STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Tariff filing of Green Mountain Power Corporation requesting a change in rates, effective October 1, 2022	)))	Case No. 21-____-TF
Petition of Green Mountain Power for approval of its new multi-year regulation plan pursuant to 30 V.S.A. §§ 209, 218, and 218d	)))	Case No. 21-3707-PET

PREFILED DIRECT & SUPPLEMENTAL TESTIMONY OF MICHAEL BURKE ON BEHALF OF GREEN MOUNTAIN POWER

January 18, 2022

Summary of Testimony

Mr. Burke's testimony introduces GMP witnesses and provides a general overview of GMP's 2.34% rate request for Fiscal Year 2023 ("FY23") and the broader context for this filing, explaining the importance of the work GMP is doing to provide a closer, more connected, and more resilient system for customers and to address climate change. His testimony also reviews GMP's capital investments, including the process used by GMP to develop and manage these important projects to benefit customers and the documentation to support these decisions. Mr. Burke specifically speaks to transmission and distribution ("T&D") capital projects, as well as facilities projects. Mr. Burke also addresses certain operation and maintenance ("O&M") expenses in the FY23, including storm and other operational costs. Finally, his testimony presents the capital forecasts for GMP's new regulation plan (the "New Plan") period.

Exhibit List

Exhibit GMP-MB-4	Exhibit 2 of 2018 Rate Case MOU
Exhibit GMP-MB-5	Flowchart of GMP's Capital Planning Process
Exhibit GMP-MB-6	T&D Capital Planning Framework
Exhibit GMP-MB-7	T&D Capital Additions (2022–2023)
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PREFILED DIRECT & SUPPLEMENTAL TESTIMONY
OF MICHAEL BURKE
ON BEHALF OF GREEN MOUNTAIN POWER

I. Introduction

Q1. Please state your name and occupation.

A1. My name is Michael Burke. I am the Vice President, Field Operations for Green Mountain Power ("GMP").

Q2. Please describe your background.

A2. I have worked for GMP since 1997, serving in many roles with the company, including customer service, meter service, and engineering design prior to my current role leading field operations. Since 2009, I have served as the Field Operations Chief and now Vice President for GMP, overseeing the planning and execution of all our T&D field activities, including all restoration efforts from severe weather events. I also oversee work on pole attachments and broadband deployment and am a member of the Rural Resiliency and Adaptation Subcommittee of the Vermont Climate Council. I received a business management degree from Champlain College, completed the Vermont Department of Labor lineman apprenticeship three-year course, and have taken numerous engineering and operations courses while at GMP.

Q3. Have you previously testified before the Public Utility Commission (the "Commission" or "PUC")?

A3. Yes. I was a witness in GMP's Climate Plan proceeding, Case No. 20-0276-PET, and have submitted testimony in GMP's New Plan proceeding, Case No. 21-3707-PET.

Although not formal testimony, I also participated in workshop proceedings before the PUC, including the grid resilience and reliability workshop held on January 11, 2018, and the PUC Line Extensions Rule 5.600 workshops.

Q4. Can you give us the context and overview of GMP's FY23 Rate Case filing?

A4. Yes. I have worked in GMP's core operations for nearly 25 years and am very proud to be part of helping shape and grow a culture that is completely centered on safety and on our customers. Every decision starts and ends with what is best for the customers we serve. In addition, to help our customers in this time of tremendous change necessary to address the climate crisis, we are focused on innovation in all aspects of our operations and service. We know we need to move more quickly than we ever have before to transform our system to deliver an even more resilient and dynamic grid for customers, and this rate filing supports this critical work.

We are working proactively and in real time to counter the effects of severe weather due to climate change on our system. This includes deploying more storage, new storm-hardened, overhead construction, and more cost-effective underground equipment to keep Vermonters powered up. We are building customer-level resiliency to go along with our grid resiliency programs, and adding load management, to lower costs and carbon for all. The capital projects in this filing and proposed for our New Plan will continue this necessary work as we strengthen the grid that is the backbone of this two-way energy sharing system.

This is the most important work we have done during my time at GMP. We have already begun to see significant impacts from climate change. Those impacts are

accelerating at the same time our customers need to rely more and more on clean energy to heat their homes, power their commutes, energize everything from lawnmowers to water heaters, and study and work from home. That is why it is absolutely critical that we expand our focus on projects that continue to improve resiliency and further strengthen the two-way energy sharing system that is the grid.

This is a generational opportunity and challenge akin to the initial buildout of Vermont's electrical grid, and we are tackling it with a commitment for all customers to access all products and services and improved reliability. Our efforts are intended to bolster the safe and reliable service Vermonters have come to expect from GMP, and to foster Vermonters' continued ability to embrace life here, with all the benefits and convenience clean electrification provides now and into the future. It is critical this work is done in a fair and equitable way that leaves no Vermonter out of the clean energy transformation. This means not only offering energy resiliency and innovation programs that are accessible to all customers but also continuing to focus on delivering reliable service to all customers throughout our territory. What this means in the field is that we will focus on providing resilience 10 miles away from a substation in rural areas on par with what we expect for customers only one mile from a substation.

This filing is the result of significant work to drive down the cost pressures we face in these uncertain times, during and following the COVID-19 pandemic. As a result of this work, we are seeking a 2.34% base rate change for FY23. This request includes careful management and innovations to lower costs for customers wherever possible. In fact, nearly all the requested rate change for FY23 is driven by regional prices and increased cost for outside goods and services. This includes energy market increases,

inflation in the services, goods, and equipment we rely on for customers, and increased expenses for work such as tree trimming needed for line maintenance.

Looking beyond FY23, our initial forecasts for FY24–26 submitted with this filing show a lower average annual change, below 2% based on current projections. We know that these forecasts will change as certain categories of costs are reforecast each year under the terms of the New Plan and these forecasts do not include assumptions for annual adjustments to cost of capital. The initial forecasts do help show that GMP's commitment to fix overall capital costs, payroll, and other substantial areas of cost will allow us to continue an overall stable rate path for customers in the years ahead. The work we will do in FY23 and under the New Plan will allow us to best serve customers safely with a resilient and equitable energy delivery system, enabling decarbonization in all aspects of their lives.

Q5. Please identify the witnesses supporting the rate filing and the topics covered in their testimony?

A5. In addition to my testimony there are six other witnesses supporting our filing:

Eddie Ryan & Rob Bingel provide details on the overall cost of service that will continue GMP's ability to provide clean, cost-effective, and reliable power for customers. Their testimony includes a summary of ratemaking mechanics, a description of the principal rate drivers and savings represented in this filing, and a description of the key changes between this filing and our most recent base rate filing. They then describe the specific cost of service and rate base adjustments proposed for FY23 and summarize GMP's capital structure and cost of debt and GMP's proposed Return on Equity ("ROE")

for FY23. Finally, they address GMP's FY24–FY26 forecasts under the proposed New Plan, and small changes GMP is proposing to the New Plan.

Josh Castonguay describes the projected output of GMP's generation resources along with the capital investment additions, and operations and maintenance costs associated with these generation resources. He also speaks to the capital additions associated with GMP's innovation projects. He explains how GMP is meeting the increased demands of grid management while continuing to transform our business to provide customers with products and services that help all customers reduce costs and lower overall carbon use. He also describes how we are advancing new technologies in our substation and system protections, to benefit both system resilience and distributed energy capacity, our work to advance Resiliency Zones, and GMP's work on electrification of its own fleet to reduce fossil fuel impacts and benefit customers. Finally, Mr. Castonguay describes GMP's intense focus on customer service and strong results delivered under GMP's Service Quality and Reliability Performance & Reporting Plan and indicated by the 95.3% customer satisfaction rating in our most recent quarterly report.

Maria Fischer describes GMP's power supply portfolio and power costs, summarizing the underlying drivers of GMP's power supply costs and GMP's overall strategy for providing carbon-free power to our customers at a low cost and with an appropriate balance of risk.

Mark Dincecco presents GMP's Information Technology ("IT") capital investments included in this rate filing. In support of this filing, Mr. Dincecco describes the overall cybersecurity and IT operating environment and the expanded role of the IT

Team at GMP, as well as GMP's request for new regulatory treatment of IT capital projects to enable flexible and responsive IT work to protect GMP's systems and benefit customers.

Michelle Nelson addresses Vermont Transco, LLC ("VT Transco") expenses assigned to GMP for the year starting October 1, 2022 (FY23, also identified throughout as the "Rate Year"). Ms. Nelson's testimony supports Maria Fischer's transmission analysis for the Rate Year. Ms. Nelson also presents VT Transco's five-year forecast, which supports GMP's FY24–FY26 forecasts.

Julie Lieberman explains how a utility's return on equity ("ROE") should be calculated, reviews GMP's position relative to our peers, and presents evidence that GMP's current allowed ROE of 8.57% is the lowest of any vertically integrated utility in the country. She explains that resetting ROE based on current market conditions could justify an ROE of 10.25%. While her analysis provides important context for the Commission in considering our FY23 Rate Case and the New Plan, as explained further in Mr. Ryan and Mr. Bingel's testimony, our filing keeps the allowed ROE flat for FY23 at the current 8.57% and we would then continue the same ROE adjustment methodology in GMP's current Multi-Year Regulation Plan ("Current Plan") going forward if the Commission adopts the overall multi-year framework in GMP's proposed New Plan.

Q6. How is the remainder of your testimony organized?

A6. I cover several areas important to our FY23 Rate Case:

First, I address our capital investments for customers. I provide an overview of GMP's capital planning philosophy and the importance of our capital projects to operate

the grid safely and reliably for customers. I describe GMP's capital planning process and explain our approach to selecting the capital projects we complete on behalf of our customers. I also provide a detailed description of specific capital projects we are undertaking for our customers in FY23 in certain operating areas of the company, including T&D and Facilities.

Second, as GMP's leader of our resiliency work, I address how we are handling projects in the final year of our approved Climate Plan (FY22), and how this important resiliency work will be incorporated into the work we do for customers going forward.

Third, I address specific Operations and Maintenance ("O&M") expenses, including adjustments for O&M costs for our storm restoration and other important field work so critical to the reliability of our system.

Finally, I supplement my testimony in support of our pending regulation plan in Case No. 21-3707-PET by addressing how we developed our overall capital forecasts for the FY24–26 periods and discussing our T&D and Facilities investments and expenses for these years.

II. GMP's Capital Planning Philosophy

Q7. Can you explain GMP's philosophy around capital investments?

A7. At GMP our focus on safety and customers guides every decision we make, including our capital planning. The grid is transforming to a two-way system that requires careful coordination and management, particularly as more Vermonters use electricity for heating and transportation along with onsite generation and storage. Increasingly in the years ahead, customers and GMP will depend upon one another, with customers at times

sharing and providing energy and reliability services to the grid and their community, while relying upon the grid to keep themselves and everyone in their community powered up at all hours and in all seasons.

Maintaining and managing the important interconnected systems that make up the grid grows more challenging and complex every day. From rapidly accelerating climate change-driven impacts to the proliferation of new cybersecurity threats every day, the scope of risks we and our customers must confront continues to expand. At GMP, we have never been more motivated to tackle these challenges and we are making good strides in addressing them, but success for our customers requires continued innovation in how we think about the grid and our connection with customers, and the types of investments we pursue on their behalf. In partnership with our customers, Vermont energy companies, lawmakers, and all other stakeholders, we are proud to be a national leader in this space, but we no doubt have further to go in the face of climate change and cybersecurity threats. Our capital planning philosophy is focused on continuing this necessary transformation by investing in the critical grid systems necessary to support it. This includes enabling new, clean, distributed energy technologies on both sides of the meter that strengthen the grid's two-way capability and empower customers. As further discussed in our recently filed 2021 Integrated Resource Plan ("IRP"), we are investing in this transformational two-way energy delivery system in the following ways:

- **Closer**: Generate energy close to where it is used. That means incorporating more local and regional clean energy like wind, solar, and hydro into our overall portfolio.

- **Connected**: The grid and everything connected to it is integrated and coordinated to drive down costs and carbon. This includes supporting innovative programs for customers such as managed storage and electric vehicle charging that benefit all customers.
- **Empowered**: Providing customer options with the latest in innovations to promote equity while also cutting carbon and costs. This means making it easy for customers to choose from a diverse portfolio of innovative products and services, supporting their use and goals around renewable energy, and helping customers meet their own energy needs and their communities' needs, while keeping costs lower for everyone.
- **Resilient**: Each of the goals above requires a grid that is reliable, resilient, and better able to stand up to the significant climate change-driven weather events that are becoming more severe and more common, particularly as our customers look to electrify transportation and heating. This increased resiliency is a key part of all the work we do with and for customers, from strengthening the grid through innovative protection schemes and undergrounding, to collaborating with customers on increased battery storage and establishing microgrids and community resiliency zones.

The critical capital investments we make for customers are all focused on achieving this vision so that we can continue to provide reliable, cost-effective, and increasingly distributed energy solutions equitably for our customers.

Q8. Can you explain why GMP's operations require capital projects, and explain the types of projects GMP invests in on behalf of its customers?

A8. To meet our obligations to customers, GMP maintains and manages a wide range of facilities and infrastructure: hydroelectric, wind, and solar facilities that generate the type of low-carbon, low-cost power our customers want; an extensive transmission and distribution network that connects to and serves our customers; and all of the information technology, communications equipment, transportation resources, and facilities needed to safely and reliably maintain, repair, and operate our system. Maintaining this critical infrastructure, while also proactively working to advance and transform the system into a more resilient, closer, connected two-way energy system requires capital projects.

We plan for and execute capital projects across our six core operating areas: Generation (also called Production), T&D, IT (including Communications, Computer Software, and Computer Hardware), Facilities (also called Property & Structures), Fleet, and New Initiatives. The individual capital investments we pursue for customers in these areas take different forms. As described further in my testimony and that of our other supporting capital witnesses, we are focused on implementing projects across all of our operation teams to advance the type of transformation and resiliency our customers need, providing significant benefits for customers while controlling overall costs.

Q9. What is the total amount of proposed capital additions included in the Rate Year?

A9. The total capital additions across all departmental teams included in the Rate Year are $131.1M. Our proposed capital projects are generally broken down by functional area. I describe T&D and Facilities and discuss specific examples of proposed projects included

in this filing. Josh Castonguay discusses Generation, New Initiatives, and Fleet projects in his testimony. Mark Dincecco discusses our IT projects.

Q10. Can you please explain how your filing identifies capital additions?

A10. The FY23 Rate Year filing builds off a comparison to FY21 (October 1, 2020–September 30, 2021), referred to as the Test Year, and accounts for base capital projects in FY22 (October 1, 2021–September 30, 2022), referred to as the Interim Year. The capital project exhibits to our testimony identify and describe capital projects in each department in the Rate Year and the Interim Year.

Identifying Interim Year capital projects is a necessary part of developing a traditional cost-of-service model, and it is important to understand what these amounts represent. As described in Mr. Ryan's and Mr. Bingel's testimony, GMP's overall cost of service for the Rate Year is built off a comparison to the Test Year. The revenue requirement for the Rate Year is then established by taking the Test Year amounts and adjusting for known and measurable changes that have occurred or will occur in the Rate Year, including changes in overall rate base.

With respect to capital, this includes the overall net change in capital between the end of the Test Year and the end of the Rate Year, including those that occur in the Interim Year. Capital projects that are added in the Interim Year and Rate Year are combined with net capital asset retirements in those same years to identify the overall change in rate base between the Test Year and the end of the Rate Year.[1]

[1] Mr. Ryan and Mr. Bingel present overall rate base changes based on 13-month average balances in Exh. GMP-ER-RB-4, Schedule D.

It is important to note here that the Interim Year is also the last year of the Current Plan. Although Interim Year projects are identified in our filing for purposes of establishing actual rate base balances at the beginning of the Rate Year for this case, these Interim Year projects will be completed under the Current Plan and subject to the overall cap on capital investment in it. The Interim Year projects are part of the total capital placed in service for customers under the Current Plan, and do not result in an increase in rates in the FY23 Rate Year.

Q11. How does the proposed level of capital spending compare to GMP's prior trend for capital spending?

A11. For the past three years, GMP has operated under the Current Plan, which locked capital investments over its term at approximately $85M per year, variable by year, for a total of $256.5M closed to plant over the three-year plan period. As noted in my testimony in GMP's New Plan proceeding, this annual amount is constrained and does not represent a sustainable ongoing level of annual investment, particularly given the increasing risks presented by climate change and the imperative to strengthen reliability in light of the important electrification of transportation and heating. The addition of up to $14M in Climate Plan projects during the second year of the Current Plan helped by allowing us to make further progress on resiliency improvements for customers as projects were permitted and made ready for construction. Combining the allowed projects in the Climate Plan, the base capital investments approved in the Current Plan, and the smaller but important investments permitted by the Broadband Deployment Rider, overall capital

investments of just over $100M/year were permitted in the final two years of the Current Plan.

Further acceleration of our work on behalf of customers is required to deliver a resilient and reliable system in the years ahead. We are proposing to continue a locked capital approach in the New Plan, updated to include annual spending on projects during the New Plan that will help us maintain high-quality, safe, and reliable service for customers while pursuing important long-term goals and strategic initiatives to keep costs down in the future. This locked capital level will be managed over the term of the New Plan subject to any specific additions approved by the PUC and will include climate resiliency projects.

We built off prior project levels for climate work and overall base capital to create the new capital budget. We updated the budget to account for equipment, materials, labor costs, and other items, along with enhanced work needed in some areas. This resulted in a FY23 capital budget on behalf of customers of $131.1M, as detailed in this filing. We propose to manage capital projects for the remaining years of the New Plan at an average of about $115M per year.

Q12. How does GMP propose to manage its capital projects in the Rate Year and the other years of the proposed New Plan?

A12. We have prepared the FY23 capital investments based on known and measurable documentation with limited exceptions, and as explained in my testimony in support of the New Plan, we are proposing to continue the same type of year-to-year flexibility to

manage overall capital projects that we use during the Current Plan. I discuss further the level of our overall capital program in Section VII below.

The ability to manage projects across years has proven to be a key feature of our Current Plan. Given the variability in permitting and complex nature of many of our projects, along with the significant amount of customer-required work that arises year-to-year outside of our own planning, this type of flexibility is important. Many factors affect the final closing date of any particular project, including but not limited to the availability of necessary equipment and materials, and as previously mentioned, the timing of obtaining necessary easements and land rights, permitting, and other approvals outside of GMP's control.

Supporting the continuation of this approach in the New Plan is informed by my years of experience working with our field operations and seeing the variability in permitting and easement acquisition. The overall capital process allows us to continue to take these circumstances into account and provides options for GMP to complete the right set of projects for customers when they are ready and permitted year to year, subject to the total cap approved in the New Plan.

This approach of requiring GMP to manage capital projects to a fixed overall amount over the term of the plan, with flexibility to address timing, planning/permitting, and unexpected circumstances within and between years has worked well in the Current Plan. So long as the investment levels are updated to account for inflation and include climate resiliency work and other approved capital investment programs, such as the anticipated continuation of energy storage tariff investments, this approach will continue

to support stable, consistent rates for customers while allowing critical infrastructure upgrades to provide customers safe, reliable, carbon-free power.

III. GMP's Capital Project Review and Approval Process

Q13. Before we turn to specific capital projects in the case, can you please explain GMP's annual capital planning process?

A13. As I described in my testimony supporting GMP's New Plan, GMP has an established capital planning process designed to ensure we are developing projects that provide meaningful benefit for our customers. This starts with the development of annual department capital budgets, which include consideration of the broader strategic alignment of potential projects, and a detailed evaluation of which projects in each year should move forward for our customers. In any given year, the specific projects pursued by our capital teams will be guided by the department's general capital planning framework, which are discussed further by each capital witness. Team project selection takes into account long-term strategic planning goals, as articulated in GMP's IRP and department-specific plans, such as the Long-Range T&D Plan and the 10-Year Generation Capital Plan, and emerging needs in each year that require prompt solutions.

The planning process incorporates and empowers our colleagues with on-the-ground experience to help identify and select the projects that will deliver strong benefits for customers. Ultimately, the department budgets contain a list of recommended projects for customers in the Rate Year. These recommendations include justifications for each project—such as improved safety, improved reliability, regulatory compliance, improved operational efficiency, and improved customer service. Most projects have

multiple purposes (safety and reliability, for example). Projects that are required by a regulatory, safety, or other permit/certification are prioritized.

GMP's Capital Management Team ("CMT") is pulled from across departments to work through an iterative process to review the proposed annual budget and confirm priority projects to achieve the best overall outcomes for customers. The CMT consolidates each department budget into a final approved capital budget, in this case for the FY23 Rate Year. This process necessarily contemplates some year-to-year flexibility to adjust and substitute projects each year depending on factors that limit individual project completion, as described above and in my New Plan testimony.

GMP documents each budgeted project in a capital folder following the documentation standard established in Exhibit 2 to the Memorandum of Understanding ("MOU') between GMP and the Department of Public Service ("DPS" or the "Department") in Case No. 17-3112-INV, which is attached here as **Exh. GMP-MB-4** (the "2018 Rate Case MOU")**.** This MOU established the documentation necessary to meet the known-and-measurable requirements for capital projects in a traditional cost-of-service rate case. The MOU provides that "the documentation standards outlined in Exhibit 2 shall also apply in any future alternative or non-traditional rate cases from GMP unless or until a separate documentation standard is established by the Commission or by express agreement between the Department regarding documentation in such cases." MOU at ¶ 26. We have used this standard in developing documentation for this case and propose to continue this approach in the New Plan.

Exhibit GMP-MB-5 is a flowchart that outlines the steps in our capital planning and documentation process. Based on our experience prior to and during the Current

Plan, this standard capital planning and documentation approach, together with the flexibility in year-to-year spending allowed by the regulation plan framework, is an effective way to manage capital projects for customers.

Q14. Can you please provide a brief explanation of the information that is contained in each capital folder?

A14. For each individual project we pursue for customers, we prepare a capital folder that contains the information necessary to support and evaluate the proposed expenditure. In summary, each capital folder contains the following six types of documents:

(1) Work Order/Financial Analysis: This document provides an overview that summarizes the project, explains the purpose of the project, why it is justified now, and identifies the relevant costs and associated qualitative and quantitative customer benefits. The Work Order/Financial Analysis document also identifies the alternatives GMP considered, outlines the cost of those alternatives where that information is reasonably available, and explains why the alternative GMP selected is in our customers' best interest.

(2) Capital Summary: This is a spreadsheet that summarizes all the capital expenditures for each project. This information is maintained in GMP's Utilities International budgeting and financial software (often referred to as "UI"), which generates the summary spreadsheet. This document summarizes and has individual tabs for: (a) actual costs to date (a printout from our financial system, Oracle, is provided to support these charges; any external costs of greater than $5,000 are supported by a vendor invoice); (b) internal labor (GMP estimates the

hours required to complete a project based on previous like-kind projects or estimates from field employees to complete the work; these hours are entered based on the employee type and are calculated using an average labor rate for that type of work); (c) contractor costs (supported by vendor quotes for hourly costs or individual project quotes when applicable); (d) materials purchased direct (supported by vendor quotes for the materials needed when applicable); (e) materials from stock (users identify the stock items required for the project and the amount is calculated based on the exported cost multiplied by the quantity estimated; costs are exported from our Oracle financial system); and (f) overheads (calculations of all overhead rates are supported by the cost calculations for each indicating how the overhead is applied; the calculation is built into the budget tool so that all overheads are applied consistently).

(3) **Quantifiable Costs and Benefits not in UI Spreadsheet:** This document quantifies the other project costs that are not capital expenses (primarily estimated increases in O&M or other annual carrying costs that are not captured in the UI capital tool) and summarizes the reasonably quantifiable benefits of each project, such as avoided costs.

(4) **Copies of invoices:** This contains documentation of actual expenditures already incurred (which supports the summary of actual expenses in the Capital Summary Spreadsheet).

(5) **Quotes or estimates:** Where applicable, this is documentation for work that has not yet been performed (which also supports the summary of contractor and direct costs including the Capital Summary Spreadsheet).

(6) We also provide any other appropriate supporting information unique to each project.

In addition to this documentation, all major projects with capital budgets greater than $2M will contain either a quantitative cost-benefit analysis evaluating the net present value of each project, or an explanation of why the project meets one of the identified exemptions for this cost-benefit requirement. Capital folders are also prepared for each capital blanket used by individual departments, but as described below, these folders are based on review of five-year spending history for each blanket category. Capital folders are provided to the DPS in conjunction with this filing to facilitate its review of the proposed projects, and any of the folders can be provided to the PUC if requested.[2]

Q15. After individual projects are selected, how does GMP track and monitor implementation of its projects and overall capital investments?

A15. Teams track and monitor project development at the department level and through the CMT. This includes a monthly review of the status of projects at the department level, and individual teams may track projects on a more frequent basis depending on the type of project and project intensity. The CMT regularly reviews overall capital expenditures and the status of each department's capital work to date against the overall budget and anticipated in-service dates. As noted above, during the Current Plan period and as proposed for the New Plan, each team evaluates anything unexpected that arises in project development—such as permitting or supply chain delays—and manages selection

[2] With the exception of IT project folders that are not provided electronically, in order to safeguard security; we will work directly with the DPS to enable appropriate, secure review of these.

of projects as necessary to ensure we deliver for customers within the anticipated budget. If a planned project encounters unexpected delays, each team works to develop and substitute projects and prepares capital folders for the new projects.

As part of the Current Plan, GMP is also reporting overall annual capital investment levels in its performance metric reports, and we propose to continue this transparent tracking and reporting requirement as part of the New Plan. This is an important component of ensuring that overall capital projects are on track for customers and are consistent with the proposed overall capital level approved under the regulation plan framework.

Q16. Can you address how Climate Plan projects are handled in the Interim Year and the Rate Year?

A16. Yes. As the Commission is aware, FY22 is the final year of our approved Climate Plan, which authorizes up to $14M per year in resiliency-focused projects. The Climate Plan helped us accelerate the critical work we are doing for customers to strengthen and harden our systems to address the increasingly severe weather events affecting the grid and customers. We have been able to advance important projects under the Climate Plan, and it is work that must continue in FY23 and beyond. Under the Climate Plan, GMP identifies the proposed climate projects in advance of each year, but the projects are not included in rates until they are completed and in service, producing benefits for customers. The Climate Plan also provides flexibility to modify the projects that are implemented in any given year, to address permitting or other circumstances that arise in

project development. As a result, only those projects that are completed will be included in rates in the future.

We identified the anticipated FY22 Climate Plan projects in our FY22 Annual Base Rate filing, filed June 1, 2021 in Case No. 21-1963-TF, and work to move those projects forward is underway. As discussed further in Mr. Ryan's and Mr. Bingel's testimony, already completed FY21 Climate Projects are included in this filing, consistent with the Climate Plan, but we have not included FY22 projects in our Interim Year rate base. As permitted in the Climate Plan, GMP will file its final Climate Plan report and seek to include completed FY22 projects in our FY24 annual base rate filing.

In FY23, and going forward, GMP has started to incorporate these important resiliency projects into each of our departmental team's planning processes. As noted in my testimony supporting GMP's New Plan, each team's capital planning framework has been updated to expressly include consideration of resiliency work, and you will see these projects throughout our FY23 capital proposals in this case. For example, in the T&D projects we have 16 projects that include some amount of strategic undergrounding to harden particularly exposed or challenging areas, and we anticipate more of this type of work, and longer segments of undergrounding, in future years.

IV. T&D Capital Projects

Q17. Please explain GMP's approach to developing T&D projects.

A17. Our T&D investments for customers are guided by the T&D team's capital planning framework, provided in **Exhibit GMP-MB-6**, which prioritizes selecting projects that are

important to delivering safe and reliable power to our customers. For the T&D team, these overarching priorities include:

- Safety Improvements
- Reliability & Resiliency Improvements
- Efficiency Improvements
- Capacity Improvements
- Compliance with Regulatory Requirements (including line extensions, generation interconnects, municipal and state relocations, third-party attachment projects, and service-quality work)

As discussed in my testimony supporting GMP's New Plan, the focus of this work for customers has continued to evolve as we adapt to the increasing impact climate change-driven storms are having on our systems. The resiliency work we have been focused on for customers, and which we accelerated as part of our approved Climate Plan, is now a central component all our T&D investments. This includes but is not limited to evaluating cost-effective options to harden our systems and reduce costs for customers going forward. For example, and as discussed below, we continue to explore strategic undergrounding opportunities to help reduce future costs associated with vegetation management, pole inspections, and storm damage, while improving reliability and safety for our customers. You will see this resiliency work addressed throughout the projects we are pursuing for customers in FY23 and beyond during the New Plan, as we fold our Climate Plan work into our standard capital planning process, for T&D projects and in other departments projects.

Q18. Please summarize the categories of T&D projects included in the cost of service for the Interim Year and Rate Year.

A18. With respect to specific T&D projects in the FY23 case, the sub-categories of work include Distribution Lines, Distribution Substations, Distribution Equipment Purchases, Transmission Lines, and Transmission Substations. As in our 2019 case, and consistent with the 2018 Rate Case MOU, any single planned capital project that exceeds $250,000 has project-specific documentation. Projects in these categories below $250,000 are handled through blankets. The Distribution Line, Distribution Substation, Transmission Lines, and Transmission Subs each have individual projects above $250,000 and blankets. The Distribution Equipment Purchases category has no planned purchases above $250,000, and therefore is reflected only in a blanket.

Q19. Please summarize the T&D plant additions for the Interim Year and Rate Year.

A19. The T&D team will have $43.020M in capital projects completed in the Interim Year and $70.761M in the Rate Year. More detailed information concerning projects in each of these T&D categories, including a project description, plant addition amounts, in-service dates, and project criteria is contained in **Exh. GMP-MB-7**. I address individual projects in each category below, followed by a discussion of the blankets.

A. Distribution Substations

Q20. Please describe the type of projects included in the Distribution Substation category.

A20. The primary type of projects included in GMP's Distribution Substation capital expenditures are reliability and safety projects, which focus on replacing substation equipment that has reached the end of its service life or become obsolete in terms of its capabilities or manufacturer support. Many of our substation transformers, breakers, reclosers, and protection systems are 30 years old or older. The probability of failure starts increasing after 30 years of service and continues to increase as the age of equipment increases. Although proper maintenance and diagnostic testing can extend the life of substation transformers and other equipment, eventually it must be replaced because of failure risk, obsolescence, or the unavailability of spare parts. We anticipate spending $2.316M on individual projects in the Interim Year and $8.112M in the Rate Year on these projects.

Q21. Can you please describe a type of Distribution Substation project that's included in this filing?

A21. Yes. As an example, our "Pleasant Street Substation Upgrade" in Randolph addresses aging assets, safety, and resiliency. The project provides greater area operating flexibility for feeder backup, which increases overall resiliency for the area. The upgrades to the Pleasant Street Substation include increasing the size of the voltage regulators to improve feeder backup for other circuits in the Randolph area, replacing the existing distribution steel structures to accommodate the larger voltage regulators, creating better clearances for safety, installing underground getaways for all three circuits, and replacing the existing 1970 vintage distribution circuit breakers, electro-mechanical based relays, and

46-kv motor-operated air break switches. This project will also include expansion of the substation yard, fence, and ground grid to enclose the separate transmission and distribution yards together to accommodate installation of a portable substation for future needs and resiliency. In addition, the new yard will include an oil containment system to protect our environment, and a security system.

Details regarding all distribution substation capital expenditures are provided in **Exh. GMP-MB-7.**

B. *Distribution Lines*

Q22. Please describe the type of projects included in the Distribution Lines category.

A22. This category of projects represents the individual distribution line projects that are over $250,000 in total cost. These include distribution line rebuilds or relocations. Distribution line projects that are under $250,000 are handled in the Distribution Line blanket discussed below. We anticipate spending an estimated $9.351M in the Interim Year and an estimated $14.699M in the Rate Year on these projects. A list of the distribution line capital expenditures is contained in **Exh. GMP-MB-7.**

Q23. Can you describe one of these individual projects in the Distribution Line category?

A23. Project Shrewsbury Line 4 is an example of a Distribution Line project over $250,000 in cost. The primary purpose of this project is to replace aged pole and wire assets, bringing most of the overhead that is currently off-road to the road with storm-hardened construction and underground, using cable in conduit for a large portion of the job. The average age of the existing facilities is over 60 years old, and the line traverses a heavily forested, rural area. Bringing the facilities to an underground and roadside configuration

will significantly increase the reliability of this line and reduce future costs of vegetation management. This project also increases capacity and reliability for future electrification and distributed generation resources.

C. Transmission Lines

Q24. Please describe the type of projects included in the Transmission Line category.

A24. The Transmission Line projects to be undertaken by GMP include reconductoring, structure replacements, and grid automation to address reliability, safety, and the potential overloading of lines. We anticipate spending an estimated $2.269M in the Interim Year and an estimated $9.339M in the Rate Year on these projects. A list of the Transmission Line capital expenditures is contained in **Exh. GMP-MB-7**, which also includes a description of each of the proposed projects. I describe one of the major transmission line projects below.

Q25. Can you please provide an example of the type of a Transmission Line project included in this filing?

A25. Yes. L105 Reconductor Taftsville to Windsor is an example of a transmission line project in this filing. This reconductoring project is an integral part of the mostly completed VELCO Connecticut River Valley Project ("CRVP"). The reconductoring project is appropriate at this time because of the timing of CRVP and the ISO-New England studies.

In the Section 248 process (Docket 8605), VELCO identified the need for this GMP line upgrade, stating "[r]elated to these improvements, GMP will replace conductors for three 46 kV line sections: the East Middlebury to Smead Road line, the Bethel to East Barnard line and the Windsor to Taftsville line." The VELCO study

determined that a Windsor-to-Taftsville line overload would cause the line to fail, which could result in the cascading failure of other 46-kV lines, and disconnect about 85 MW of load, assuming failure stops at Middlebury. This project is the last portion of the CRVP that needs to be completed.

D. Transmission Substations

Q26. Please describe the type of projects included in the Transmission Substation category.

A26. GMP's Transmission Substation capital expenditures are focused on reliability and safety projects, which involve replacing substation equipment that has reached the end of its service life or become obsolete and implementing power-quality improvements. GMP plans to invest $2.435M in the Interim Year and $5.253M in the Rate Year in these projects. A list of the Transmission Substation department capital expenditures is contained in **Exh. GMP-MB-7.**

As with the distribution substations, many of our transmission substation transformers, breakers, reclosers, and protection systems are 30 years old or older. The probability of failure starts increasing after 30 years of service and continues to increase as the age of equipment increases. Although proper maintenance and diagnostic testing can extend the life of substation transformers and other equipment, eventually it must be replaced because of failure risk, obsolescence, or the unavailability of spare parts.

Q27. Please describe an example of a Transmission Substation project in this filing.

A27. An example of a Transmission Substation project in this filing is the Berlin GT Substation project. The primary reason for this project is to increase reliability in the

area. The Berlin GT Substation contains obsolete equipment, including the 3303, 3325, and 3326 34.5-kV circuit breakers, which are all 1971 vintage and will be replaced with 34.5-kV vacuum circuit breakers. The existing line voltage transformers ("VTs") are 1973 vintage and will be replaced with GMP's standard pedestal-mounted, fused-line VTs. The existing substation Remote Terminal Unit ("RTU") will be replaced with a new microprocessor-based RTU. The existing ground grid will be upgraded, and security cameras added. All of these upgrades will improve reliability, safety, and security for the area.

The detailed description and project justifications for all Transmission Substation projects is provided in **Exhibit GMP-MB-7.**

E. T&D Blankets

Q28. Can you identify the T&D blankets and explain the purpose of these blankets?

A28. Yes. Five types of T&D blankets are utilized: (1) Distribution Lines Small; (2) Distribution Line Extensions; (3) Distribution Equipment Purchases, (4) Distribution Substations, and (5) Transmission Lines & Substations. Blankets are generally used for categories of spending where the anticipated level and need for the spending is known based on our experience, but the exact location of work or the individual projects that will be required cannot always be known in advance. Blankets also cover work dictated by third-party needs, which are not GMP driven and therefore arise outside of our annual planning process. These include, for example, requests for relocation requested by the State or municipalities, customer installations, new renewable energy project interconnections requested by the developers, or pole replacement due to damage from accidents or based on our pole inspection program. These projects, while not specifically

identifiable year to year, are important—they are often driven by customer need and can have an immediate and obvious benefit for our customers through reduced and shortened outages and the quality of power delivered. The need to quickly undertake these thousands of projects, coupled with the difficulty of predicting when they will occur, given the many factors affecting their timing, requires us to have a financial mechanism to address these needs quickly and efficiently. In this way, when the projects are ready to construct, GMP can get them done for our customers. We think of these blankets as our "T&D customer service budget."

It should also be noted that the timing of construction for unexpected blanket projects can impact the construction and in-service timing for other, individually identified projects we do plan. Thus, while the blanket approach is important for those types of projects, the overall flexibility in the timing and completion of all our T&D projects we have developed through the Current Plan and propose to continue in the New Plan is itself important, achieving strong outcomes for our customers, as we balance these third-party needs with GMP's own planned projects.

Q29. What is included in the five different types of T&D blankets?

A29. The Distribution Lines Small and Distribution Line Extension blankets are for distribution line projects $250,000 or less. Projects in these two blankets may include: (1) reconstruction and rebuild projects primarily for safety, efficiency, and reliability of the distribution system; (2) customer-requested line extensions, relocations, and upgrades (handled under our line-extension tariff and PUC Rules 5.100 and 5.500 for electric generation interconnection); (3) road relocation projects (relocating T&D facilities for

State- or municipality-initiated road or bridge construction); and (4) third-party reconstruction projects (telephone or cable requests to upgrade and relocate joint facilities). These blankets are for expenditures to address distribution line asset management issues, road and bridge relocations, pole replacements requested by telephone and cable companies, and distribution line enhancements to improve the safety and reliability of the system. GMP continuously examines our equipment and circuits to identify capital reconstruction and additions based on asset management, outage history, and impact on customers, safety of employees and customers, and cost. GMP also uses the Distribution Lines Small blanket for smaller resiliency projects, focusing on undergrounding and reconductoring with covered wire. These types of projects will be planned like the Distribution Lines projects above but will be under the $250,000 threshold. The total for the Distribution Line Small blanket is $13.162M in the Interim Year and $19.336 in the Rate Year. The total for the Distribution Line Extension blanket is $3.173M in the Interim Year and $3.236M in the Rate Year.

The Distribution Equipment Purchases Blanket includes three equipment purchase blanket work orders for the purchase of transformers (WO36), meters (WO38), and regulators and capacitors (WO37). These capital purchases permit the installation of new or replacement of deteriorated, obsolete, or failed equipment on the system. The total for the three Distribution Equipment Purchase Blankets included in rate base are $6.925M for the Interim Year and $7.336M for the Rate Year.

The Distribution Substations Blanket (WO34) includes a number of unforeseen individual project expenditures to replace or repair deteriorated or failed equipment in distribution substations to maintain system capability and reliability. Total capital

investments for this blanket are $0.980M for the Interim Year and $0.999M for the Rate Year.

The Transmission Lines & Substation Blanket (WO32) similarly includes individual project expenditures that are needed to replace or repair deteriorated or failed equipment in transmission substations and transmission lines to maintain system capability and reliability. We know these types of projects will occur based on experience, but typically do not know the exact location of equipment that will require replacement in any given year. Projects in this blanket work order include but are not limited to replacement of equipment such as lightening arresters, batteries, breakers, transmission poles, and insulators. Total capital investments for the Transmission Lines and Substations blanket are $1.937M for the Interim Year and $1.963M for the Rate Year.

Q30. How are the proposed blanket amounts determined?

A30. Cost estimates for T&D blankets are established by reviewing past spending in each of the functional categories. For the majority of these blankets, the lesser of a five-year historical average adjusted for inflation or the actual budget was used. The Distribution Line Small blanket is the only blanket where the actual budget was used despite being slightly higher than the five-year inflation adjusted average for this category. We incorporated the actual budget for this category because of the importance of continuing our accelerated resiliency work for customers, as discussed throughout our Climate Plan proceeding. This additional work is not fully reflected in the five-year average for the Distribution Line Small blanket and it is important we do not lose ground in this area in

the coming Rate Year. The difference between five-year inflation adjusted average for this category ($18.567M) and the actual budget ($19.336M) is approximately $770,000. It should be noted that this increase in the Distribution Line Blanket does not reflect all of our additional resiliency work we anticipate undertaking for customers in the Rate Year but is simply intended to allow for those smaller line projects that are of the type that will fall within that blanket. Consistent with our agreement with the Department in 2019, any project with an estimated cost above $250,000 is excluded from the blankets and are listed as individual projects, with separate individual capital folders, and we anticipate that much of our climate resiliency work will be pursued as individual distribution line projects outside of the blanket.

Q31. Can you speak further to how the Rate Year budget for meters (WO38) was developed?

A31. Yes. The Rate Year investment in meters is based upon the five-year average of spending history and has been adjusted from the Test Year to account for the end of warranty claims that were completed in the Test Year (or are underway and will be completed in the Interim Year). The warranty work funded much of the meter work necessary to replace failed meters. With the warranty work behind us, the budget level will fall back in line with the five-year average of costs for metering equipment. At this time, we are not anticipating significant investments beyond the five-year average in the current generation of meters, as we are evaluating potential new meter technology that may offer greater benefits for customers, and therefore are looking to limit the investment in existing meters.

Q32. Can you explain and give more detail on your T&D projects that exceed $2,000,000?

A32. Yes. In the Rate Year we have four T&D projects that exceed $2,000,000. These projects are summarized below, and additional detail is available in each of the supporting capital folders:

- **143293:** Pleasant Street Substation Upgrade ($3.7M). This project involves upgrades to the distribution substation that serves the Randolph area and will improve reliability for customers served by the substation by addressing aging equipment, increased feeder backup capability, and improved safety by increasing clearances in the substation.
- **179715:** Hydeville Conversion ($3.4M). This project involves rebuilding the Hydeville distribution substation including a conversion of the 4.16-kV circuit to 12.5-kV, allowing feeder backup to other substations in the area and the addition of 46-kV circuit breakers to improve the reliability of service to customers served by this substation.
- **148614:** L105 Reconductoring (Tafts to Windsor) ($9.01M). This is the transmission line reconductoring project discussed above in my testimony. This project will reconductor 10.55 miles of transmission line from Windsor to Taftsville (Line 105). As noted above, the existing line was determined to be overloaded by 124% at existing load levels in the VELCO and ISO analysis, and reconductoring will improve reliability and safety on this line.
- **176557:** VELCO – Florence ($2.33M). This transmission substation project was identified as needed during VELCO's Substation Condition Assessment Project ("SCAP") and will include 46-kV equipment in the substation owned

by GMP. The project will improve reliability for customers in the areas of Rutland County served by the substation and provide important safety improvements at the substation facility. VELCO's petition related to this project is pending before the PUC in Case No. 21-3732-PET.

Consistent with Exhibit 2 to the 2018 Rate Case MOU, we prepared a thorough financial analysis of each of these important projects. While the MOU provides a presumption that cost-benefit analyses will be done for all major projects (those projects with costs above $2,000,000), a cost-benefit analysis is not required for projects that are:

- designated to address an immediate safety hazard;
- an in-kind replacement of equipment that is damaged or no longer functionally useful for its intended purpose; or
- intended to address a regulatory requirement or is a reliability project and viable alternatives are not reasonably available for the project.

As noted in the supporting capital folders, each of the projects above meets one of the identified exceptions for a full cost-benefit analysis.

V. FY23 T&D O&M Expenses

Q33. Let's turn to the T&D-related adjustments for Rate Year O&M expenses. Which FY23 O&M adjustments do you address?

A33. I address Cost of Service Adjustment No. 7 ("COS No. 7") related to minor storm restoration, and COS Adjustment No. 8 ("COS No. 8"), related to vegetation management O&M costs for the reliability of our T&D systems for customers.

Q34. Please explain COS No. 7 – Minor Storm Restoration.

A34. This adjustment represents the changes in costs between the Test Year and the Rate Year for minor-storm restoration efforts, caused by a very low amount of minor storm restoration expense in the Test Year compared to an average year. The Rate Year cost represents the five-year average for minor storm costs, adjusted for inflation. The FY23 minor-storm restoration O&M amount is $3.727M, which is an increase of $2.094M over the Test Year amount of $1.633M.

As a reminder, GMP's Current Plan contains an exogenous adjustment component to address all "major storms," which are defined as individual storm events which (1) result in extensive mechanical damage to GMP infrastructure; (2) place more than 10% of the customers in a service territory out of service due to the storm's effects; (3) place at least 1% of the customers in the service territory out of service for at least 24 consecutive hours; and (4) result in more than $1.2M in incremental maintenance expenses for storm restoration. This "Major Storm Adjustor" also includes a $1.2M deductible, under which GMP absorbs the first $1.2M in costs each year associated with all major storms. All recovery costs for storms that are below this threshold—i.e., "minor storms"—are handled within GMP's O&M budget and are not subject to the Major Storm Adjustor.

We have proposed to continue the Major Storm Adjustor in the New Plan, and as such, in FY23 minor storm costs will continue as an O&M cost. Although these events are defined as "minor storms" the impact they have on customers is anything but minor, and unfortunately, despite an outlier Test Year, we have seen these events accelerating as climate change-driven storms become more frequent and severe. Our resiliency work

under the Climate Plan and going forward will help to address and minimize these impacts in focused areas, but restoration efforts will remain a critical part of the work we do for customers. Responding to each of these events requires personnel and equipment and this adjustment reflects the reality that, even with efforts to increase the resiliency of our system, we are responding to more severe events more often.

Q35. Can you explain what COS No. 8 includes, and explain GMP's overall approach to vegetation management?

A35. Yes. COS No. 8 represents the changes in costs between the Test Year and the Rate Year for all our vegetation management work on our transmission and distribution systems. Vegetation management is a critical part of the work we do for our customers and helps ensure our system is as reliable and resilient as possible. This regular maintenance work goes hand in hand with additional projects we are pursuing to harden our grid. But as described in detail in my testimony supporting our New Plan, this work is becoming more expensive and more challenging in the face of climate change, for several compounding reasons. Not only do we have a more mature tree canopy around our rights-of-way, but climate change is accelerating this growth with warmer and wetter weather, leading to longer growing seasons and storm damage from growth outside our right-of-way. These same climatic changes have opened the door to new invasive species, such as the Emerald Ash Borer ("EAB"), which is no longer isolated to specific parts of Vermont but now is devastating ash trees across our service territory. On top of these changes, we continue to see increased climate change-driven weather events,

including more frequent high winds and severe thunderstorms, ice storms, and heavy, wet snowstorms, which cause significant damage, as noted above.

Confronting these conditions is challenging, particularly as tree trimming contractor costs are continuing to increase. Trimming contractor costs have increased nearly 20% over the last two years alone, not only as a result of general inflation but also due to the demand for tree-trimming contractors and the difficulty contractors are having procuring and retaining their workforce. GMP works to manage this by hiring multiple contractors through an RFP process but has seen a significant increase in this cost through our most recent RFPs.

FY23 vegetation management O&M is $18.997M, which is an increase of $2.892M over the Test Year amount of $16.105M. The Rate Year budget for vegetation management will pose a significant challenge for us but reflects a level of funding that we believe will meet our trim cycle goals and provide our customers with the most cost-effective program that addresses our distribution and transmission programs in terms of safety and reliability. Based on the increasing cost pressures, we are working to implement more mechanical removals of vegetation along with use of other tools such as light detection and ranging ("LIDAR") to focus the dollars where they provide strong reliability benefits for our customers, in terms of preventing outages and aiding quicker recovery after severe weather events.

We are folding EAB management into our baseline vegetation management plans, while seeking infrastructure funding to specifically tackle this expensive and increasing problem shared by utilities, towns, and the state. We now know after three years of management that the EAB problem is increasing, the task of targeted ash tree removal is

expensive but necessary, and the funding that would be needed to fully address it will be hard to sustain for our customers. Given that the land management and infrastructure risks posed by diseased ash trees are not unique to electric utilities, we are seeking partnerships with other utilities and stakeholders such as towns and the State to determine if a more coordinated approach, funded by infrastructure dollars, is possible.

VI. FY23 Facilities Capital Projects

Q36. How are Facilities capital projects identified and selected?

A36. The Facilities team is responsible for maintaining GMP's 15 district operations locations and three administrative facilities from which our teams provide local services to customers all over the state of Vermont. As reflected in the team's capital planning framework in **Exhibit GMP-MB-8**, the team focuses its project work on:

- Safety improvements
- Building efficiencies
- Compliance with regulatory requirements
- Reliability improvements
- Resiliency improvements

The Facilities team identifies and prioritizes projects to land and buildings within these categories with the objective of providing working spaces that are safe, sustainable, create an environment of interactivity and communication among our team members, and help our teams deliver services in a dynamic and high-quality manner.

Q37. Please identify the capital expenditures on Facilities in the Interim Year and the Rate Year.

A37. GMP is proposing $1.018M in capital projects in the Interim Year and $2.767M in the Rate Year. A detailed list of all capital projects in each of these categories, including project description, estimated costs, in-service date, and applicable project criteria, is contained in **Exhibit GMP-MB-9.**

Q38. Can you please provide an example of a Facilities project proposed for the FY23 Rate Year?

A38. Yes. The White River office and garage expansion is a project to expand the office area into the present stockroom area, renovate the aged office area including the kitchen and bathrooms, and create more working space for our field and office teams working in this busy district. We have moved an additional six team members from Engineering, Power Production, and T&D to this district office to handle appropriate work demands in the area, and this has created very tight, unsafe, and inefficient workspaces. Reel trailers, wire-pullers, and inventory currently must be stored outside in the elements, which jeopardizes their ability to be used when needed, due to ice/snow, and shortens the lifespan of the equipment. The facility has become overcrowded, including when being used for storm restoration work.

VII. FY24–FY26 Forecasts

Q39. Can you describe the level of projects that are necessary during the term of the New Plan to meet customer needs?

A39. Based on our evaluation of necessary capital projects for customers, the overall average annual capital investment level for the four-year term of the New Plan should be set at approximately $119M per year. This represents approximately $131.1M in FY23, described in detail above in my testimony and by other capital witnesses supporting the FY23 case, and approximately $115M per year for FY24 to FY26. This would give GMP the responsibility and flexibility to manage the overall capital projects during the period in the same way it has been managed under the Current Plan. As outlined in **Exh. GMP-MB-10**, and **Table 1** below, these overall amounts are expected to break down as follows across each departmental team, with the anticipated capital spending in FY2019 provided for context:

Table 1.

Construction Summary by Category	FY23	FY24	FY25	FY26
Information Technology	7,993,479	9,000,000	9,000,000	9,000,000
Distribution Lines Large	14,699,864	10,300,000	10,600,000	10,900,000
Distribution Lines Small	19,336,818	24,200,000	24,700,000	25,400,000
Distribution Lines Extension	3,236,555	3,000,000	3,000,000	3,000,000
Distribution Substation	9,112,290	7,500,000	7,500,000	7,500,000
Meters	1,162,374	1,500,000	1,500,000	1,500,000
General Plant	483,357	500,000	500,000	500,000
New Initiatives	9,969,366	10,000,000	10,000,000	10,000,000
Generation (incl. JO)	36,412,066	25,500,000	25,000,000	24,000,000
Property & Structures	2,767,018	1,500,000	1,200,000	1,200,000
Regulators and Capacitors	1,199,956	1,500,000	1,500,000	1,500,000
Transformers	4,973,684	5,500,000	5,500,000	5,500,000
Transmission Lines	11,302,410	5,000,000	5,000,000	5,000,000
Transmission Substations	5,253,013	7,500,000	7,500,000	7,500,000
Transportation	3,207,207	2,500,000	2,500,000	2,500,000
	131,109,457	**115,000,000.00**	**115,000,000.00**	**115,000,000.00**

Generally, there is greater certainty on specific individual projects in the early years, while the anticipated spending levels for the later years are at more of a planning level. As was the case in the Current Plan, the point of these forecasts is not to precisely establish now the specific projects that will be implemented in each year in each category, but rather to establish, at a planning scale, the capital level we anticipate will be needed to meet our obligations to customers. These levels are based on our experience, prior project levels, and, where available, specific anticipated projects. GMP would then

be required to manage within that plan, recognizing year-to-year variation in projects and overall capital levels. **Exhibit GMP-MB-10** provides a narrative description of the types of projects each departmental team anticipates in each fiscal year of the plan, and as noted above, the level of detail varies by project and year. Although some teams have identified specific anticipated projects, these narratives are intended to be representative of the types of projects each team will pursue during the term of the New Plan.

Q40. Can you further explain the methods of analysis that were used to develop the proposed capital investment levels?

A40. The proposed level of capital projects was developed taking several factors into account. First, our proposed capital levels are informed by the detailed capital documentation prepared as part of the FY23 case, which establishes a known and measurable foundation for necessary capital spending levels in the Rate Year. As discussed in detail above, this FY23 process is guided by work in each departmental team to identify the individual projects and historical average blanket spending. Our forecasts for future years take this foundation into account, looking at the ratio of spending between departments and any larger one-time projects that may have influenced the FY23 level. The proposed annual FY24–26 investment levels are then further informed by a department-level team look and CMT review of anticipated capital needs across departments.

In the department review, we asked team leaders to work with their teams to identify the minimum levels of investment required to address known and anticipated necessary projects and programs. These levels are based on a realistic assessment of the projects needed to maintain our current levels of performance, reliability, and customer

service, considering the need for investments to stay ahead of the challenges we are seeing across the company, from increasing severe storms to new and evolving security threats.

Of course, these assessments are built with the understanding that we cannot anticipate every individual project or issue that will occur during the New Plan period. In particular we know there are some areas of work, such as New Initiatives and IT, including cybersecurity, where opportunities or threats are evolving so quickly that it is important to have additional mechanisms to respond to changes during the term of the New Plan. In those areas, the bottom-up analysis considers ongoing anticipated projects. We have also built into the New Plan specific processes for proposed exceptions for capital in limited areas—for new tariffed offerings for New Initiatives (which are already subject to Commission approval) and the opportunity to propose a Cybersecurity Plan.

From the CMT perspective, we also considered the effect proposed projects will have on rates during the term of the New Plan, seeking the right balance of investments to address existing and future needs, while at the same time minimizing potential rate pressure. By setting rates that are informed by known and measurable documentation in FY23 as well as anticipated needs going forward, and then locking the level of spending over the term of the New Plan, we can minimize and provide greater certainty on this component of our costs over the next four years.

Finally, our proposed capital levels for the New Plan were also informed by our experience under the Current Plan. As noted above, the current annual capital investment level is approximately $100M when base capital levels and allowed Climate Plan and Broadband Deployment Rider projects are combined. At the start of the New Plan, we

noted that the proposed capital levels presented challenges to meeting our customers' needs including addressing the growing challenges of maintaining our energy delivery systems while working to meaningfully transform the system to reduce future costs for customers. The Climate Plan helped to address some of this concern, allowing us to increase the necessary resiliency projects to address the more frequent and severe weather impacts on our system, as we were able to get regulatory and environmental permits to proceed with this work. We have made progress on these critical issues over the Current Plan period, but more is needed. The locked capital approach proposed in the New Plan seeks to meaningfully advance these efforts, proactively incorporating climate resiliency work, along with updates to overall base capital levels to account for equipment, materials, labor costs, and other items, along with enhanced investment needed in some areas. We also considered the potential effect of inflation pressure, labor shortages, and the need for infrastructure investments across the nation that will necessarily put further pressure on the cost of components, raw materials, logistics, and transportation.

Q41. Is there anything else you want to say about how this capital plan relates to GMP's overall goals that you highlighted earlier?

A41. This level of investment is guided by our efforts to achieve the goals for customers discussed earlier in my testimony here and in the New Plan proceeding—developing a closer, more connected, and more resilient energy delivery system, which empowers our customers as we together pursue the type of transformation needed to lower carbon and costs going forward. Like the approach used at the start of the Current Plan, we developed these proposed capital levels based on several factors, seeking to balance

projects necessary to meet our obligations to our customers today and into the future with the goal of keeping overall costs as low as possible for customers.

I would like to underscore the critical nature of continued capital investment, to replace equipment and resources at or near their reasonable life expectancy, to improve reliability, meet customer requests for new services and municipal and State requests to accommodate construction and infrastructure projects, and to address climate change. Ensuring the strength and security of these systems is imperative to ensuring the health and safety of our customers, and the Vermont economy.

Q42. Does this conclude your testimony?

A42. Yes.