj PSD 11 - Distribution Line Blankets Revision					8,218		623	588	52		
13	Adj PSD 12 - Distribution Lines Large Revision					4,594		114	329	70		
14	Adj PSD 13 - Transmission Lines Revision					1,368		10	98	7		
15	Adj PSD 14 - Capital Structure Revision											0.023%
16	Adj PSD 15 - Power Supply Cost Revision	398										
17	Adj PSD 16 - Renewable Energy Certificate Revision			4,080								
18	Total PSD Cost of Service Adjustments	464	90	-	(717)	(4,055)	(12,104)	(181)	(2,247)	(942)	-	0.000%

GREEN MOUNTAIN POWER CORPORATION
 COST OF SERVICE ANALYSIS
 TEST PERIOD ENDED September 30, 2017
 Adj PSD 10b - Tesla PowerWall 2.0 Revision 2
 \$ in 000s

Line No.	Item	Adjustment Amount	Source
(a)	(b)	(c)	(d)
1	Remove Sales and Lease Revenues	(568)	GMP.DPS3.Q23.15 - COS Adj 19 Other Op Rev 9 month 2019 - Final 09 05 2018.xlsx
2	Remove Power Supply Cost Savings	90	Exh. GMP-JC-3 - Innovative Products in 2019 Cost of Service.xlsx, GMP.DPS3.Q23.45 - Tesla Power Supply Impacts.xlsx
3	Remove Transmission Cost Savings	464	Exh. GMP-JC-3 - Innovative Products in 2019 Cost of Service.xlsx, GMP.DPS3.Q23.45 - Tesla Power Supply Impacts.xlsx
4	Remove Depreciation Expense	(867)	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE TESLA.xlsx
5	Remove 10-Month Average Plant in Service	(11,570)	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE TESLA.xlsx
6	Remove 10-Month Accumulated Depreciation	(668)	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE TESLA.xlsx
7	Remove 10-Month ADIT	(828)	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE TESLA.xlsx

GREEN MOUNTAIN POWER CORPORATION
 COST OF SERVICE ANALYSIS
 TEST PERIOD ENDED September 30, 2017
 Adj PSD 11 - Distribution Line Blankets Revision
 \$ in 000s

Line No.	Item	Adjustment Amount	Source
(a)	(b)	(c)	(d)
Adjustemnts to Rate Base			
1	Original GDS Adjustment - Plant in Service	(12,158)	
2	Revised GDS Adjustment - Plant in Service	(3,941)	[GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE DISTRIBUTION BLANKETS REVISED.xlsx]Plant in Service'!\$L\$35/1000
3	Amount of Revised Adjustment for Plant in Service	8,218	Line 3 - Line 2
4	Original GDS Adjustment - Accumulated Depreciation	(117)	
5	Revised GDS Adjustment - Accumulated Depreciation	506	[GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE DISTRIBUTION BLANKETS REVISED.xlsx]Accumulated Depreciation'!\$L\$35/1000
6	Amount of Adjustment for Accumulated Depreciation	623	Line 5 - Line 4
7	Original GDS Adjustment - Depreciation Expense	(110)	
8	Revised GDS Adjustment - Depreciation Expense	(58)	[GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE DISTRIBUTION BLANKETS REVISED.xlsx]Depreciation Expense'!\$M\$34/1000
9	Amount of Adjustment for Depreciation Expense	52	Line 8 - Line 9
10	PSD ADIT Factor	7.158%	
11	Adjustment for ADIT	588	Line 10 x Line 3

GREEN MOUNTAIN POWER CORPORATION
 COST OF SERVICE ANALYSIS
 TEST PERIOD ENDED September 30, 2017

GREEN MOUNTAIN POWER CORPORATION
 05-Nov-18

DISTRIBUTION LINES LARGE REVISED ADJUSTMENT

Line No.	Project No.	PSD Original Adj.	GMP Revised Adj.	PSD Position	PSD Revised Adj.
1	126847	\$203,176	\$360,574	Agree	\$0
2	141211	\$509,837	\$0	Agree	\$0
3	141961	\$451,965	\$0	Agree	\$0
4	148867	\$321,010	\$0	Agree	\$0
5	149662	\$735,392	\$67,523	Agree	\$0
6	149663	\$1,221,859	\$147,147	Agree	\$0
7	149811	\$74,356	\$78,308	Agree	\$0
8	150420	\$254,859	\$2,267	Agree	\$0
9	153149	\$22,513	\$23,709	Agree	\$0
10	153588	\$13,871	\$0	Disagree	\$13,871
11	153711	\$33,820	\$33,653	Agree	\$0
12	153950	\$306,894	\$0	Agree	\$0
13	155051	\$35,477	\$37,363	Agree	\$0
14	155199	\$244,206	\$257,188	Agree	\$0
15	157361	\$16,149	\$0	Agree	\$0
16	158518	\$94,032	\$93,662	Agree	\$0
17	159358	\$56,045	\$59,024	Agree	\$0
18	159467	\$0	\$273,019	Agree	\$0
19	Total	\$4,595,461	\$1,433,437		\$13,871

Notes: GMP Revised Adjustments from Exhibit GMP-JRF-3

GREEN MOUNTAIN POWER CORPORATION
 COST OF SERVICE ANALYSIS
 TEST PERIOD ENDED September 30, 2017
 Adj PSD 12 - Distribution Lines Large Revision
 \$ in 000s

Line No.	Item	Adjustment Amount	Source
(a)	(b)	(c)	(d)
Adjustemnts to Rate Base			
1	Original GDS Adjustment - Plant in Service	(4,595)	
2	Revised GDS Adjustment - Plant in Service	(1)	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE DIST LINES LARGE.xlsx
3	Amount of Revised Adjustment for Plant in Service	4,594	
4	Original GDS Adjustment - Accumulated Depreciation	(114)	
5	Revised GDS Adjustment - Accumulated Depreciation	0	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE DIST LINES LARGE.xlsx
6	Amount of Adjustment for Accumulated Depreciation	114	
7	Original GDS Adjustment - Depreciation Expense	(70)	
8	Revised GDS Adjustment - Depreciation Expense	(0)	
9	Amount of Adjustment for Depreciation Expense	70	
10	PSD ADIT Factor	7.158%	
11	Adjustment for ADIT	329	Line 10 x Line 3

GREEN MOUNTAIN POWER CORPORATION
 COST OF SERVICE ANALYSIS
 TEST PERIOD ENDED September 30, 2017
 Adj PSD 13 - Transmission Lines Revision
 \$ in 000s

Line No.	Item	Adjustment Amount	Source
(a)	(b)	(c)	(d)
Adjustemnts to Rate Base			
1	Original GDS Adjustment - Plant in Service	(1,482)	
2	Revised GDS Adjustment - Plant in Service	(114)	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE TRANS LINES.xlsx
3	Amount of Revised Adjustment for Plant in Service	1,368	Line 3 - Line 2
4	Original GDS Adjustment - Accumulated Depreciation	(8)	
5	Revised GDS Adjustment - Accumulated Depreciation	2	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE TRANS LINES.xlsx
6	Amount of Adjustment for Accumulated Depreciation	10	Line 5 - Line 4
7	Original GDS Adjustment - Depreciation Expense	(8)	
8	Revised GDS Adjustment - Depreciation Expense	(1)	GMP.DPS3.Q23.5 - 2019 Rate Base 9 6 2018 incl t&d - tesla gmp postion REMOVE TRANS LINES.xlsx
9	Amount of Adjustment for Depreciation Expense	7	Line 8 - Line 9
10	PSD ADIT Factor	7.158%	
11	Adjustment for ADIT	98	Line 10 x Line 3

GREEN MOUNTAIN POWER CORPORATION
 Calculation of Rate Increases
 \$ in 000's

	<u>As Filed</u>
Total Cost of Service to Ultimate Consumers	\$ 484,587
Revenue from Ultimate Consumers	\$ 461,056
Transmission Class:	28,095
All Other Classes:	432,961
	461,056
 Total Cost of Service to Ultimate Consumers	 \$ 484,587
2019 Transmission Class Revenue:	\$28,095
Total Cost of Service for Non-Transmission Class Customers:	456,492
Total Revenue from Non-Transmission Class Customers (2018 Rates)	432,961
	23,531
Revenue Deficiency from Non-Transmission Class Customers:	
Rate Increase for Non-Transmission Class Customers	5.43%

Check:

484,587 Total Cost of Service to Ultimate Consumers

28,095	=	Transmission Class Revenue at 2018 Rates.
0.00%	=	FY 2019 Rate Increase
28,095	=	FY 2019 Transmission Class Revenue

432,961	=	Non-Transmission Class Revenue at 2018 Rates.
5.43%	=	FY 2019 Rate Increase
456,492	=	FY 2019 Non-Transmission Class Revenue

484,587 = Total FY 2019 Revenue

0 = Difference