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Judith Whitney, Clerk  
Vermont Public Utility Commission  
Peoples United Bank Building, 4<sup>th</sup> Floor  
112 State Street  
Montpelier, VT 05620-2701

Re: Energy Storage System Tariff

Dear Ms. Whitney:

Green Mountain Power (“GMP”) files for approval by the Vermont Public Utility Commission (“PUC”) tariff sheets implementing a new standalone Energy Storage System offering for customers. GMP requests an implementation date of September 15, 2019, pursuant to 30 V.S.A. 225(a). The new offering will be designated as GMP’s Energy Storage System Tariff. This filing consists of the following documents:

- Attachment 1 - GMP’s workpapers supporting the tariff;
- Attachment 2 - clean tariff sheets; and
- Attachment 3 - estimate of revenues and costs attributable to the new service pursuant to Rule 2.401(c).<sup>1</sup>

#### Background and Explanation of Tariff

The GMP Energy Storage offering was developed as a result of GMP’s Tesla Powerwall Pilot program, noticed under GMP’s Regulation Plan (the “Pilot”). The Pilot was well subscribed by customers throughout our service territory and continues to deliver benefits to both participating and non-participating customers. We believe that customers continue to want the benefit of battery storage as a method of backup power during this time of climate change, and provide this Tariff as a way for customers to do so. GMP committed to providing a Tariff for this standalone

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<sup>1</sup> GMP has indicated in its filing the forecasted revenues and costs on an NPV basis, per installed Energy Storage System, and the costs over three years if participation is at the maximum allowed limit of 5MW per year as set forth in the Tariff. Total revenues and costs will depend on the actual number of customers that participate in the offering.

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Energy Storage System offering in conjunction with its review of prior Pilots with the Department of Public Service and Renewable Energy Vermont. Providing a direct Tariff offering to lease a standalone Energy Storage System will give customers the option to participate with GMP in grid management to benefit all customers, while also accessing backup power.

Customers participating in the GMP Energy Storage System offering will lease an Energy Storage System owned by GMP which will be installed in their home by manufacturer certified contractors. Customers can choose to pay a monthly lease charge of \$55, or an upfront one-time lease payment of \$5,500 per Energy Storage System. Full costs and terms are as specified in the Lease Agreement that is attached to the Tariff enclosed with this filing.

As shown in Attachment 3, the required statement of costs and revenues under Commission Rule 2.401(c), each individual Energy Storage System is projected to have a positive net present value for all customers. Over three years of capital additions conservatively set at the maximum participation level (5 MW, 500 customers/yr), the accounting required to demonstrate the cost of each yearly Energy Storage System acquisition under Rule 2.401(c) shows a deficit in net present value; however, over the course of the program for these systems the overall net present value is strongly positive. GMP recognizes that this Tariff is a new, innovative way to treat localized, distributed grid services and has presented the full financial workpapers for the benefit of review by the Commission and Department.

GMP's workpapers detail the method utilized to set the \$55/month pricing. The one-time price of \$5500 is somewhat higher than the present value of the 10 year monthly lease payments. The overall methodology applied to pricing this Tariff is the same methodology GMP utilized in its Powerwall pilots, with a few key updates:

First, this Tariff is for a standalone Energy Storage System that is not required to be paired with or charged by solar, and therefore is not eligible for GMP to apply the federal Investment Tax Credit applicable to storage systems charged from solar; this raises the price of the system compared to those GMP has required to be paired with solar but allows for wider customer participation and fewer operating restrictions.

In addition, the pricing reflects current costs for the equipment and software platform, along with a fixed contribution toward standard installation costs. As set forth in the Tariff and Lease Agreement, any different installation costs that exceed the amount covered in GMP's lease typical installation will be disclosed to the Customer prior to installation, paid directly to the certified installer, and not included in GMP's lease. This allows GMP to maximize the number of certified installers that may participate in the program while setting a stable lease price and terms for customers under the Tariff.

Also, because the one-time payment option is higher under this Tariff than in previously-modeled pilots, GMP has conservatively changed the assumption regarding how many customers will choose the upfront option from 30% to 20%, lowering somewhat the overall net present value of the program.

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Finally, the pricing reflects updated, current projections for the value of the benefits generated by use of the Energy Storage System in regional markets.

As in the Powerwall pilot modeling, the costs of the program reflect GMP's standard A&G allocation applicable to all capital investments. The revenues for the program include the present value of the lease payments over 10 years, plus the value of the peak shaving in the regional markets over the course of 15 years for participating batteries, dropping off a portion of the installed batteries yearly between year 11 and 15. This is the same methodology used previously; the lease allows the customer and GMP to continue sharing access to the installed storage system for 5 years beyond the end of lease payments and the batteries are projected to retain significant charging ability beyond the 10 year warranty and lease payment period.

Overall, as shown in the attached workpapers, the pricing means that participating customers will be covering GMP's reasonable costs of providing the Energy Storage Systems and the program as a whole is expected to provide an overall net positive value for all customers.

The Tariff will be offered for up to 5 MW of installed capacity per calendar year, and is open to GMP residential customers and small commercial customers (General Service) that do not take service under a time-of-use energy tariff. This equates to about 500 customers per year. Customers can participate in the program under the requirements and terms set forth in the Tariff and Lease Agreement. GMP has chosen the 5 MW annual size in order to limit yearly capital outlays; to better visualize and control grid changes and associated peak management as more systems come online; and to stagger the end of life dates for these systems. GMP notes that, under its current regulation plan, it must separately seek approval for including in rate base any new capital outlays associated with this Tariff when it next files its annual base rate adjustment after Tariff approval.

GMP strongly believes that customers who participate in this Tariff will be partnering with GMP to create the grid of the future, featuring local load management of dozens of individual resources while also helping to reduce carbon emissions related to peak energy demand times – all of this, while customers receive the benefit of the Energy Storage System for backup power, subject to GMP's access and load control to benefit all customers. While GMP will have the ability to discharge the entire system at its option, GMP will manage its use of the Energy Storage System to avoid depletion immediately prior to storm events within its discretion, as it has done with its existing Powerwall fleet under its pilot programs. This has allowed these systems to serve both as important grid resources as well as new sources of resiliency for participating customers.

Proposed Effective Date:

GMP requests an implementation date of September 15, 2019, which is forty five days from the date of this filing.

Judith Whitney, Clerk

August 1, 2019

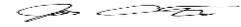
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Conclusion:

We are excited to offer this standalone Energy Storage System program as a Tariff, and thank the Commission for its review. If you have any questions or need further information, please contact me.

Sincerely,



Josh Castonguay

Vice President, Chief Innovation Executive

Enclosures

cc: Department of Public Service  
Renewable Energy Vermont  
Efficiency Vermont