

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. 18-0974-TF

Tariff filing of Green Mountain Power 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)

**Green Mountain Power’s Responses to the
Third Set of Discovery Requests Served by the Department of Public Service**

Green Mountain Power (“GMP” or “Petitioner”), by and through the undersigned counsel, hereby responds to the third set of discovery requests served by the Department of Public Service (“Department” or “DPS”) on September 19, 2018.

General Objections

The following General Objections of Petitioner GMP 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. Petitioner 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. Petitioner 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. Petitioner 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. Petitioner 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. Petitioner 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. Petitioner 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. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request exceeds the scope of Petitioner's testimony and exhibits.
8. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that the request would require Petitioner to conduct extensive document review, additional studies, analyses, and/or tests as part of its response.
9. Petitioner 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. Petitioner 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. Petitioner objects to each Interrogatory, Request to Produce, and Request for Admission to the extent that it calls for a legal conclusion.

INTERROGATORIES AND REQUESTS TO PRODUCE

Requests Related to Capital Spending

DPS3.Q1. To the extent currently available to GMP, please provide the close-out costs (Plant in Service) for all individual capital projects that were included in GMP's 2018 rate case filing (Case No. 17-3112) as of July 31, 2018.

Objection: GMP reasserts General Objections 1, 6, and 7 as the request is unduly burdensome and outside the scope of GMP's rebuttal testimony. It would require significant effort to prepare updated information reflecting the current closings for all individual projects included in GMP's 2018 rate case through July 31, 2018. GMP's rebuttal testimony does not address or raise arguments related to this issue, and the scope of the request is not proportional to the needs of the case at this time.

DPS3.A1. See objection and see Responses DPS3.Q2 and DPS3.Q3.

Person/s Responsible for Response: Eddie Ryan, Matt Haley
Title of Person/s: Controller; Manager of Fixed Assets and Fleet
Date: September 28, 2018

DPS3.Q2. To the extent currently available to GMP, please provide the close-out costs (Plant in Service) for the transmission, substation, and distribution blankets for GMP's current rate year for each month through July 31, 2018.

DPS3.A2. Please see Attachment GMP.DPS3.Q2.

Person/s Responsible for Response: John Fiske, Matt Haley
Title of Person/s: Leader of Engineering; Manager of Fixed Assets and Fleet
Date: September 28, 2018

DPS3.Q3. To the extent currently available to GMP, please provide the close-out costs (Plant in Service) for each sub-category of the distribution blanket (transformers, meters, etc.) for GMP's current rate year for each month through July 31, 2018.

DPS3.A3. Please see Attachment GMP.DPS3.Q2.

Person/s Responsible for Response: John Fiske, Matt Haley
Title of Person/s: Leader of Engineering; Manager of Fixed Assets and Fleet
Date: September 28, 2018

DPS3.Q4. For each motor-operated air brake (“MOAB”) switch on GMP’s system, please provide the following information:

- a. Year installed;**
- b. Number of operations via the SCADA system (exclude any operations required to exercise the switch).**

Objection: GMP reasserts General Objections 1 and 8. The request calls for GMP to conduct extensive document review and prepare additional analysis, which it has not already conducted, and which would be burdensome to produce. Without waiving this objection, GMP responds as follows:

DPS3.A4.

- a. See Attachment GMP.DPS3.Q4. Installation dates are provided where available after a review of reasonably available documentation.
- b. GMP cannot exclude operations required to exercise the switch as requested; that detail is not kept in these event logs. The Company’s SCADA system database was queried for the five-year period spanning 8/1/2013 to 7/31/2018 and Motor Operated switch operations were identified as set forth in the table in Attachment GMP.DPS3.Q4. A total of 141 Motor Operated switches were identified to have been operated a total of 2,494 times in that five-year period.

The combined company SCADA logs extend back to late 2014, as reflected in the exhibit. Earlier entries are from the legacy CVPS system, for which records are maintained.

Person/s Responsible for Response: John Fiske
Title of Person/s: Leader of Engineering
Date: September 28, 2018

DPS3.Q5. For each switch planned for replacement with a MOAB switch, please state the number of operations in the last five years (exclude any operations required to exercise the switch).

Objection: GMP reasserts General Objections 1 and 8. The request calls for GMP to conduct extensive document review and prepare additional analysis, which it has not already conducted, and which would be burdensome to produce. Without waiving this objection, GMP responds as follows:

DPS3.A5. As part of the proposed capital projects in this case, there are fifteen (15) manually operated switches that we plan to upgrade to MOABs, which are identified in Attachment GMP.DPS3.Q5. These switches were operated a total of 201 times over a five-year period spanning from 8/1/2013 to 7/31/2018. The Company uses an in-house designed and built database program, “Controller Notes,” for tracking daily activities within the control rooms. Entries into the Controller Notes program consist of individual free form text entries for each activity. The Company filtered and scanned the entries over the five-year period in order to identify times when the specified switches were operated, and attempted to exclude any operations required to exercise the switch. See the specific results in the table in Attachment GMP.DPS3.Q5.

Person/s Responsible for Response: John Fiske
Title of Person/s: Leader of Engineering
Date: September 28, 2018

Requests in Response to Rebuttal Testimony of John Fiske

DPS3.Q6. Please refer to page 22, lines 3–18 of Mr. John Fiske’s rebuttal testimony. Please describe in detail how GMP benchmarks its cost-estimating program, if at all.

DPS3.A6. GMP benchmarks its cost estimations at various stages of a project’s life. GMP’s cost estimating is based upon known and measurable quotes gathered each year for direct material purchases, stock materials, and contractor services. For most individual T&D projects this process includes obtaining quotes from multiple vendors. Crew Labor Hour estimates are developed internally based upon the scope of the project. GMP then reviews major project costs on a monthly basis as part of the capital management team’s cost tracking and forecasting, including review at the end of the project for major projects.

Person/s Responsible for Response: John Fiske
Title of Person/s: Leader of Engineering
Date: September 28, 2018

DPS3.Q7. Please refer to page 27 of Mr. John Fiske’s rebuttal testimony. With respect to the table listed below line 5, please provide the following:

- a. The number and total dollar amount of projects over \$250,000 included in each of the years 2016 through 2019;**
- b. A version of the table that excludes Distribution Line projects that exceed \$250,000.**

Objection: GMP reasserts General Objections 1 and 8. The request calls for GMP to conduct additional complex analysis, which it has not already conducted, and which would be burdensome to produce. Without waiving this objection, GMP responds as follows:

DPS3.A7.

- a. In preparing this response GMP discovered that the table provided on page 27 of Mr. Fiske’s rebuttal testimony contains an error in the amounts listed for 2018 and 2019. Specifically, the totals included for the 2018 and 2019 distribution line blankets are too high. GMP incorrectly used the total five-year average of actual historical spending (i.e. GMP’s prior method for determining blanket amounts), rather than the new method which first estimates the distribution line blanket for projects ≤ \$250,000 based on a five-year average and then adds specific individual estimates for those projects over \$250,000 within the rate period. The numbers below reflect the corrected total of all T&D blankets, including distribution lines over \$250,000 as requested in the rate filing.

Fiscal Year	2016	2017	2018	2019
Annual T&D Blanket Totals ¹	\$40,309,611	\$42,804,073	\$37,392,429	\$32,949,722

The 2018 and 2019 individual projects greater than \$250,000 that will close to plant in each fiscal year were provided in John Fiske’s prefiled testimony Exhibit GMP-JRF-2. There were 19 projects identified in FY2018 totaling \$12,756,838. There were 17 projects identified in FY2019 totaling \$8,154,610.

GMP has not conducted an analysis of the historical rate periods in 2016 or 2017 to determine the number or total dollar amount for spending on prior distribution line blanket projects over \$250,000, consistent with the new

¹ The Annual Blanket Totals above include Distribution Line projects greater than \$250,000.

methodology adopted in 2018. It would take significant additional time to identify individual blanket projects above \$250,000 that closed to plant in 2016 and 2017, and then to adjust the annual spending amounts in the blankets each year (which are based on historical five-year averages) to properly remove the closed-to-plant values for these projects. We provided the analysis in the table above (adding the projects above \$250,000 back into the total blanket numbers for 2018 and 2019) to provide the best available comparison with available historical data.

- b. The chart below excludes the Distribution Line projects that exceed \$250,000 in fiscal year 2018 and 2019. See response to (a) above for explanation as to why 2016 and 2017 are not included.

Fiscal Year	2018	2019
Annual T&D Blanket Totals Excluding Distribution Lines >\$250,000	\$24,635,588	\$24,795,115

Person/s Responsible for Response: John Fiske
Title of Person/s: Leader of Engineering
Date: September 28, 2018

Requests in Response to Rebuttal Testimony of Douglas Smith

DPS3.Q8. Please refer to the chart titled “RNS Price History and Forecast – June 2000 Forward (based on RNS year June – May)” on page 23 of Mr. Douglas Smith’s rebuttal testimony. Please provide copies, in native file format, of any workpapers, data, or files that Mr. Smith relied on to develop this chart.

DPS3.A8. Please see Attachments GMP.DPS3.Q8.1 - 2018 Effective RNS Rate (page 24) and GMP.DPS3.Q8.2 - Historical RNS Rates (page 23). These are ISO-NE presentations showing current year and historical RNS prices through 2018 and 2013, respectively. Attachment GMP.DPS3.Q8.3 - RNS Forecast (page 5) is an August 2018 presentation prepared by ISO-NE showing its current forecast for the next four years. Attachment GMP.DPS3.Q8.4 - Workpaper is the file containing the chart in native format.

Person/s Responsible for Response: Andrew Quint
Title of Person/s: Power and Markets Analyst
Date: September 28, 2018

DPS3.Q9. Please refer to page 25, line 21 through page 26, line 3 of Mr. Douglas Smith's rebuttal testimony. Please provide copies, in native file format, of the following:

- a. Copies of any workpapers, data, or files that Mr. Quint relied on to conduct and develop the sensitivity analysis referenced by Mr. Smith on page 26, line 1 of Mr. Smith's rebuttal testimony.**
- b. Copies of any workpapers, data, or files that Mr. Smith relied on to develop the table presented below line 3 on page 26 of his rebuttal testimony.**

DPS3.A9.

- a. Please see Attachments GMP.DPS3.Q9.1 through GMP.DPS3.Q9.14 that provide details of the various scenarios considered for the table presented below line 3 on page 26 of Mr. Smith's rebuttal testimony. These scenarios were specifically prepared for the Essex Solar Storage petition but are also representative of the Milton Project. The sizing of the solar array is slightly different in these two petitions but the battery storage system has the same specifications and we expect that it will be operated in the same manner.
- b. See Attachment GMP.DPS3.Q9.15 - Sensitivities which combines the results of Attachments GMP.DPS3.Q9.1 through GMP.DPS3.Q9.14 described above.

Person/s Responsible for Response: Andrew Quint
Title of Person/s: Power and Markets Analyst
Date: September 28, 2018

Requests in Response to Rebuttal Testimony of Joshua Castonguay

DPS3.Q10. Please refer to Exhibit JC-3 (Rev.). Please provide copies, in native file format, of any workpapers, data, or files that Mr. Castonguay relied on to develop this exhibit that have not previously been provided to the Department. Please also provide the following information:

- a. Confirm whether income taxes have been included in Return on Rate Base. If not, please provide by product type;**
- b. Define the “O&M Due to Innovative Pilot Program” of \$189,821, describe how it was calculated, provide supporting documentation and invoices, and allocate it by product type;**
- c. Confirm that “A&G Absorbed that would otherwise flow to O&M” is capitalized O&M. If so, please state whether it is included in the Return on Rate Base calculation and allocate by product type. If not please define, describe how it was calculated and allocate by product type;**
- d. Provide bad debt or collection expense by product type.**

Objection: GMP reasserts General Objections 1 and 3. The request to provide all workpapers, data, or files relied on for the preparation of Exhibit GMP-JC-3 in their native format is overbroad and unduly burdensome and not proportional to the needs of the case. GMP has previously provided the underlying native Excel workpaper supporting the exhibit, which includes summaries of information used to prepare this analysis. Additional data related to the analysis was also provided elsewhere to the Department, including for example, analysis of power supply benefits previously provided in power supply work papers. Without waiving this objection, GMP responds as follows:

DPS3.A10. With respect to the information relied on to develop Exhibit GMP-JC-3 (Rev.), GMP previously provided the underlying native Excel document developed to support this exhibit with rebuttal testimony on September 12, 2018 and via e-mail to the Department on September 17, 2018. For convenience, that document is included here again as Attachment GMP.DPS3.Q10.

- a. Confirmed that income taxes have been included.
- b. The value of \$189,821 for O&M reflects the budgeted expense for FY2018, which was based on the actual cost for FY2017, increased by approximately \$29,000 for the new VSECU-related heat pumps. Other than those units, the \$189,821 was not budgeted on a per program basis. We did not review individual invoices but relied on a summary of expense in our financial

system, as reflected on the “outside services” tab in Attachment GMP.DPS3.Q10.

- c. Confirmed. This amount is included in the Return on Rate Base calculation. The table below shows the allocation by product type.

A&G Capitalized

EVGo	\$0
Heat Pump	\$13,911
Heat Pump Water Heater	\$18,806
Tesla	\$408,859
	\$441,576

- d. Bad debt was not included in Exhibit GMP-JC-3 (Rev.). No bad debt expense was incurred in the test period and therefore, no bad debt expense is included in the rate period analysis in that exhibit.

Person/s Responsible for Response: Josh Castonguay, Rob Bingel
Title of Person/s: VP & Chief Innovation Executive and Power Supply; Manager,
Forecasting & Analytics
Date: September 28, 2018

DPS3.Q11. Please refer to “Table 1 – 2018 ISO Peak Performance” on page 11 of Mr. Joshua Castonguay’s rebuttal testimony. Please provide copies, in native file format, of any workpapers, data, or files that Mr. Castonguay relied on to prepare this table. With respect to this table, please also provide the following information:

- a. Please state the date of the current ISO peak for 2018;**
- b. Provide documentation or other supporting data for the Total MW Dispatched and Powerwall MW dispatched;**
- c. Describe in detail the methodology used to estimate Total FCM Value and Powerwall Only FCM Value, as well as any supporting data**

DPS3.A11. Please see Attachments GMP.DPS3.Q11.1 through GMP.DPS3.Q11.8 for data relied on by Mr. Castonguay to prepare the table included on Page 11 of his rebuttal testimony.

- a. The date of the current ISO peak for 2018 is August 29th.
- b. Please see Attachments GMP.DPS3.Q11.b1 - Aug. 29th Powerwall_Panton Total Output and GMP.DPS3.Q11.b2 - Powerwall Only Dispatch – Aug. 29th.
- c. Attachment GMP.DPS3.Q11.c – 2018 Peak Value Calc provides the calculation used to determine the FCM value for 2018 peak. The difference between total value and Powerwall-only value is a function of the total MWs that were dispatched from each. The underlying calculation does not change.

Person/s Responsible for Response: Josh Castonguay, Andrew Quint, Chuck Watts
Title of Person/s: VP & Chief Innovation Executive and Power Supply; Power and Markets Analyst; Power Supply Analyst
Date: September 28, 2018

DPS3.Q12. Please refer to page 12, lines 3–5 of Mr. Joshua Castonguay’s rebuttal testimony. Please provide copies, in native file format, of any workpapers, data, or files that Mr. Castonguay relied on to prepare to develop the \$45,000 value (RNS reduction) listed on line 4 of page 12.

DPS3.A12. Please see Attachment GMP.DPS3.Q12.

Person/s Responsible for Response: Josh Castonguay, Andrew Quint, Chuck Watts
Title of Person/s: VP & Chief Innovation Executive and Power Supply; Power and Markets Analyst; Power Supply Analyst
Date: September 28, 2018

DPS3.Q13. Please refer to page 16, line 12 through page 18, line 2, where Mr. Castonguay discusses the size of the Powerwall program. Please provide the following information:

- a. Please provide copies of any contemporaneous documentation analysis regarding the decision to acquire and deploy 2000 units that has not previously been provided to the Department. If such documentation has previously been provided, please identify the documentation;**
- b. Please state whether customers are being served on a first come first served basis or are being screened to ensure there is a representative sample of customers;**
- c. Please describe in detail the customer data that GMP maintains to support the analysis of Powerwall deployment;**
- d. Please describe how GMP will determine whether the Powerwall will create any stability or reliability issues.**

Objection: GMP reasserts General Objection 5 as the phrase “contemporaneous documentation analysis” is not defined and is therefore vague and ambiguous. GMP interprets this term to refer to documentation that was provided to support the decision to include the program in 2019 rates. The phrase “deployment” is also undefined and could refer to either the installation of the unit, or GMP’s deployment of the Powerwall during peak events. Without waiving the objection GMP responds as follows.

DPS3.A13.

- a. For documentation produced contemporaneously with the decision to include the program in this rate case, please see the project capital folder provided on April 13, 2018 for the Tesla Powerwall program. There is no additional contemporaneous documentation analysis that has not already been provided to the DPS regarding the deployment of 2,000 units and their value for all customers.
- b. Customers are being served on a first come, first served basis, although GMP conducts screening for a few basic requirements for participation in the Powerwall pilot before a customer is added to the queue. First, the customer must be a Rate 1 or a Rate 6 customer. Second, the customer must be in “good standing” with GMP, meaning they must not have any past due bills. Finally, the customer must have an existing smart meter or be willing to have a smart meter installed during the Powerwall installation process. If all of these criteria are satisfied, then the customer is passed over to Tesla in the order that they have contacted GMP. As anticipated, and as shown on the deployment map provided in Attachment GMP.DPS3.Q13.b, we have

received interest from customers in all parts of our territory, providing for the geographic diversity that we expected. In addition, through a recent VLITE grant, GMP is able to offer 100 Powerwalls to eligible low-income customers at no charge. These 100 Powerwalls are part of the overall 2,000 that will be deployed.

- c. In conjunction with Tesla, GMP maintains detailed records of each customer that either participates in the pilot or is in the process to become fully enrolled. On a weekly basis, Tesla provides GMP with a master list of customers with completed installations, as well as those still in the sales process. This information includes the following: (1) customer name; (2) town in which they are located; (3) the latest step of the process completed with an associated date (e.g., contract signed date, installation scheduled date etc.); and (4) the number of Powerwall units that are planned to be installed at the customer site.

GMP tracks each installation in our customer care and billing system (“CC&B”), our distributed generation (“DG”) database and in the Gridlogic software platform. Detailed information about each customer is tracked in our CC&B system, while all of the operational/dispatch details are tracked in the Gridlogic software platform. See also answer to subpart (d) below.

- d. GMP expects, and has seen through operational evidence, that the Powerwall units improve stability and reliability of the system and therefore GMP clearly does not expect any stability or reliability issues will be created by the installation of the Powerwall units. GMP has developed automated reporting from our AMI system, which provides us a notification when voltages at an AMI meter location exceed pre-set tolerances based on acceptable ANSI voltage ranges. In addition, the Gridlogic software that operates the Powerwall batteries provides us with voltage information for the home location of the battery, as well as real and reactive power values. In the event that a battery were to cause voltage tolerance issues, it would likely be picked up by one of these methods. However, it is important to note that the Powerwall system is internally designed to manage voltage, unlike historical traditional inverter solutions. More specifically, the Powerwall systems can produce or consume reactive power (VAR’s) in order to manage voltage at its specific location. As a result, no issues are expected to be created by the installation of the Powerwall units.

Person/s Responsible for Response: Josh Castonguay, Craig Ferreira
Title of Person/s: VP & Chief Innovation Executive and Power Supply; Innovation
Champion
Date: September 28, 2018

DPS3.Q14. Please refer to page 19, lines 4–14 of Mr. Joshua Castonguay’s rebuttal testimony. With respect to GMP’s heat pump hot water heaters (“HPWH”), please provide the following information:

- a. The total number of HPWH currently installed by GMP;**
- b. The total number of HPWH that can currently be controlled by GMP;**
- c. The number of times that GMP has actually curtailed (or otherwise controlled) the water heaters to manage load, shave peaks, etc.;**
- d. If available, please provide details on fuel type (gas, electric, etc.) of hot water heaters replaced by HPWH.**

DPS3.A14.

- a. GMP has installed a total of 438 HPWHs as part of GMP’s HPWH pilot program.
- b. & c. As noted in rebuttal testimony, GMP has just completed work with a manufacturer, Rheem, to allow direct control of HPWHs. This is new technology that we expect to deploy beginning in 2018 and in the 2019 rate period, after the prior control system (GE Geospring) was discontinued. GMP is just now deploying the newly-available Rheem system.
- d. GMP is now tracking the type of water heaters being replaced by HPWHs that are installed as a result of the HPWH pilot but does not have historical data on installed units to produce in response to this inquiry.

Person/s Responsible for Response: Josh Castonguay, Craig Ferreira
Title of Person/s: VP & Chief Innovation Executive and Power Supply; Innovation
Champion
Date: September 28, 2018

DPS3.Q15. Please refer to page 22, lines 12–16 of Mr. Joshua Castonguay’s rebuttal testimony, where Mr. Castonguay states that GMP is “currently partnering with a third party and C&I customer to develop a pilot that will allow testing of a commercial scale ice energy storage system.” Please then refer to page 28, lines 18–19 where Mr. Castonguay testifies that “[t]hese estimates do not include benefits with the three Ice Energy storage systems located in Rutland.” With respect to these assertions, please respond to the following:

- a. Please state whether GMP has already commenced an Ice Storage pilot.**
- b. If your answer to subpart a above is affirmative, please state whether GMP has provided notice to the Department and Commission for this pilot project;**
- c. If your answer to subpart a above is affirmative, please state the total number of Ice Storage systems that GMP has already installed;**
- d. If your answer to subpart a above is no, then please describe in detail who owns and operates the “three Ice Energy storage systems located in Rutland.”**
- e. Please state whether any costs associated with Ice Energy storage systems are included in GMP’s proposed cost-of-service. If yes, please identify or indicate where those costs are included in GMP’s proposed cost-of-service.**

DPS3.A15.

- a. No. For clarity, the storage projects mentioned were completed years ago in 2014, before the current regulation plan. These are not new facilities or pilots proposed as part of the 2019 case.
- b. Not applicable. GMP is in the process of developing the C&I program mentioned and has had informal conversations with some Department staff regarding the scope of that program for industrial and commercial customers, but has not completed its filing materials that will provide notice of the pilot under the regulation plan.
- c. Not applicable. Again, for clarity, the three Rutland projects mentioned in the cited testimony were completed many years ago but provide context for the type of program GMP is presently developing.
- d. GMP owns and operates the controls of the three ice energy storage systems in Rutland.

- e. No costs are proposed to be added in the rate period. The Rutland ice storage programs mentioned in the cited testimony closed in 2014. In addition, no costs associated with the potential future pilot are included in the 2019 filing.

Person/s Responsible for Response: Josh Castonguay
Title of Person/s: VP & Chief Innovation Executive and Power Supply
Date: September 28, 2018

DPS3.Q16. Please refer to Mr. Castonguay’s response to prior discovery request DPS1.A127 for the following requests:

- a. Please provide copies of any invoices from Tesla that GMP has received since June 15, 2018 (and clearly indicate the date on which the invoice was received);**
- b. Please provide details on any additional payments that GMP has made to Tesla in response to invoices for the Tesla Powerwall project;**
- c. Please also state whether GMP continues to make payments to Tesla prior to delivery and installations of the Powerwalls. If so, please explain why payment is made prior to delivery and installation.**

DPS3.A16.

- a. GMP has received three additional invoices since June 15, 2018. See:
 - Attachment GMP.DPS3.Q16.a1 for units installed in the month of June (received on 7/30/18);
 - Attachment GMP.DPS3.Q16.a2 for units install in the month of July (received on 8/6/18); and
 - Attachment GMP.DPS3.Q16.a3 for units installed in the month of August (received on 9/11/18.)
- b. GMP is current on all invoices submitted to GMP by Tesla.
- c. GMP pre-paid one invoice at the beginning of the program but did not pre-pay any invoices after that and does not “continue to” prepay. GMP makes payments to Tesla for Powerwalls that are already installed. Tesla invoices GMP on a monthly basis for the previous month’s installed units.

Person/s Responsible for Response: Josh Castonguay, Craig Ferreira
Title of Person/s: VP & Chief Innovation Executive and Power Supply; Innovation Champion
Date: September 28, 2018

Requests in Response to Rebuttal Testimony of Brian Otley

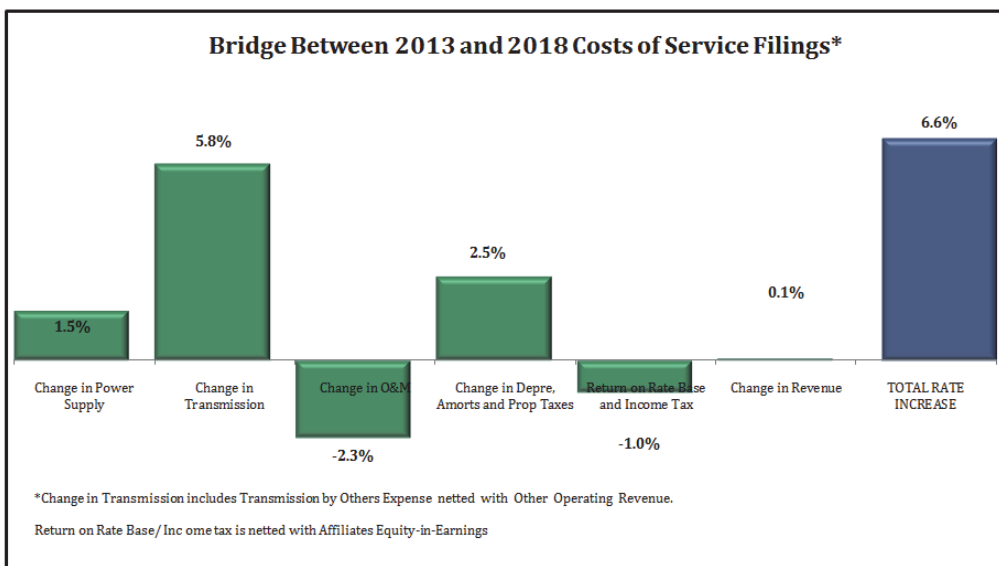
DPS3.Q17. Please refer to page 1, line 15 of Mr. Brian Otley’s rebuttal testimony. Mr. Otley testifies that “However, I factually disagree with the way Mr. Winn characterizes GMP’s capital spending as a primary rate driver because it simply is not what is causing the vast majority of rate pressure.” With respect to this statement, please provide the following information:

- a. Please describe in detail what Mr. Otley believes is the primary cause (or causes) of rate pressure and provide any analysis conducted or reviewed by Mr. Otley in support of that conclusion;**
- b. Please state whether Mr. Otley agrees that growth in rate base was the primary cause of rate pressure from 2013 through 2018 as presented in Mr. Winn’s testimony. If not, please indicate what Mr. Otley believes is the primary cause and provide all analysis supporting his conclusion.**

DPS3.A17.

- a. The table below contains a bridge between the final 2013 and 2018 costs of service filings, which is a rates-to-rates comparison, rather than a rates-to-test year comparison. The format, which is consistent with the PUC workshop held for the 2019 rate case, shows that a direct transition between 2013 and 2018 would have resulted in a rate change of approximately 6.6%. The table shows that the primary driver of the increase is, by far, transmission costs, meaning expenses paid directly to third party transmission providers.

Mr. Winn’s analysis, with which GMP strongly disagrees, included equity in earnings associated with GMP’s investment in VELCO/Transco as an offset to transmission costs, without crediting the benefit these investments provide directly to customers. As noted in Attachment GMP.DPS3.Q26, the additional \$157M 13-month average investment in Velco/Transco from GMP’s actual 2013 investment balance to the 13-month average included in our calendar year 2018 filing results in a *lower* cost of service of \$17.4M. Given that the higher earnings flow directly to customers and only occur because of GMP’s investment in VELCO/Transco, the benefits and costs should be combined in a single category. Historically for rate-making purposes, GMP has always considered the return on the investment in Velco/Transco and the equity in earnings received from this investment as being related. Mr. Winn’s presentation does not credit this fact and therefore skews the presentation of rate drivers in GMP’s opinion.



b. Please see the response in (a) above.

Person/s Responsible for Response: Brian Otley, Eddie Ryan, Rob Bingel
 Title of Person/s: Senior VP and Chief Operations Officer; Controller; Manager, Forecasting & Analytics
 Date: September 28, 2018

DPS3.Q18. Please refer to page 3, lines 11–12 of Mr. Brian Otley’s rebuttal testimony. Mr. Otley testifies that “GMP’s overall levels of capital spending in 2018 and 2019 reflect a meaningful decrease from previous years.” Please clarify whether this assertion factors GMP’s investments in subsidiaries.

DPS3.A18. No, it does not factor in GMP’s investment in subsidiaries, because GMP’s investments in affiliates lowers overall rates, not the opposite. By “overall levels of capital spending,” Mr. Otley is referring to internal capital spending or those items whose balances are categorized as “Utility Plant in Service,” property, plant, and equipment.

Investments in Affiliates present opportunities for GMP to lower the cost of service for its customers, and a complete analysis of this component of ratebase must include benefits as well as costs. GMP’s investments in Transco generates higher equity in earnings, which lowers the overall cost of service for customers. In particular, the investment in Transco yields a return of 11.03% over the 9-month rate period in 2019. This is a substantial benefit compared to the filed pre-tax weighted average cost of capital of 6.62%, which is incurred to generate the 11.03% return. Additionally, the JV Solar/Battery investment has led to benefits of \$12 million being passed along to customers as a reduction to the cost of service in 2019.

Person/s Responsible for Response: Brian Otley, Eddie Ryan
Title of Person/s: Senior VP and Chief Operations Officer; Controller
Date: September 28, 2018

DPS3.Q19. Please refer to page 4, lines 1–2 of Mr. Brian Otley’s rebuttal testimony. Mr. Otley testifies that “[a]s a result, I do not believe Mr. Winn’s presentation of historical information regarding the level of GMP’s capital investment applies in our current environment.” With respect to this assertion, please admit or deny the following:

- a. GMP’s revised Cost of Service shows rate base increasing from \$1.43 billion in the test period to \$1.56 billion in the 2019 rate period.**
- b. In its November 1, 2017 presentation to Standard & Poor’s, GMP forecasted capital spending and investments in subsidiaries of \$534 million from 2018 through 2021.**

Objection: GMP reasserts General Objections 6 & 7. The question is argumentative and beyond the scope of Mr. Otley’s rebuttal testimony in that it seeks admissions of fact unrelated to the cited testimony statements, attempting to take out of context the opinion asserted by Mr. Otley. Without waiver of this objection, GMP states as follows:

DPS3.A19.

- a. Admitted that total rate base for the revised COS 2019 rate period is approximately \$130 million higher than the test period. It should be noted the increase of \$130 million represents the change in net ratebase assets offset by the change in ratebase liabilities, and not just the change in GMP’s capital related expenditures as discussed in the testimony from Mr. Winn. As indicated in Exhibit GMP-ER-1 (rev.), net GMP capital related expenditures are responsible only for approximately \$15 million of this increase. The question tying total ratebase to Mr. Otley’s cited testimony takes out of context the point Mr. Otley presented regarding GMP’s capital spending on property, plant, and equipment.

- b. Admitted that capital spending *and* investments were forecasted at this level at the time of this S&P report in 2017. This is not a comparison to Utility Plant in Service and therefore takes out of context Mr. Otley's statement in the cited testimony. Included in this amount are investments in VELCO/Transco and the JV Solar/Battery, the benefits of which are discussed above and produce significant cost savings for customers, as noted above in Response DPS3.Q18. By contrast, Net Utility Plant (property, plant, and equipment) was forecast to increase by only 3.2% per year. Furthermore, please note that the S&P forecast represents an estimate at a moment in time and GMP has, as set forth in the Multi-Year Regulation Plan proceeding, proposed to lower the amount of Utility Plant in Service closed to plant to approximately \$85 million per year.

Person/s Responsible for Response: Brian Otley, Eddie Ryan
Title of Person/s: Senior VP and Chief Operations Officer; Controller
Date: September 28, 2018

DPS3.Q20. Please refer to page 4, lines 8–17 of Mr. Brian Otley’s rebuttal testimony, where Mr. Otley discusses GMP’s 2019 long term incentive plan. With respect to this portion of Mr. Otley’s testimony:

- a. Please state whether a copy of the 2019 long term incentive plan referenced and discussed by Mr. Otley in this portion of his testimony was previously produced GMP in response to request DPS1.Q20. If so, please identify the document that includes to 2019 long-term incentive plan discussed by Mr. Otley. If not, please provide a copy of the 2019 plan;**
- b. Please identify all participants to the 2019 plan;**
- c. Please refer to the document titled “Exhibit H,” that was previously produced by GMP as Attachment GMP.DPS1.Q20.c and admit or deny that “Investments Driving Customer Value” target amounts are:**
 - i. \$1.73 billion for the 2017 Cycle (2015-2017);**
 - ii. \$1.965 billion in the 2018 Cycle (2016-2018);**
 - iii. \$2.005 billion in the 2019 Cycle (2017-2019);**
 - iv. \$2.086 billion in the 2020 Cycle (2018-2020).**

DPS3.A20.

- a. Mr. Otley’s rebuttal testimony mistakenly referred to the 2019 long term incentive compensation plan cycle, when it should have referred to the 2020 long term incentive compensation plan cycle which was recently enacted. GMP recently revised its 2020 cycle goals to remove capital investments and institute new goals relating to overall financial strength and minimizing rate impacts for customers. Please see Attachment GMP.DPS3.Q20 for the newly revised 2020 cycle goals.
- b. The current employees who are participants to the 2019 plan and the 2020 plan are the same as those listed in the 2018 plan as previously produced by GMP in discovery as Attachment GMP.DPS1.Q18.b-e 2018.

- c. Admitted that these target amounts are all accurate except, as stated above, the 2020 Cycle no longer contains this goal. The “Investments Driving Customer Value” goals in the 2017 through 2019 cycles include not only capital investments but also investments in affiliates, like VT Transco. Please see Response DPS3.Q18 above.

Person/s Responsible for Response: Brian Otley, Mari McClure
Title of Person/s: Senior VP and Chief Operations Officer; VP, Chief Talent Officer, System & Support Operations
Date: September 28, 2018

DPS3.Q21. Please refer to page 5, line 1 through page 7, line 15 of Mr. Brian Otley’s rebuttal testimony, where he discusses GMP’s innovative investments. With respect to this portion of Mr. Otley’s testimony, please respond to the following requests:

- a. Please provide any written manuals or other documents that detail the “conservative process” referenced by Mr. Otley on page 5, line 15. If no such documentation exists, please describe in detail GMP’s “conservative process.”**
- b. Please also provide contemporaneous documentation of the process (i.e. what projects were considered and accepted or rejected) that resulted in the amount of innovative project capital spending to be included in the 2018 stub period and the 2019 rate period.**

DPS3.A21.

- a. As previously noted, GMP does not have any manuals responsive to this question. Rather than describing this as a “process,” it may have been more accurate to describe it as a “conservative approach” to setting the boundaries for our innovative investments. This approach can be summarized as follows.

All of our innovative investments are a result of our innovation pilot program. Within this program, GMP sets the scope of the pilot with regard to the number of pilot participants, the duration of the pilot, and the extent of the capital investment to be made within the pilot, and submits that for review by the DPS and Public Utility Commission (“Commission”). In setting the scope of the pilot we work to balance data and learnings to be gained with the cost of the pilot and the benefits to both participating and non-participating customers in this transformed energy environment. It is setting the scope of the pilot based on balancing of data and experience and cost that I was referring to when I described using a “conservative process.”

- b. The amount of innovative project capital spending was based on continuing the existing innovative pilots through the rate period. Please see the supporting capital folders for innovative pilots included in the initial filing in this proceeding, which we are requesting to include in rates during the 2019 rate period. Please also see prior discovery Response DPS1.Q42 for documentation on capital projects that were considered for inclusion in the 2019 rate case, including new initiative projects.

Person/s Responsible for Response: Brian Otley
Title of Person/s: Senior VP and Chief Operations Officer
Date: September 28, 2018

DPS3.Q22. Please refer again to page 5, line 1 through page 7, line 15 of Mr. Brian Otley’s rebuttal testimony, where he discusses GMP’s innovative investments for the following requests:

- a. Please indicate whether GMP will include these products in rate base during the 18 month trial period or after a tariff has been filed;
- b. Please state whether GMP will commit that all these products will be controllable by GMP in order to operate for the benefit of all rate payers;
- c. Please state whether GMP will ensure that non-participating rate payers are not charged for collection, marketing or maintenance expenses associated with these products;
- d. Please state whether GMP will ensure that quantifiable benefits exceed the costs to non-participating customers;
- e. Please state whether GMP will seek ensure that it will takes the necessary steps to ensure that its status as a regulated monopoly not be used as a competitive advantage.

Objection: GMP reasserts General Objections 3, 5, 6, & 7. The question is beyond the scope of rebuttal testimony; Mr. Otley’s testimony responds to a narrow Commission question regarding how the amount of spending on innovation projects is developed. The request is also vague and unclear in that it does not define the term “these products”—that phrase could refer to current innovative pilots, or future pilots, or both. Given the scope of this proceeding and the proper scope of discovery in it, we interpret the question to refer to only current pilots. To the extent the question relates to the current rate period, the request is also duplicative and unduly burdensome in light of prior discovery requests concerning the specific details of each program proposed to be included in rates. Without waiving the objection GMP responds as follows.

DPS3.A22. The question is unclear. To the extent the question is referring to current pilots, and how GMP proposes to treat those projects in the 2019 rate period that is the subject of this proceeding, the GMP capital folders document the projects that are requested to be included in rates. Some of these pilots are in the 18-month trial period, and some are at the end of the trial period. GMP’s prior testimony and exhibits address each of the subparts of this question, including the controllability of the programs, the overall benefits to non-participating customers, the availability of opportunities to partner with third parties, and why pursuing these programs is so important for controlling costs for our customers. Please see, among other responses, Response DPS1.Q124 through DPS1.Q133, Response DPS2.Q50 through DPS2.Q66, as well as the prefiled direct and rebuttal testimony of Mr. Castonguay.

To the extent that the question is referring to potential future pilot programs not at issue in this case, GMP will continue to adhere to the standards of its Innovative Pilot Program, as approved in its current and any future regulation plan, and strongly believes this program is beneficial in this rapidly-changing energy landscape.

Person/s Responsible for Response: Josh Castonguay, Brian Otley
Title of Person/s: VP & Chief Innovation Executive and Power Supply; Senior VP and Chief Operations Officer
Date: September 28, 2018

Requests in Response to Rebuttal Testimony of Edmund Ryan

DPS3.Q23. Please provide copies, in native file format, of all source files (linked or otherwise) that Mr. Ryan used to prepare the revised Exhibit GMP-ER-1(Rev.).

DPS3.A23. The working cost of service file and all source files used to prepare Exhibit GMP-ER-1(Rev.) are provided in Attachments GMP.DPS3.Q23.1 through GMP.DPS3.Q23.46.

Person/s Responsible for Response: Eddie Ryan, Karen Young
Title of Person/s: Controller; Budget/Forecasting Supervisor
Date: September 28, 2018

DPS3.Q24. Please refer to page 7, lines 4–21 of Mr. Edmund Ryan’s rebuttal testimony, where Mr. Ryan discusses corrections to the Department’s proposed rate period cost-of-service for the following requests:

- a. With respect to the bulleted paragraph on lines 7–8, please provide the calculations, in native file format, that GMP used to correct the Department’s adjustments to Plan in Service that reflect the ten month average and plant retirements;**
- b. Please provide the calculations or Excel spreadsheet, in native file format, that GMP used to calculate the cost-of-service corrections (based on the Department’s recommendations) that would result in a revenue deficiency of \$22,895,280 and a rate increase of 4.97;**
- c. With respect to your response to subpart b above, please identify or indicate where GMP made adjustments to reflect cost-of-service corrections that would result in a revenue deficiency of \$22,895,280 and a rate increase of 4.97.**

DPS3.A24.

- a. Please see Attachment GMP.DPS3.Q24.a. The new 10-month average Plant in Service amount can be found on the tab labeled “Plant in Service,” along with a comparison to the original filing. The new 10-month average Accumulated Depreciation amount can be found on the tab labeled “Accumulated Depreciation,” and the new depreciation expense is on the “Depreciation Expense” tab. Information for these worksheets flows from the detailed Input worksheet included in the file.
- b. Please see Attachment GMP.DPS3.Q24.b.
- c. Please see Attachment GMP.DPS3.Q24.b.

Person/s Responsible for Response: Eddie Ryan, Karen Young
Title of Person/s: Controller; Budget/Forecasting Supervisor
Date: September 28, 2018

DPS3.Q25. Please refer to page 7, lines 13–16, where Mr. Ryan testifies that the Department’s discovery responses identified that “The operational savings associated with the Powerwall program net of any costs associated with these benefits should have been removed from the cost of service when the DPS recommended removing the Powerwall program from the cost of service (responses to Q.GMP.1-78 and 1-79, see Exhibit GMP-ER-19).” With respect to this portion of Mr. Ryan’s testimony:

- a. Please describe in detail (if not previously discussed in your prior response) the specific adjustments that GMP believes should be made regarding the benefits of Powerwall program;**
- b. State whether it is GMP’s contention that all benefits from the Powerwall program are not estimates, but rather are “measurable and documented,” which is the language that the Department used in the discovery response referenced by Mr. Ryan in his testimony (response to Q.GMP.1-78(d)).**

DPS3.A25.

- a. See Attachment GMP.DPS3.Q25.a (worksheet “COS RB Summary” column N) for native file showing how GMP’s April cost of service filing was adjusted to remove all impacts of the Tesla Powerwalls, along with the detail showing how the Power Supply Savings was calculated (worksheet “Tesla Power Supply Savings.”)

The table below summarizes the changes GMP made to remove all impacts associated with the Tesla Powerwalls from the 2019 cost of service.

Green Mountain Power			
Rebuttal Review	Base Rate Adjustment	Revenue Deficiency	Revenue Requirement
Revenue from Ultimate Consumers			\$ 461,056
April 14 Filing - Base Rates / Revenue Requirement	5.45%	\$ 25,112	\$ 486,169
Impacts of Removing TESLA from 2019 Rate Filing			
\$000s	COS Rate Impact	COS \$ Impact	Revenue Requirement
Removal of Power Supply Benefits	0.15%	\$ 683	\$ 486,852
Removal of Depreciation Expense	-0.22%	\$ (997)	\$ 485,896
Removal of Pre-Tax Return	-0.20%	\$ (917)	\$ 485,007
Removal of Lease Revenue	0.09%	\$ 392	\$ 485,399
Ancillary Adjustments	0.00%	\$ (9)	\$ 485,391
Total Adjustments to Remove TESLA Impacts	-0.18%	\$ (848)	

b. Yes, the Powerwall benefits are known and measurable.

Person/s Responsible for Response: Eddie Ryan, Karen Young, Josh Castonguay
Title of Person/s: Controller; Budget/Forecasting Supervisor; VP & Chief Innovation
Executive and Power Supply
Date: September 28, 2018

DPS3.Q26. Please refer to page 13, line 1 through page 14, line 2 of Mr. Ryan’s rebuttal testimony. To allow for the Department to calculate the impact of transmission costs on GMP’s rates in the “appropriate rate drivers grouping[s]” suggested by Mr. Ryan, please provide the following information for 2013 (from GMP’s 2014 Base Rate Filing Attachment B, Schedule 1: Cost of Service) and 2018 (from 2018 Settlement COS for Docket 17-3112):

- a. The total annual transmission operating expenses paid to ISO-NE and Transco/VELCO.**
- b. The amounts in rate base related to the investment in transmission affiliates (VELCO/Transco)**
- c. The annual costs to support the rate base investment (Taxes, interest return, etc.) in transmission affiliates (VELCO and Transco).**
- d. The annual equity in earnings from affiliates provided by the transmission investments (VELCO and Transco).**
- e. Please provide details on the annual investments GMP made in transmission affiliates.**
- f. Please provide the contemporaneous analysis of the cost and benefits for each of the investments made in the transmission affiliates, if available;**
- g. Please provide details on any other payments to or from the transmission affiliates not covered in subsections a. through e.**

Objection: GMP reasserts General Objection 1, 5, 6, & 7. The phrase “contemporaneous analysis” in subpart (f) is not defined and is therefore vague and ambiguous and is also beyond the scope of Mr. Ryan’s rebuttal testimony. It would also be unduly burdensome to produce the requested analysis. Without waiving the objection GMP responds as follows.

DPS3.A26.

- a. Please see Attachment GMP.DPS3.Q26, page 1, line 1.
- b. Please see Attachment GMP.DPS3.Q26, page 1, line 2.
- c. Please see Attachment GMP.DPS3.Q26, page 1, lines 3 and 4.
- d. Please see Attachment GMP.DPS3.Q26, page 1, line 5.

- e. Please see Attachment GMP.DPS3.Q26, Page 1, lines 6–10.
- f. See objection. Without waiver, please see Response DPS3.Q18, which explains that every GMP investment in Transco provides a net benefit for our customers—the benefits exceed the costs—particularly since without the benefits generated by the investment GMP’s customers would still pay any increased transmission expenses caused by the funded VELCO projects. In addition, GMP reviews investments to ensure that its bonding capacity and financial position are adequate to support them. GMP also reviews any material changes to the circumstances of the investments—such as changes in FERC authorized returns for VELCO or, more recently, the effect of federal tax reform—to ensure that the investments continue to return net benefit to customers.
- g. In addition to the items mentioned below, please see pages 11 and 28 of Mr. Ryan’s prefiled direct testimony describing the benefits GMP customers received from the sale of VELCO’s Utopus investment.

Person/s Responsible for Response: Eddie Ryan, Karen Young
Title of Person/s: Controller; Budget/Forecasting Supervisor
Date: September 28, 2018

Requests in Response to Rebuttal Testimony of Kirk Shields

DPS3.Q27. With respect to GMP’s proposed JV Solar/Storage projects, please respond to the following requests:

- a. Please admit or deny that once the projects are placed into service, GMP will be able to earn the authorized rate of return on its investment in the projects as reflected in rate base. If denied, please explain the basis for your answer;**
- b. Please provide copies of any invoices received by GMP or GMP’s Joint-Venture partners from Tesla for these projects to date;**
- c. Please provide details on any payments made by GMP or GMP’s Joint-Venture partners to Tesla for these projects to date.**

Objection: GMP reasserts General Objection 5 as the phrase “will be able to earn the authorized rate of return” is vague and ambiguous. It is unclear if this phrase means that GMP is guaranteed to earn its authorized rate of return, which it is not. Without waiving the objection GMP responds as follows.

DPS3.A27.

- a. Neither denied nor admitted as the question is vague and ambiguous. GMP will have the opportunity to earn its allowed rate of return for portion of the investment that is included in rate base, but it is not guaranteed that rate of return.
- b. Not applicable.
- c. Neither GMP nor its Joint-Venture partners have made any payments to Tesla yet for these projects to date. No money is currently due or payable to Tesla from GMP or its Joint-Venture partners.

Person/s Responsible for Response: Kirk Shields, Josh Castonguay
Title of Person/s: Director, Development & Risk Management; VP & Chief Innovation
Executive and Power Supply
Date: September 28, 2018

Request in Response to Rebuttal Testimony of James Coyne

DPS3.Q28. Please provide copies of all work papers and supporting documentation used by Mr. Coyne in the preparation of his Rebuttal Testimony and Exhibits. Please provide all spreadsheets with cell formulas intact. Please include all exhibits in native spreadsheets with cell formulas intact.

DPS3.A28. The requested copies of work papers and supporting documentation used by Mr. Coyne in the preparation of his Rebuttal Testimony and Exhibits may be found in Attachments GMP.DPS3.Q28.1 through GMP.DPS3.Q28.17.

Person/s Responsible for Response: Jim Coyne
Title of Person/s: Senior Vice President, Concentric Energy Advisors, Inc.
Date: September 28, 2018

Dated at Burlington, Vermont this 28th day of September, 2018.

As to Objections:



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Attorneys for Green Mountain Power

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. 18-0974-TF

Tariff filing of Green Mountain Power 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)

LIST OF DOCUMENTS PRODUCED
ROUND 3 DPS DISCOVERY RESPONSES

September 28, 2018

Round	Question	Document
3	2	GMP.DPS3.Q2
3	4	GMP.DPS3.Q4
3	5	GMP.DPS3.Q5
3	8	GMP.DPS3.Q8.1 - 2018 Effective RNS Rate
3	8	GMP.DPS3.Q8.2 - Historical RNS Rates
3	8	GMP.DPS3.Q8.3 - RNS Forecast
3	8	GMP.DPS3.Q8.4 - Workpaper
3	9	GMP.DPS3.Q9.1 - Scenario 1 Battery
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3	9	GMP.DPS3.Q9.14 - Summary Scenario 8
3	9	GMP.DPS3.Q9.15 - Sensitivities
3	10	GMP.DPS3.Q10 - Exh. GMP-JC-3 (Rev.) - Revised Innovative Pilots – Costs & Revenues
3	11	GMP.DPS3.Q11.1 - 2018 FCM Peak Performance

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3	23	GMP.DPS3.Q23.4 - 2019 C11 C12 headcount updated
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3	23	GMP.DPS3.Q23.6 - Base O&M Cost Calculation
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3	23	GMP.DPS3.Q23.17 - COS ADJ 21 Accretion Expense
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3	23	GMP.DPS3.Q23.22 - CWIP as of 4-4-2018
3	23	GMP.DPS3.Q23.23 - CWIP for Blankets
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3	23	GMP.DPS3.Q23.25 - FY 2019 RATE CASE ADIT 04 03 2018
3	23	GMP.DPS3.Q23.26 - GMP 11-9-17 Settlement - 5.37%
3	23	GMP.DPS3.Q23.27 - GMP JV Solar-Battery Investment and Reg Asset Rate Year 2019 FINAL
3	23	GMP.DPS3.Q23.28 - GMP Rebuttal COS Filing FINAL DPS
3	23	GMP.DPS3.Q23.29 - GMP VT Solar Ratebase and COS Adjustments Draft 3-1-18
3	23	GMP.DPS3.Q23.30 - Lead Lag Study
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3	23	GMP.DPS3.Q23.36 - RB Adj 11 Millstone Energy Capacity Def-Amort 9 months 2019
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3	23	GMP.DPS3.Q23.38 - RB7 Transco Rollforward 2018-2019 Proforma
3	23	GMP.DPS3.Q23.39 - RB15 Accrued Pension Expense-RP ended Sep 19
3	23	GMP.DPS3.Q23.40 - RB16 Post Retirement Medical Expense-RYP 2019
3	23	GMP.DPS3.Q23.41 - RB17 Long Term Disability RP ended 9-30-19
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3	23	GMP.DPS3.Q23.43 - Revenue 2019 Rebuttal Summary
3	23	GMP.DPS3.Q23.44 - Revenue 2019 Summary
3	23	GMP.DPS3.Q23.45 - Tesla Power Supply Impacts
3	23	GMP.DPS3.Q23.46 - Transco Rollforward 2017-2022 update 8-1-18
3	24	GMP.DPS3.Q24.a
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3	26	GMP.DPS3.Q26
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3	28	GMP.DPS3.Q28.3 - Figure A PE Ratios (8-29-2018)
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3	28	GMP.DPS3.Q28.7 - Roger Morin, New Regulatory Finance p. 172
3	28	GMP.DPS3.Q28.8 - Direct Testimony MORIN April 20, 2012
3	28	GMP.DPS3.Q28.9 - SCG-4 Direct Testimony of Dr. Roger A. Morin Ph.D.
3	28	GMP.DPS3.Q28.10 - DT of Roger A. Morin, Ph DE 04-177 March 25, 2005
3	28	GMP.DPS3.Q28.11 - Morin Testimony Final January 29, 2010
3	28	GMP.DPS3.Q28.12 - Morningstar, SBBI 2013 Valuation Yearbook p. 44
3	28	GMP.DPS3.Q28.13 - Cooper Arithmetic v Geometric EFM 1996
3	28	GMP.DPS3.Q28.14 - Roger Morin, New Regulatory Finance p. 159-160
3	28	GMP.DPS3.Q28.15 - Opinion No. 531-B 147 FERC 61,234 Order on Rehearing March 3, 2015
3	28	GMP.DPS3.Q28.16 - Morin - New Regulatory Finance, p. 151-152
3	28	GMP.DPS3.Q28.17 - Extracted pages from 2017 Valuation Handbook - U.S. Guide to Cost of Capital U.S. Guide to Cost of Capital

Dated at Colchester, Vermont this 20 day of September, 2018.

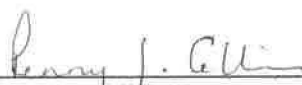
Respondent Signature

By:



Rob Bingel
Green Mountain Power

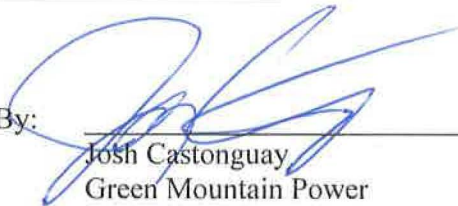
Subscribed and sworn before me this 20th day of September, 2018.



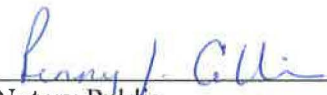
Notary Public
Name of Notary: Penny J. Collins
Commission Expires: 2-10-19

Dated at September, Vermont this 24 day of September, 2018.

Respondent Signature

By: 
Josh Castonguay
Green Mountain Power

Subscribed and sworn before me this 24 day of September, 2018.



Notary Public

Name of Notary: Penny Collins

Commission Expires: 2-10-19

Dated at Marlborough, MASSACHUSETTS, this 21st day of September, 2018.

Respondent Signature


By: 
James Coyne
Green Mountain Power

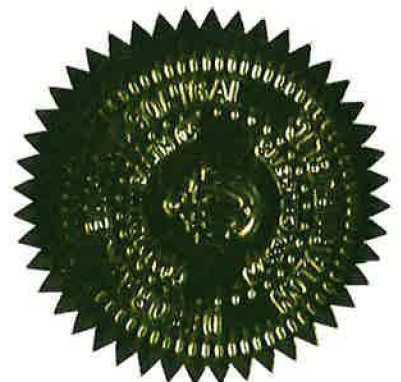
Subscribed and sworn before me this 21st day of September, 2018.


Notary Public

Name of Notary: DEBORAH-JEAN MCGONIGAL

Commission Expires: 11-2-2023

 **DEBORAH-JEAN MCGONIGAL**
Notary Public
Commonwealth of Massachusetts
My Commission Expires
November 2, 2023




Dated at Rutland, Vermont this 20 day of September, 2018.

Respondent Signature

By: 

Craig Ferreira
Green Mountain Power

Subscribed and sworn before me this 20th day of September, 2018.



Notary Public
Name of Notary: BONNIE L O'ROURKE
Commission Expires: 2-10-19

Dated at Rutland, Vermont this 25th day of September, 2018.

Respondent Signature

By: John R. Fiske
John Fiske
Green Mountain Power

Subscribed and sworn before me this 25th day of September, 2018.

Melissa Stevens

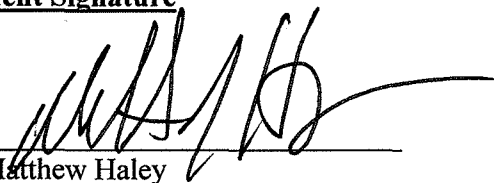
Notary Public

Name of Notary: Melissa Stevens

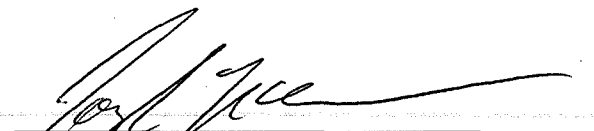
Commission Expires: 2-10-19

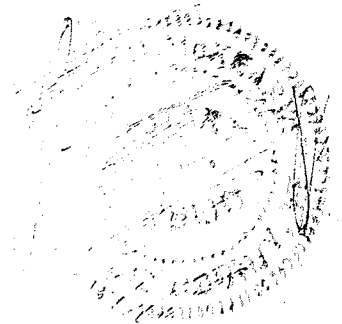
Dated at Rutland, Vermont this 20 day of September, 2018.

Respondent Signature

By: 
Matthew Haley
Green Mountain Power

Subscribed and sworn before me this 20 day of September, 2018.


Notary Public
Name of Notary: Joseph McKeon
Commission Expires: 2-10-19



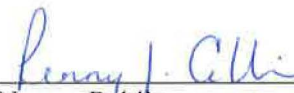
Dated at September, Vermont this 24 day of September, 2018.

Respondent Signature

By: 

Mari McClure
Green Mountain Power

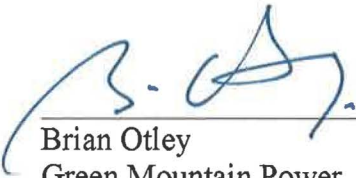
Subscribed and sworn before me this 24 day of September, 2018.



Notary Public
Name of Notary: Penny Collins
Commission Expires: 2-10-19

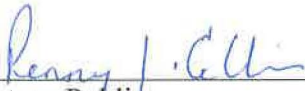
Dated at Colchester, Vermont this 21st day of September, 2018.

Respondent Signature

By: 

Brian Otley
Green Mountain Power

Subscribed and sworn before me this 21st day of September, 2018.



Notary Public

Name of Notary: Renny Collins

Commission Expires: 2-10-19

Dated at Rutland, Vermont this 20th day of September, 2018.

Respondent Signature

By: Andrew R. Quint
Andrew Quint
Green Mountain Power

Subscribed and sworn before me this 20th day of September, 2018.

Bonnie L. Lofurke
Notary Public
Name of Notary: BONNIE LOFURKE
Commission Expires: 2-10-19

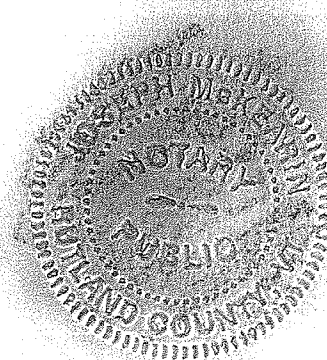
Dated at Rutland, Vermont this 21st day of September, 2018.

Respondent Signature

By: Eddie Ryan
Eddie Ryan
Green Mountain Power

Subscribed and sworn before me this 21st day of September, 2018.

Joseph McKeavin
Notary Public
Name of Notary: Joseph McKeavin
Commission Expires: 2-10-19

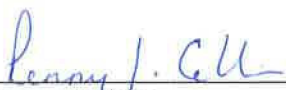


Dated at Colchester, Vermont this 20 day of September, 2018.

Respondent Signature

By: 
Kirk Shields
Green Mountain Power

Subscribed and sworn before me this 20 day of September, 2018.


Notary Public
Name of Notary: Penny Collins
Commission Expires: 2-10-19

Dated at Colchester, Vermont this 20th day of September, 2018.

Respondent Signature

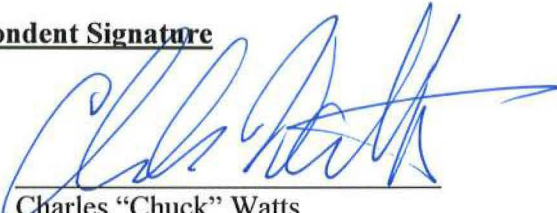
By: Douglas Smith
Doug Smith
Green Mountain Power

Subscribed and sworn before me this 20th day of September, 2018.


Penny J. Galt
Notary Public
Name of Notary: Penny J. Galt
Commission Expires: 2-10-19

Dated at Rutland, Vermont this 21st day of September, 2018.

Respondent Signature

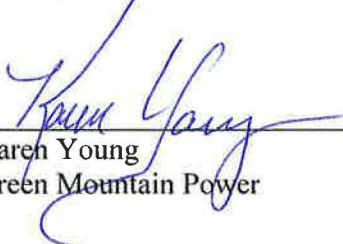
By: 
Charles "Chuck" Watts
Green Mountain Power

Subscribed and sworn before me this 21st day of September, 2018.



Notary Public
Name of Notary: BONNIE L. COURKE
Commission Expires: 2-10-19

Dated at Rutland, Vermont this 25th day of September, 2018.

Respondent Signature

By: 
Karen Young
Green Mountain Power

Subscribed and sworn before me this 25th day of September, 2018.


Notary Public
Name of Notary: Melissa Stevens
Commission Expires: 2-10-19