STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. _____

Petition of Green Mountain Power for approval of)
a multi-year regulation plan pursuant to 30 V.S.A.)
§§ 209, 218, and 218d)

PREFILED TESTIMONY OF MARY G. POWELL ON BEHALF OF GREEN MOUNTAIN POWER

June 4, 2018

Summary of Testimony

Mary Powell explains the significant shifts in the energy landscape in recent years that have altered the fundamental assumptions underlying traditional utility regulation, and the outlook for Green Mountain Power ("GMP") and its customers going forward. She outlines the reasons why GMP seeks approval of a three-year Multi-Year Regulation Plan, to be in effect from October 1, 2019 through September 30, 2022, that will better align the method for setting rates with customer and GMP goals of low cost, highly reliable electricity service that is more local, renewable, and innovative. She summarizes the important timing to enact a new regulation plan for GMP; the witnesses GMP relies on in support of its regulation plan; the elements of the plan design GMP proposes; and why the plan benefits GMP's customers.

Exhibit List

Exhibit GMP-MGP-1 Multi-Year Plan Major Elements Summary

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I. INTRODUCTION

Q1. Please state your name, address and occupation.

A1. My name is Mary Grace Powell, and I am the CEO of Green Mountain Power Corporation ("GMP").

Q2. Have you previously testified before the Public Utility Commission ("Commission" or "PUC")?

A2. Yes. I was a witness in Docket No. 7628, the Kingdom Community Wind CPG proceeding and Docket No. 7770, the Central Vermont Public Service ("CVPS") acquisition proceeding.

Q3. Why are you serving as a witness in support of GMP's proposed regulation plan?

A3. I have spent much of my career in the energy business and I see clearly that we are in a pivotal and important period of transition. Concurrent with my twenty years in the energy industry, I have had many opportunities to serve the State of Vermont in other ways and to work hard with many others to contribute to a strong socio-economic future for the state. I have served as the Chair of the Vermont Land Trust, Chair of the Vermont Business Roundtable, Chair of Champlain College, Co-Chair of the Child Care Fund of Vermont, and have served many governors leading important education and economic initiatives and councils. I am very passionate about the environmental and socio-

economic success of our state, and I believe that energy is an incredibly important component that can be used as a force for good to help transform and strengthen Vermont.

While our utilities in Vermont have adopted significant renewables within their energy portfolios and our state policy has strongly supported renewable energy and net-metering, Vermont has not yet truly grappled with how we can keep ourselves on a transformational path for energy delivery while ensuring that customers (both residential and commercial) are protected from the potentially skyrocketing costs associated with promoting self-supply, integrating additional renewables, meeting regional transmission needs, recovering from more frequent storms, and hardening the grid physically and digitally. I view one of GMP's most important responsibilities in leading the energy transformation as accomplishing it with an unrelenting focus on cost to all of our customers. The time is right for GMP to work with state regulators and stakeholders to continue to adjust rate setting and utility regulation in order to help counteract the enormous economic shifts in the electric industry that threaten the affordability of our core infrastructure services for customers and the stability of GMP, so that we do not miss the amazing opportunity before us to transform Vermont innovatively and affordably away from our carbon-laden sources.

Q4. How is your testimony organized?

A4. After summarizing the plan that we propose and the witnesses GMP offers to support this filing, I describe the significant changes in our industry that I have seen during the ten

years I have served as GMP's CEO. These include growing external cost pressures outside utility control from regional grid investments and policy choices, coupled with lower overall customer sales driven by a move toward a more distributed, renewable energy system that also, in turn, creates significantly more complexity and cost in grid and infrastructure management. I highlight the need for continued innovation both within GMP and in our regulatory system to turn these challenges into opportunities for customers. I describe how our proposed Multi-Year Regulation Plan ("MYRP" or "Plan") enables those opportunities by saving money for our customers, stabilizing our operations in the face of industry-wide disruption, and helping advance state energy goals. The MYRP is attached to the testimony of Eddie Ryan as **Exhibit GMP-ER-1**.

II. SUMMARY OF REGULATION PLAN FILING

Q5. What is the current status of GMP's regulation plan?

A5. The regulation plan under which we are currently operating will expire at the earlier of December 31, 2019 or as soon as a new regulation plan is approved, after the Public Utility Commission recently granted the one-year extension allowed in the current plan. We asked for this extension because we realize that reviewing this new regulation plan proposal could take up to twelve months as permitted by statute (30 V.S.A. § 218d) and should be informed by the Public Utility Commission's proceeding in Case No. 17-3142-PET, referred to as the Future of Regulation workshop. Parties participating in that workshop have submitted a wealth of information to the Commission. We have filed this new regulation plan now because of the timing challenges described below, but we know

that the Commission's guidance in the Future of Regulation workshop once issued will also be very valuable during the review of this filing.

Q6. What is your proposal for the timing of the MYRP?

A6. We propose that this new Plan go into effect October 1, 2019 and remain in effect for three years. We filed a traditional cost of service rate case in April (Case No. 18-0974-TF), for rates to take effect January 1, 2019 ("2019 Rate Case"). We used a nine-month rate period (for both the cost and revenue side of the analysis) in that filing and propose to base the MYRP on that rate period. We therefore seek a ruling from the Commission on this petition in time for the MYRP to go into effect for rates as of October 1, 2019, which is the start of GMP's Fiscal Year 2020. This timing will align with our current rate filing and will provide a smooth path for customers. Given the process for annual forecasts and base rate refreshes of certain components as contemplated by this Plan, we believe a Commission order approving the Plan by next June 2019 (no later than twelve months after this filing) will allow the parties to complete the work needed to ensure the MYRP covers rates for the three-year period from October 1, 2019 through September 30, 2022. GMP also will be filing its proposed new Rate Design on July 3, 2018 and will ask that it go into effect as soon as feasible, but no later than the start of the MYRP.

Here is a summary of these milestones:

2019 Rate Case filed	April 13, 2018
MYRP filed	June 4, 2018
Rate Design filed	July 3, 2018

Commission order on 2019 Rate Case expected	December 2018
2019 rates go into effect	January 1, 2019
Commission orders on MYRP and Rate Design expected	May 2019
GMP submits forecasts and files reports for base rates to go into effect in Fiscal Year 2020	June–August 2019
Adjusted rates for first year of MYRP	October 1, 2019

Q7. What are the goals of your proposed Multi-Year Regulation Plan?

A7. As we described during the Commission's Future of Regulation proceeding, we believe a well-designed regulation plan should accomplish a number of connected goals:

First, it should continue to support GMP's work to lower costs for customers while achieving robust carbon reduction goals laid out by statute.

Second, the plan should encourage the evolution and transformation of our Vermont energy system into one that is highly distributed and based increasingly on home-, business-, and community-based energy solutions, while focusing on the fact that this evolution will also make grid management more complex, requiring appropriate investment and management.

Third, a plan should encourage implementation of transformative energy programs that bring benefits to both the customers who directly participate in the program offerings, as well as to all other customers from peak shaving, grid resiliency, and other advantages these programs create in helping drive down costs. In addition, it

should enable innovation that supports cost-effective multi-service programming by the utility and third parties, like combining storage, home heating and cooling systems, and car chargers, along with dynamic controls to maximize value and customer convenience.

Fourth, a multi-year regulation plan should reduce financial costs and unnecessary risk created by frequent traditional rate cases, instead enabling low, stable, and predictable costs for customers, and eliminating the disincentives to support efficiency and innovation inherent in traditional rate regulation by decoupling revenue from sales in ways that protect customers while providing more stability for the utility.

Finally, a regulation plan should support a transparent and efficient process of multi-year rate setting, bounded by thorough, traditional cost of service rate filings.

As I will describe later in my testimony, we have crafted specific provisions of this Plan to fulfill these goals and satisfy all the criteria of 30 V.S.A. § 218d.

Q8. Please summarize the witnesses on behalf of GMP in support of this proposal.

A8. Besides my testimony, our filing is supported by the following witnesses:

- **Doug Smith**, Chief Power Supply Executive, describes the power costs and revenue mechanisms of the MYRP, including the proposed Retail Revenue and Power Supply Adjustors.
- **Brian Otley**, Senior Vice President and Chief Operating Officer, describes how GMP proposes to treat capital spending in the MYRP by committing to a capped investment amount every year of the plan, with limited exceptions to enable innovation to benefit customers and drive down costs. Mr. Otley also describes

the Innovation and Performance Metrics proposed in this MYRP, and the Innovative Pilot provision GMP seeks to continue during the term of the plan. Finally, Mr. Otley describes several smaller but important features of the plan, such as its treatment of cloud technology costs, the flexibility we seek to expand capital spending on new initiatives that create unique revenue streams and values that are beneficial for all customers, and its provision to allow a petition for approval in the event of strategic or unforeseen important capital expenditures.

- **Eddie Ryan**, Controller, describes the proposed yearly mechanics for filings and approvals under the plan. He also describes our proposed treatment of the elements of the MYRP, including debt forecasting and treatment of other items such as taxes and Equity in Affiliates. Mr. Ryan also describes GMP's proposed Earnings Sharing Adjustment Mechanism, Exogenous Adjustor—focusing particularly on how we propose to stabilize costs caused by Major Storms, and other ancillary but important mechanisms proposed in the plan. Mr. Ryan explains how the plan fits the statutory criteria for a regulation plan under Section 218d.
- **James Coyne**, an expert consultant with Concentric, describes the treatment of Return on Equity in the Plan and the level of risk presented by the Plan GMP proposes.

Q9. Please describe how the elements of your proposed MYRP operate.

A9. Overall, we have proposed to fix a significant portion of our cost of service in each year of this plan, most notably by fixing capital spending at approximately $85 million per

year, and to file updated annual forecasts for other items in our cost of service to set yearly base rates. We then will adjust through collections or returns to reflect the variance between our forecasts and actual power costs and retail revenue. We propose to bookend the MYRP with full traditional cost-of-service rate cases (meaning the filed 2019 Rate Case would precede the Plan, and another traditional rate case would occur for Fiscal Year 2023). While the details of each element are covered by other witnesses, attached is a chart that provides an overview and summary of major elements of our Plan proposal, **Exhibit GMP-MGP-1**.

Q10. Focusing on a few of these elements specifically, please explain GMP's proposal regarding capital expenses.

A10. We share the goal of improving the regulation plan process with the Department and other stakeholders in order to eliminate the intense yearly "mini rate cases" that were a feature of our last regulation plan. Since removing this feature from our plan, GMP has filed two more traditional rate cases and has significantly adapted our capital planning and documentation in response to feedback from the Commission and the Department. In this Plan, we are proposing to make the same level of investment each year that we have requested on an annualize basis for 2019. Specifically, we propose to cap spending each year to the level of approximately $85 million, with limited opportunities for exceptions. As detailed by Mr. Otley, our proposal is supported by a well-formed capital planning process. By agreeing upfront to cap our annual spending during the three-year plan at this level, we can assure customers and our regulators that our three-year investment in

capital projects will have a set effect on rates, not unknown, upward pressure as otherwise could occur.

At the next traditional rate filing at the end of the MYRP term, we will once again have a chance to deep dive into the level of capital investment and our capital plan for the next regulation period. While we believe our proposed capital spending level is adequate at this time, we are cognizant of the need to avoid the long-term impact to GMP customers of starving or stacking the need for investments into later periods. It is critical that our investments pack multiple benefits for customers and advance the evolution to a home-, business-, and community-based grid. While this transition is underway, GMP also has to balance important traditional utility investments. We feel this proposal strikes that critical balance.

Q11. Does the MYRP propose to treat power costs and revenue differently than GMP's previous regulation plans?

A11. Yes. Power and transmission costs combined are roughly 60% of GMP's total cost of service. During the Plan term, we will submit these costs annually on a forecasted basis to adjust customer rates, and then will implement collections or returns quarterly through a power adjustor mechanism to reflect actual costs and revenues. The details are set forth by Mr. Smith. While the proposed power adjustor retains many features of the mechanism that exists in GMP's current regulation plan, there are some very important differences. Most significantly, we are committing to a full decoupling of our retail revenue through a separate quarterly Retail Revenue Adjustor that will operate in concert

with the Power Supply Adjustor that measure's GMP's cost control directly, rather than relying on the complex and somewhat opaque Volume Variance formula presently embedded in a portion of our power supply adjustment. Mr. Smith describes this in further detail. While he notes that our proposal would have yielded about the same net results for customers and for the company over the last five years had it been in place, it reduces volatility year to year for both customers and the company. It also places all the GMP incentive right where it belongs on the side of power cost control, rather than retail sales. While our current power supply adjustor has functioned well for the company and for customers, we believe the proposed changes further improve the plan, ensuring just rates and stability for customers that reflect the changing energy landscape.

Q12. How does the Plan treat savings from the GMP merger with CVPS?

A12. GMP is on track to deliver greater savings to our customers than originally guaranteed. In total, GMP believes it will deliver more than $180 million in customer savings—well in excess of the guaranteed $144 million—through the end of the merger measurement period which coincides with the end of the MYRP. GMP has proposed that this MYRP run through Fiscal Year 2022 in order to align with the ten-year measurement period for guaranteed customer savings set forth in Docket No. 7770. The merger savings platform has been very successful and the procedure for it has worked well. Therefore, we plan to utilize the same Base O&M model and merger savings sharing mechanism that have been in place since the merger. At the time of GMP's next expected traditional rate case and regulation plan (2023 and beyond), O&M costs will no longer be subject to the merger

platform. As Mr. Ryan explains, for O&M costs that are not a part of the merger platform, GMP proposes to annually update its forecast based upon inflation and payroll changes expected in the coming year.

Q13. Does this regulation plan support continued innovation for GMP's customers?

A13. Yes. The ability for GMP to innovate is key for customers. We believe that the Innovative Pilot provision in our current regulation plan is working, and we seek to continue it in the MYRP. Innovative Pilots have been very important in providing value to customers and finding ways to drive down costs, as I describe further below using the examples of our Powerwall and Bring Your Own Device programs. Going forward, it is clear that our regulation plan should encourage us to innovate around broader value propositions for customers—ones that seamlessly tie together multiple services like storage, home heating and cooling, and car charging, among others. As Mr. Otley describes, we plan to aggressively test ways to deliver value for customers through both GMP services and through partnerships with third parties, and we will utilize the Innovative Pilot provision to drive these programs. The best programs that deliver sustained value for customers will thereafter transition to traditional tariffs.

III. ELECTRIC INDUSTRY CHALLENGES AND TRANSFORMATION

Q14. What accomplishments and challenges have you seen at GMP?

A14. We have accomplished a great deal over this past decade. I feel very fortunate that since becoming CEO, together with our customers and regulators, GMP has delivered

outstanding service at one of the lowest overall rates in the region. While some other states have seen the detrimental effects of slow utility storm recovery, GMP's outage duration and frequency numbers are consistently among the best of utilities in the region, and we have consistently invested in our state's critical energy infrastructure whenever needed through VELCO. For the last two years, J.D. Power ranked GMP as one of the top mid-sized utilities in the East for customer service, and our most recent customer service satisfaction survey showed that 95.6% of GMP customers are satisfied overall. This year, *Fast Company* placed GMP #1 on its list of Most Innovative Energy Companies in the world.

We have achieved these results while stabilizing the finances of GMP, accomplishing a transformational merger that has created significant, lasting savings for customers, and helping support Vermont's forward-thinking energy policy by pursuing a more distributed, resilient, and renewable energy future. In partnership with state and community leaders, GMP has put Vermont on the energy map nationally with the innovative approaches we have taken to offer customers the latest in storage and transformation services as we move to a home-, business-, and community-based energy system that is more cost-effective and more reliable. Our passion around this transformation is two-fold: we want to help Vermonters dramatically reduce dependence on carbon, while at the same time earning our way into new energy relationships with our customers to help transform the grid to drive down future cost pressures.

GMP serves about 265,000 customers, with more than $640 million in revenues and $2 billion in assets. But we recognize that we are tiny when compared to other

investor-owned utilities in New England and the country. While our smaller size gives us an advantage in being nimble and innovative, we absolutely must continue to operate effectively and efficiently to counterbalance the risks created by our size, particularly given the intense cost pressures created by regional transmission investments and the required repairs to our own infrastructure caused by the frequent and fierce, climate change-driven storms Vermont is seeing. I believe a strong, performance-based, multi-year regulation plan is a key tool to mitigate risk for our customers in this time of transformation and disruption during which GMP must continue to work harder than ever to deliver results for our customers by innovating new, cost-effective solutions.

Q15. What has been GMP's experience with regulation plans?

A15. Vermont first recognized the benefits of regulation plans just over a decade ago. GMP's first regulation plan was approved in 2006, and we operated under it or a successor plan through 2013 without any traditional rate case review. The term "alternative regulation" perhaps incorrectly signaled that such regulation plans were not bounded by traditional ratemaking principles; they were, though some considered the process too intensive, rushed, and not transparent enough. Specifically, over time, the yearly "mini rate cases" in which the Department scrutinized every detail of GMP's capital and other spending were thought to be the worst of both worlds: nearly as exhaustive to perform as traditional rate cases (over a shorter time span), yet not perceived as transparent enough for some interested parties (despite posting all filings and related information publicly).

To address these concerns, GMP filed a traditional rate case in 2013. Since that time, we have filed two other traditional cost of service rate reviews. While these rate cases were resource and time intensive, the litigation process helped resolve some of the differences GMP and the Department had regarding documentation of capital projects, and they provided transparency and insight into the company's operations and managerial judgment. At the same time, they have also displayed the potential limitations of relying solely upon traditional cost of service ratemaking, such as intensive and frequent rate cases, particularly in a time of tremendous upheaval in the industry with cost pressures outside the utility control.

From our experience gained over more than a decade, we believe that a multi-year regulation plan paired with periodic traditional cost of service rate case reviews will prove more efficient and produce better results for customers than either the old plan or traditional cost of service ratemaking alone. The flexibility and innovation allowed by regulation plans is particularly important now because the energy sector is undergoing a profound transformation that is exposing the weakness of some fundamental assumptions underlying traditional rate regulation.

Q16. What fundamental weaknesses of traditional rate regulation do you believe are addressed by adopting a multi-year regulation plan?

A16. Traditional rate regulation functioned well in a time of increasing sales and relatively stagnant innovation. We have flat to declining loads in Vermont, and GMP sales are now lower than they were at the end of 2003. The traditional approach has fundamental

design flaws because it does not encourage efficiency and is inconsistent with achieving our state's renewable energy and energy innovation goals affordably, as Mr. Smith describes. Regulation plans allowed by Vermont law are designed to address these flaws and respond more nimbly to the needs of customers in today's dynamic energy landscape.

Q17. You mentioned that you believe a regulation plan is important during this time of significant industry change. Can you be specific regarding this transformation?

A17. Three interlocking changes have fundamentally challenged the assumptions underlying traditional rate regulation: first, the move from a small number of large, centralized generators to a large number of distributed resources, including self-generation; second, innovations in information technology, communications systems, renewable generation, and storage; and third, decreased traditional electricity sales, caused in part by net-metering, efficiency, and other customer choices driven by the first and second changes.

The traditional utility regulation framework was created more than fifty years ago. At that time, electric sales increased every year. The grid was designed and controlled as a top-down, centralized structure that moved power to customers over long distances from a few, mostly large generators. Renewable supply was limited to a handful of hydro resources. Wind and solar generators did not exist in any meaningful sense, and customers did not have real opportunity to self-generate through supportive policy like net-metering. Components of the grid did not seamlessly communicate, and customers did not have the usage and billing choices allowed by smart meters. Nor was there any ability to store electricity—save for a few pumped-hydro storage plants designed to back

up critical functions of nuclear plants outside Vermont, as well as conventional hydro plants with limited ponding capacity.

A great deal has changed since then. Beginning in the late 1990s, Vermont undertook one of the most aggressive efficiency programs in the country. Then, in the mid-2000s, the State had the foresight to partially "decouple" revenues from sales through regulation plans for the largest utilities in Vermont, including GMP. This means that financial outcomes were no longer strictly tied to the amount of electricity sold, but rather were dependent upon a utility's ability to effectively manage the business and produce strong outcomes for customers. It was during this time period that service quality plans were also implemented to measure operational performance; Vermont supported a transformational statewide project to deploy advanced meter infrastructure; and state policy encouraged a surge in renewable power, including self-generation through a supportive net-metering policy.

During this same period, the Great Recession hit, causing electric sales to decline in Vermont, New England, and throughout much of the country. However, unlike other economic recoveries, the one we have seen following the 2008 recession has not included higher electricity sales. Instead, sales have been flat to declining, despite year over year economic growth and "bull" market conditions over the last eight years. Declining baseload electric sales result in higher unit costs for customers because there are fewer kilowatt hour sales over which to spread the fixed costs of the system and needed investment, particularly those caused by the regional bulk transmission system. Declining loads in Vermont also have lately materially reduced the incremental value of

baseload efficiency measures for our customers because these measures can no longer be said to offset the need for transmission and distribution infrastructure.

There has also been a rapid increase in the deployment of renewable generation technologies like solar, as state policies have encouraged their use while their costs have declined. Simultaneously, self-generation through net-metering has exploded, adding significant complexity to grid management while saving individual customers money and causing a shift in peak usage timing. Since 2008, Vermont's net-metering program within GMP has grown to include over 10,000 residential customers and almost 2,700 businesses whose primary source of electricity is now coming from either self-generation or providers other than GMP. Energy storage—which enables energy to be pulled, pushed, or held for deployment at times of greatest value to drive down costs for our customers—has also recently seen remarkable advances and today can be cost-effective for customers as an energy and grid resource that both decreases costs and increases reliability.

Q18. How have these changes affected GMP and its customers?

A18. The changes have led to a remarkable shift in GMP's operation, compared to the time before its first regulation plan. In fact, as we described in our Future of Regulation comments, GMP:

- now sells less electricity than we did at the end of in 2003, yet more electrons travel across our distribution system than ever before;
- has over 8,400 small generation sources (net-metering, standard offer, larger scale solar wind and hydro) supplying energy to its system in addition to shares of larger resources like Hydro Quebec and Seabrook;
- has a power supply that is 60% renewable, 90% carbon-free;

- is actively using large, grid-scale and small, behind-the-meter battery storage to reduce costs for customers and improve grid performance and reliability (nearly 2000 Tesla Powerwall units alone will be deployed by year end);
- has connected nearly 2,000 distributed energy resources such as Heat Pumps, Electric Vehicle Chargers, and Hot Water Heaters to our shared access control platforms to further reduce costs for customers and prepare for a transformed grid;
- has the second largest amount of distributed solar generation compared to peak load in the country (Hawaii has the largest); and
- is on track to have about 300 MW of installed solar, on a peak that is less than 700 MW, by the end of calendar year 2018. Of this, GMP currently owns on behalf of its customers about 22 MW or just over 10%.

Our customers tell us that they want energy that is low cost, low carbon, and highly reliable. At the same time, our customers are partnering with us to transition from the traditional bulk grid to an energy system that is home-, business-, and community-based. As new technologies continue to emerge in the energy market, our customers are showing us they are interested in generating their own clean power, and storing it too, while giving their consent to shared control access of their energy resources (including heating, cooling, and vehicle charging) in order to enable better grid outcomes.

Q19. You earlier mentioned external cost threats GMP cannot control but its customers must cover. Can you elaborate?

A19. Yes—I have in mind increasing regional transmission costs and the infrastructure costs associated with climate change. First, there is the ever-increasing cost of regional transmission and capacity (through an ISO fee to ensure there is sufficient generating capacity in New England). Transmission expense has increased by roughly 20% in the last three years and capacity costs have more than doubled. These increases have occurred despite the fact that the amount of electricity used throughout New England is

on the decline. In 2018, GMP's customer rates increased by about 5%, reflecting these uncontrollable regional cost increases, other regional policy choices, and state-based choices such as net-metering. (We were able to offset that increase by 1%, through returning the benefits of the federal tax return changes in the rate year, so the actual impact is closer to 4%.) We are structuring this Plan to support many of our initiatives that can help lower our overall share of regional costs to help offset the seemingly inexorable increases in transmission and other regional expenses we do not directly control.

Second, as the Commission has recognized, we are experiencing the impacts of climate change in Vermont. Nowhere is the impact more pronounced than with the increasing frequency of extreme weather events that damage the distribution system, cause customer outages, and disrupt economic activity in Vermont. During these events, customer comfort and security are impacted and grid repairs are performed at significant cost. These storms are severe, taking trees down well outside of the trimming right-of-way. The evolution from the bulk system to a distributed one with storage as a core element of local grid operations, as GMP is doing, will help offset some of this increased cost and disruption to customers over the longer term. We are already seeing a new customer experience during storm events for our Powerwall program customers. The reformulation of Major Storm costs in the MYRP will mitigate volatility in rates and stacked cost pressures, compared to our current plan.

Q20. What other challenges do you see in front of the company?

A20. As energy delivery becomes more distributed and more renewable, GMP's grid network supporting and enabling that transformation becomes more complex to operate. Combined with enhanced cyber security requirements, this transformation puts more pressure on GMP's distribution system performance. Keeping up means we must make critical grid investments not only to ensure the bulk system is safe and reliable for basic energy delivery to customers, but also to enable and reliably orchestrate energy delivery from literally thousands of distributed sources around the clock.

Q21. You also mentioned the impact of energy storage on GMP. Please explain.

A21. We are in the midst of a historic breakthrough in energy storage technology, and Vermont is on the forefront of this. Electricity is unique as a commodity, in that supply and demand must be precisely balanced at all times. For decades, we had no meaningful, cost-effective ability to store electricity and use it later during "peak" periods when supply was scarce.

In the last decade, research and development in battery storage technology has grown exponentially, to meet demand for consumer electronics and other distributed technologies. There have been breakthroughs in larger scale batteries that have the capacity to store large amounts of energy for several hours, and then release it onto the grid on command. Like we have seen with solar panels before, we are now seeing a sustained drop in the cost of these batteries as the industry scales up and improves the

performance of the technology. This technology is already delivering early benefits in Vermont by driving down the cost of the bulk grid.

The ability to store electricity locally has the potential to be transformative for customers and for GMP's continuing ability to deliver energy that is clean, cost-effective, and reliable. Battery storage is a core part of our service now and of our strategy in the future, helping to integrate renewables and smooth their uneven output, providing "islanding" ability that can serve as back-up power during outages, and reducing costs for customers through peak shaving, energy arbitrage, and other ancillary services. For example, by deploying the 3.4 MWh of battery storage at the 2 MW Stafford Hill solar project in Rutland, GMP saved customers over $180,000 in a single hour and have further provided customers with over $150,000 of value through participation in other ISO New England ancillary markets.

The storage breakthrough is now making its way to individual customer sites too. In the next several months, nearly 2,000 GMP customers will have Tesla Powerwalls in their homes or businesses, fulfilling just the initial requests for participation for this program. These customers will not only increase their personal energy reliability through their participation, but also provide benefits to non-participating customers through GMP's shared access capabilities to manage demand and thereby lower system-wide peak costs. The outcomes enabled by these storage devices directly lower costs for all customers. At 2,000 installed Powerwall systems, GMP will have access to nearly 10 MWs of aggregated, stored energy to use during expensive peak times. Even this relatively small capacity of peak control has the potential to save customers more than $2

million over the program's life. As we seek to do with all of our transformation programs, we are focused on innovative solutions that deliver multiple benefits, creating value for both the customers who choose Powerwall systems as well as for all other customers we serve. The Plan supports these choices by allowing us to seek approval to expand New Initiatives spending when it makes sense to do so.

We also are supporting a community of third-party developers to deliver transformation solutions to Vermonters cost-effectively. We recently launched our "Bring Your Own Device" ("BYOD") program and filed a Third-Party Billing Tariff in support of the program. The BYOD pilot allows GMP customers to bring their own backup power solution, procured independently from one of Vermont's energy solution providers, to participate in GMP's grid transformation capabilities and help manage peak costs. The Third-Party Billing tariff allows third-party companies to utilize GMP's bill for customer's energy-related equipment purchases that advance the energy goals of the State of Vermont. Of course, all of these technology and product breakthroughs will further disrupt the traditional utility model, presenting risks if the regulatory framework does not shift to accommodate them.

Q22. One of the shifting assumptions in ratemaking that you described earlier had to do with declining revenues. Please elaborate.

A22. In the past, it was a routine occurrence for Vermont utilities' retail sales to grow by a few percentage points each year. Traditional ratemaking functions well in such an

environment because natural growth supports utilities' cost increases, assuming good management, and lessens the frequency of rate cases.

However, our retail sales stopped growing a while ago. We have seen a real decline in retail sales growth over the last decade and predict that retail sales will continue to decline over the next few years and perhaps longer. This predicted decline is due in large part to the combination of self-supply largely through net-metering, efficiency efforts, and modest economic growth. If we do nothing to encourage other cost saving measures and create new value propositions for customers targeted at smart electrification to replace fossil fuels in heating and transportation, customers will continue to bear the financial impact of reduced sales from the grid in the form of increased rates. This is because when sales decline, the utility and regional infrastructure must still recover the same amount of revenue through its remaining sales to meet its fixed costs; thus, the price per kilowatt hour must increase and rates must go up.

Q23. Won't these cost pressures (i.e., declining sales, increasing regional and net-metering pressures) continue to harm customers?

A23. They would, if we were to do nothing. But our strategy is to address these external pressures head-on, and to drive down costs through innovations in operations and service to our customers. For example, we are working to reduce our share of transmission and capacity costs through aggressive peak management, including measures such as battery storage and demand response. We are also working on controlled shared access to end-use devices like heat pumps, EV chargers, batteries, and water heaters, that can be turned

down during peak times in a way that is imperceptible to customers. Meanwhile, the Commission has addressed net-metering cost pressures through review of appropriate pricing in its recent order and will continue to do so going forward.

Through these measures, we are shifting away from a traditional bulk energy system to one that is more home-, business-, and community-based. We are shifting our focus from traditional utility assets like poles, wires, and fossil-fueled peaking plants, to distributed generation, battery storage, electric vehicles and their charging apparatuses, and load-controlled, efficient devices like heat pumps. In this way, these devices become as much grid assets as customer assets. They also allow us to "stack" benefits for customers by simultaneously enhancing grid reliability and reducing the carbon footprint associated with heating and transportation.

Our goal is to reduce our reliance on the regional grid and move toward a system that is more local, transforming energy delivery from the inside out. We want to reduce customer exposure to costs over which we have little control, like regional transmission and capacity. Shifting to a business that relies on data and technology as much as on poles and wires will, of course, affect our investment patterns, depreciation lives, cost structures, and other core underpinnings that affect how we set rates. We have designed this Plan to account for these changes.

Q24. Is now the right time to focus on these measures?

A24. Yes. Change in our industry is happening rapidly, and some strategies for controlling costs must be seized early to benefit our customers. For example, to some extent, peak

shaving is a zero-sum game: if utilities in other New England states like Massachusetts that have commercial scale storage statutory mandates get ahead of Vermont in terms of peak management, they will be able to realize transmission and capacity savings and revenues from participation in ancillary markets that could otherwise have been ours and flowed 100% to customers.

Too much delay also risks compromising the integration of renewables. We hear over and over from our customers that they want a more local, renewable energy system. If we wait too long to meet their expectations, we increase the likelihood of these customers exiting the grid to self-supply, increasing costs substantially for our remaining customers.

IV. BENEFITS OF THE MULTI-YEAR REGULATION PLAN

Q25. Please explain why you believe the elements of your proposed MYRP are necessary and appropriate for this three-year period.

A25. We have designed this Plan by utilizing the lessons learned from submissions made during the Commission's Future of Regulation proceeding and by building plan elements that decrease customer costs while incentivizing the transformation away from the old, centralized grid of past decades, as I described above.

The plan design also will encourage innovation and incentivize continued excellent performance. By continuing Innovative Pilots and establishing Innovation and Performance Metrics, the Plan will achieve far better alignment between customer needs and GMP's than would traditional ratemaking alone.

The predictability we can achieve through a sound regulation plan will benefit our customers in material financial ways. In particular, the design will be highly significant to GMP's ongoing credit rating and financial strength. In addition, the MYRP design helps avoid stacking cost pressure due to volatility in power markets and unpredictable events, through the use of forecasting and adjustors.

Q26. Why is GMP's credit rating important to customers?

A26. A strong credit rating benefits customers. The better the credit rating, the lower GMP's costs, including borrowing and debt costs. Our credit rating is the grade that our rating agency, S&P, assigns to GMP after considering financing, and other factors that measure the risk associated with our ability to repay our debts. Our unsecured credit rating was upgraded in December 2016 and confirmed in January 2018 as "A-." Our senior secured debt rating is "A". The rating outlook is stable.

We know our rating is dependent on our ability to sustain or improve financial metrics and our business risk profile, and to demonstrate a healthy regulatory environment. We are a small utility, operating in a single regulatory jurisdiction. It is important to reduce uncertainty around the process and details of cost recovery through the continued use of a regulation plan.

Creditors often lend capital to utilities over long periods of time (to support the development of long-lived assets), so when credit agencies evaluate electric utilities they specifically consider the regulatory climate and framework under which the utility operates. In a 2017 briefing, the firm S&P indicated that its assessment incorporates the

degree to which the regulatory framework considers, explicitly or implicitly, credit quality in its design. In the absence of a regulation plan, power cost and sales fluctuations and unanticipated storms and other exogenous events may impair our financial risk profile and set our credit rating back, driving up costs for customers.

A strong credit rating is also important to securing more favorable power supply contract costs. Our account at ISO-NE and many of our purchased power agreements ("PPAs") have credit protection provisions in them in favor of our counterparties—the companies selling power to us—that require GMP to post collateral under certain market conditions. These provisions—the amount of collateral required to be posted and when—depend on our credit rating. Vertically integrated utilities like GMP have to monitor and manage these potential threats to liquidity. A stronger, higher credit rating means more favorable terms for GMP. A lower credit rating increases both the risk and the potential amount of collateral posting—a harmful outcome for customers.

These collateral obligations that are customary for PPAs could adversely affect our customers because the costs associated with posting collateral are directly reflected in the power and financial costs that our customers pay, and because they can threaten our liquidity under adverse market circumstances.

A strong credit rating also directly benefits customers by limiting the interest rates that GMP incurs on long-term borrowing to support the substantial capital investments that GMP makes in capital assets to serve its customers. For example, if GMP's S&P rating were to decline to "BBB" then GMP's senior secured credit rating would drop by one NAIC rating factor, which would noticeably increase the interest rate that GMP

would have to pay for long-term debt. This is significant because GMP's borrowing for capital investments is substantial—typically amounting to tens of millions of dollars per year. As a result, an increase in borrowing costs associated with a credit downgrade could amount to several hundred thousand dollars per year to GMP customers, and several million dollars over the life of a long-term bond.

Q27. What other factors within a regulation plan may affect a utility's credit rating?

A27. In my experience, the ratings agencies pay particular attention to the way in which a regulation plan sets the utility's Return on Equity ("ROE"). GMP's ROE is currently the lowest of any vertically-integrated utility in the country, despite GMP achieving incredibly high customer goals from outage duration, to satisfaction, to innovation. While Mr. Coyne expresses serious concerns that the 2019 base ROE of 9.3 proposed by GMP in its 2019 Rate Case is too low to provide an adequate return for important, needed investments and to continue to support GMP's strong credit rating, we agreed to that ROE in the 2018 Rate Case resolution with the Department and recognize the value customers will receive through sticking with that agreement.

From where I sit, focusing on customer value through a regulation plan that provides certainty and supports innovation is critical. We strongly believe the Plan that we propose will help mitigate ratings agency concerns about the level of our ROE but, make no mistake, the world of utility regulation can be an upside-down one. Other companies that perform worse than Green Mountain Power in terms of satisfaction, trust, rate stability, and innovation earn higher returns all across New England and the country.

GMP's performance, its size, the clear market trends toward higher interest rates (addressed through indexing), and the significant risks presented by electric industry disruption all will point toward a higher ROE over time.

Lastly, climate change has made the importance of utility financial health even more critical. Major disruptive storms have become a routine occurrence in New England. Ensuring that GMP, Vermont's largest utility, is financially sound and strong is essential. A solid credit rating and a fair return are critical to ensuring access to capital, cash flow, and access to credit so that when Mother Nature strikes Vermont and our customers, GMP has the ability to spend tens of millions of dollars on storm recovery on demand.

Q28. Do you believe the design of the MYRP is positive for customers and meets the criteria of 30 V.S.A. §218d?

A28. Yes, I believe that it is positive for customers and meets the statutory criteria for a just and reasonable regulation plan under Vermont law. The Plan is designed to limit customer exposure to cost swings and revenue decreases, encourage GMP to innovate and perform, and allow GMP to recover costs for efficient and cost-effective management.

For example, the Plan permits recovery for power supply purchases in a manner that benefits customers directly by limiting GMP's cost recovery through the use of a cost variance calculation with a dead band and percentage adjustor, as further described by Mr. Smith. Similarly, the Exogenous Change Adjustor also benefits customers by

requiring GMP to absorb the first $1,200,000 of qualifying Exogenous Major Storm costs in a measurement period.

The Earnings Sharing Adjustment Mechanism keeps skin in the game for GMP to have a chance to earn up to its full authorized return but share equally with customers changes in its performance outside the dead band. The Innovation and Performance Metrics keep GMP's eye squarely on better customer outcomes, not just for traditional service quality and reliability measures we already are obligated to meet but also for emerging needs related to distributed generation, grid connectivity, load management, and other innovations.

These features fit well the statutory criteria for approval of a regulation plan under Section 218d, as further described by Mr. Ryan.

V. CONCLUSION

Q29. Do you have any other comments in support of this filing?

A29. As I look ahead, I know that GMP will continue to work to drive down costs for our customers through innovation, increased synergy savings, and tight cost control as we move in partnership with our customers toward the new energy future we all seek. As a customer-obsessed culture, that is the focus of everything we do. We know that leading this important transformation through innovation is critical to discovering and delivering ways to lower the cost of maintaining the bulk grid, while continuing to provide strong customer service. It is our culture of innovation, paired with a lean and effective operating approach, that gives us confidence during this challenging time of transition. I

believe the right regulation plan can help us through the disruptive changes in the electricity industry while creating broad socio-economic prosperity and positive environmental outcomes for the customers we serve. That is what guided our development of this Plan.

Q30. Does that conclude your testimony at this time?

A30. Yes, it does.