

Schedule G-1 – Summary of New Initiatives and Innovative Pilots

This Schedule G-1, and the supporting Schedules G-2b and G-3 to G-11, summarize GMP's New Initiatives and outline GMP's request, pursuant to Section IV(A)(1)(iv) and Attachment 2 of GMP's Multi-Year Regulation Plan ("MYRP" or the "Plan"), for approval of capital expenditures for FY22 New Initiatives. The Public Utility Commission ("PUC" or the "Commission") approved GMP's New Initiatives and Innovative Pilot Program because of the importance of these programs in encouraging further transformative energy efforts that reduce carbon and costs for customers.¹

GMP's Plan provides for fixed capital spending each year, yielding a total of \$256.5M closed to plant over the course of the three-year Plan. Within the yearly spending is an expected base of \$5M per year, for a total of \$15M over the Plan, for New Initiatives and Innovative Pilots, subject to two requirements that set this category of capital apart from other annual capital investments. First, GMP is required to seek PUC approval before including capital investments associated with Innovative Pilots in rate base.² Second, the Plan requires GMP to seek approval to invest over \$5M in capital on New Initiatives in any fiscal year period, and requires specific approval before investing more than \$5 million in any individual Innovative Pilot program.³ GMP previously sought and received approval for \$7.9M in New Initiative investments in FY20, and \$4.86M in FY21, and advised the Commission that it would seek approval if FY22 capital investments would result in more than \$15M over the three-year term of the Plan.⁴

In this final year of the Plan, GMP seeks PUC approval to include \$10.6M in New Initiative investments for customers in rate base in FY22, resulting in total New Initiative investments of \$22.5M over the three-year term of the Plan. As a result, GMP is requesting authorization for \$7.5M in New Initiatives investments above the preset \$15M three-year investment level.⁵ As indicated in Schedule C, this additional investment will have a limited rate impact (0.09%) in FY22 and will allow GMP to continue its well-subscribed Energy Storage System ("ESS") tariff program, which will produce net positive customer benefits over the installed life of the storage systems.

As outlined further below, and described in Mr. Castonguay's testimony supporting GMP's concurrently filed Petition to Modify MYRP, the additional capital investment in the FY22 New Initiatives budget is driven almost exclusively by customer demand for GMP's innovative ESS program installations. The ESS Tariff was approved by the Commission in May of 2020,

¹ See Case No. 18-1633-PET, Order of 5/24/2019 at 30, 37.

² MYRP, Attachment 2 at 1–2.

³ MYRP at Section IV(A)(1)(iv).

⁴ See Schedule G-2 in the FY20 Annual Base Rate Filing, available at <https://epsb.vermont.gov/?q=downloadfile/356412/141368>.

⁵ The sum of GMP's prior FY20, FY21, and FY22 annual proposed New Initiative investment levels equals slightly more than \$22.5M because of minor variations in actual closings. Per the Plan, the amount in base rates has remained at the \$5M per year in FY20 and FY21, and would only be adjusted in FY22 pending approval of the present request. One of the reasons GMP did not earlier request to exceed \$15M total for the three-year period was to have more information on how investments were tracking with closings in FY20 and FY21 in order to manage base rate impacts.

together with GMP’s Bring-Your-Own-Device (“BYOD”) Tariff, after the initial MYRP budget was established.⁶ This ESS Tariff is an optional program that allows customers to lease an energy storage system owned by GMP and installed in the customer’s home by manufacturer-certified installers, and is capped at 500 customers each calendar year. Customers participating in the ESS Tariff receive two Tesla Powerwalls, which will provide backup power for customers during outages and which will be dispatched to reduce power supply costs for all GMP customers. Customers can choose a monthly lease payment of \$55, or an upfront, one-time lease payment of \$5,500 per Energy Storage System. Each installation is anticipated to provide all GMP customers a system lifetime net benefit of \$2,629.⁷ At an expected install pace of around 40 systems per month, we currently anticipate a total of 500 systems installed in FY22, resulting in a capital investment of \$8.4 million.

The ESS is authorized for up to 500 installations per year, and is fully subscribed through 2021. While installation pace has lagged in the past year due to COVID-19 impacts and related supply chain constraints, we continue to move enrolled customers through the program and anticipate an uptick in installations this coming year. We also expect to fill all 500 slots that will become available in January of 2022.⁸ A copy of the capital folder for the FY22 ESS program is provided as Schedule G-3.⁹

In addition to the ESS Tariff, GMP’s FY22 New Initiatives capital budget will support two other non-pilot New Initiative programs, and three Innovative Pilots. As noted below, some of these programs have been submitted or will commence in FY21 and some will be proposed in new pilot filings anticipated in FY22.

GMP’s two other non-pilot New Initiatives include:

1. DC Fast Charging (“DCFC”) Project: This project involves installing new higher-powered fast chargers at existing GMP-owned Level 3 charging stations (EVgo) to accelerate the state’s progress on the EV fast charging network. The old stations will be redeployed at GMP offices for fleet charging purposes. The scope of work involves selecting existing sites for improved fast chargers according to historical usage patterns, purchasing new stations through EVgo, and coordinating installation with local contractors. We will undertake this project in phases, with the aim of upgrading the entire network (14 sites) over the next three fiscal years. Five stations are planned to be

⁶ See Case Nos. 19-3537-TF & 19-3167-TF, Order of 5/20/2020. The BYOD Tariff provides upfront incentives to up to 500 customers per year to install qualifying batteries from other manufacturers and installers. Costs associated with this program are recorded as a power supply expense.

⁷ See Exh. PUC-Info Request-1.a, filed 2/21/2020 in Case No. 19-3167-TF.

⁸ In the event that installation pace exceeds this estimate, GMP would track variance from the proposed FY22 capital investment and will seek PUC approval for treatment of any variance in a future rate case. See Prefiled Direct Testimony of Joshua Castonguay supporting concurrently filed Petition to Modify MYRP.

⁹ Budget numbers in project capital folders reflect anticipated FY22 spending, and may vary slightly from actual closing within the FY22 rate period.

replaced in FY22, which will equate to an expected capital spend of \$559,364. A copy of the capital folder for the DCFC program is provided as Schedule G-4.

2. V2G Project: GMP is working with several manufacturers of Vehicle to Grid (“V2G”) EV Chargers, and is planning to test a few systems in the coming months for different use cases. Vehicle to grid chargers allow energy in a vehicle’s onboard battery to flow out of the vehicle and back onto the grid for the purposes of demand response to lower costs and carbon, or even to a home to be used for backup power. This is all managed via software included with each system we are planning to test. This project is anticipated to commence in FY21 and the expected capital investment of \$110,669 will be handled within the original New Initiatives investment limits through FY21. A copy of the capital folder for the V2G program is provided as Schedule G-5.

GMP’s two new proposed capital-based Innovative Pilots for FY22 include:

1. SPAN Pilot: The pilot filing for this project was filed with the PUC April 21, 2021 and it is currently underway. Under the SPAN innovative pilot, we will work with 100 customers to replace their electrical panel with a smart electrical panel. GMP will use this pilot program to test these new panels, comparing metering data to GMP’s existing AMI meters, to test management of various loads within the home, such as electric water heaters and cold climate heat pumps. The panel provides customers greater insight and control of their home energy consumption and provides GMP an opportunity to learn whether the panel can simplify and/or save costs for certain distributed resource installations like solar and energy storage. The program is anticipated to require \$396,503 in capital spending closed to plant in FY22, which equates to 68 installs in FY22 at a rate of eight per month.¹⁰ A copy of the capital folder and the pilot filing, including a financial analysis of the costs and benefits of the program, is provided in Schedule G-6.
2. Enphase Battery Pilot: We anticipate this pilot will be filed in June or July 2021 and continue for a period of 18 months. The Enphase Battery innovative pilot will allow customers to participate in a program similar to the ESS Tariff, but with a different battery manufacturer to help us determine its viability to be added as an option to the ESS or similar future tariff offerings. Customers will lease a battery system from GMP for \$65 per month for ten years. Starting in July, we anticipate an install rate of 10 per month through April 2022 totaling 100 systems, 70 of which are to be installed in FY22.

¹⁰ To the extent there are FY21 closings for this program, those investments will be managed within the approved New Initiative investment limits through FY21. Budget numbers in project capital folders reflect anticipated FY22 spending and may vary slightly from actual closing within the FY22 rate period.

The total capital spending expected in FY22 for this pilot is \$1,221,995.¹¹ A copy of the capital folder for the Enphase Battery Pilot is provided as Schedule G-7.

In addition to these capital-based Innovative Pilots, GMP also has four new Innovative Pilots that are managed without additional capital costs, and which are designed to produce additional power supply benefits for customers:

1. **The Frequency Regulation Innovative Pilot:** This pilot was filed with the PUC November 30, 2020 and is currently underway. The program makes use of existing Powerwall installations in ISO-NE’s Frequency Regulation Market. GMP has enrolled 200 volunteer customers to allow use of the batteries for this purpose, generating additional revenue that will be shared between the participating customers, all GMP customers, and the platform operator. The use of battery aggregation for frequency regulation is the first of its kind in the ISO-NE market, and is truly an innovative step forward with this technology, providing a service that has been typically sourced from large fossil fuel generators. A copy of the pilot filing, including a financial analysis of the costs and benefits of the program, is provided in Schedule G-8.
2. **Workplace Charging Pilot:** This pilot was filed with the PUC on January 25, 2021 and is currently underway. Under this program, GMP is coordinating with interested commercial customers to facilitate the installation of Level 2 workplace charging stations at customer locations. The program is designed to simplify the process of installing and managing Level 2 chargers at places of employment. GMP has partnered with multiple vendors to make this possible and will pass through software/maintenance costs. We anticipate around two to three sites will be installed per month in FY22, which will result in approximately 30 total installs in the fiscal year. A copy of the pilot filing, including a financial analysis of the costs and benefits of the program, is provided in Schedule G-9.
3. **Flexible Load Management (“FLM”) 2.0 Pilot:** This pilot was filed with the PUC on March 17, 2021 and is currently underway. The FLM 2.0 pilot improves upon the original FLM pilot and pays customers to shift their load/demand during GMP peak hours. The original pilot compensated participating customers based solely on the peak hour each month regardless of performance during GMP peak events. This pilot will compensate participants based on their performance during all called events, regardless of the ultimate peak hour. Current FLM participants will transfer to the new program in FY21, and the program will continue into FY22. There are no capital spending requirements for this pilot, as the compensation will be paid out of GMP’s Power Supply budget. A copy of the pilot filing, including a financial analysis of the costs and benefits of the program, is provided in Schedule G-10.

¹¹ To the extent there are FY21 closings for this program, those investments will be managed within the approved New Initiative investment limits through FY21. Budget numbers in project capital folders reflect anticipated FY22 spending, and may vary slightly from actual closing within the FY22 rate period.

4. C&I BYOD 2.0: This pilot program is anticipated to be filed in June of 2021. Like the FLM 2.0 Pilot, the C&I BYOD 2.0 pilot will improve upon the original C&I BYOD program. In this pilot, customers will be paid based on their installed battery performance during GMP peak events. There are no capital requirements for this pilot, but rather, the compensation structure will be very similar to FLM 2.0 where participants will be paid for their performance during GMP peak events, which will come from the Power Supply budget. Because batteries will be sized very differently for different customers, it is difficult to gauge how many customers will sign up. However, we anticipate that 100–200 kW per month of battery capacity will be enrolled through February 2022, for a total of 900 kW for FY22. A copy of the current financial analysis for this program is provided in Schedule G-11.

The overall impact of GMP’s new FY21 and FY22 Innovative Pilots on GMP’s cost of service is shown on Schedule G-2b.¹² Documentation supporting the costs and anticipated revenue and power cost savings associated with these programs are provided in the remaining subparts of Schedule G, referenced above. Where applicable, this material includes known and measurable documentation as required for proposed capital expenditures under the agreement approved by the Commission in GMP’s 2018 Rate Case (Exhibit #2 to GMP-DPS MOU, Case No. 17-3112-INV).

Given the important benefits provided by these innovative efforts, GMP is respectfully requesting that the Commission authorize the requested FY22 capital budget of \$10.6M, and approve total MYRP New Initiatives capital investments over the three-year Plan of \$22.54M. As noted, GMP has filed a petition seeking approval for New Initiative investments concurrently with this Annual Base Rate filing.

¹² GMP has included new Innovative Pilots that are anticipated to start in FY21, but were not known at the time of GMP’s FY21 Annual Base Rate filing, along with new FY22 Innovative Pilots in G-2b. The cost of service impact of GMP’s request for New Initiative Investments above the pre-set \$15M three-year amount, in order to continue the ESS program in FY22, are shown separately on Schedule C. For reference to the original Schedule G-2, which was filed in advance of FY20, and reflects the original proposed forecast of investments for New Initiatives over the three-year term of the Plan, please see <https://epsb.vermont.gov/?q=downloadfile/356412/141368>. Schedule G-2a, which was filed with the FY21 Annual Base Rate filing, and showed the impact of new FY21 pilots known at that time, is available at <https://epsb.vermont.gov/?q=downloadfile/412559/149674>. To the extent that GMP develops additional innovative pilot programs during the remainder of FY21 and FY22 which are not yet known, it will propose an approach for addressing benefits and costs associated with those programs in a future rate case and/or regulation plan proceeding.

Green Mountain Power
Multi-Year Regulation Plan

Schedule G-2b
Impact of Innovative Pilot Programs on COS

G-2b Impact of New Innovative Pilot Programs Upon FY2022 Cost of Service*

6 New Programs: Span, Workplace Charging, Flexible Load Management (FLM) 2.0, Enphase Battery Pilot, C&I BYOD, Frequency Regulation.
Program descriptions in each tab

(Decrease)/Increase to Cost of Service

FY2022

(\$26,691) = Higher Retail Sales from Workplace Charging.**

\$5,481 = Higher Power Costs Associated with Higher Retail Sales from Workplace Charging.**

(\$2,032) = Power Cost Savings Associated with Span.

(\$246,498) = Power Cost Savings Associated with FLM.

\$172,549 = Passthrough Customer Payments associated with FLM

(\$50,919) = Power Cost Savings Associated with Enphase Battery Pilot.

(\$235,591) = Power Cost Savings Associated with C&I BYOD 2.0

\$164,914 = Passthrough Customer Payments associated with C&I BYOD 2.0

(\$31,218) = Power Cost Savings Associated with Frequency Regulation

\$5,399 = Wholesale energy costs associated with Frequency Regulation

(\$247,114) = Total Incremental Impact on FY2022 COS for new Innovative Services that were not previously included in the FY2021 MYRP filing.

(adjusted by Gross Revenue Tax)

* Costs for new innovative programs that affect COS which were not in previous COS filings. For reference to the original Schedule G-2, which was filed in advance of FY20, and reflects the original proposed forecast of investments for New Initiatives over the three-year term of the Plan, please see <https://epsb.vermont.gov/?q=downloadfile/356412/141368>. Schedule G-2a, which was filed with the FY21 Annual Base Rate filing, and showed the impact of new FY21 pilots known at that time is available at <https://epsb.vermont.gov/?q=downloadfile/412559/149674>. Because other costs including Plant Placed in Service are fixed, this Exhibit contains only the two items that affect COS - Revenue and Power Supply. (Tier III costs and values not separately shown here.) The cost of service impact of GMP's request for New Initiative Investments above the pre-set \$15M three year amount are shown separately on Schedule C.

** Assumed to be part of Itron's forecast for EV growth, rather than a separate line item.

**Green Mountain Power
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**Schedule G-3
Capital Folder For Energy Storage System Tariff**

To be provided as a separate document

**Green Mountain Power
Multi-Year Regulation Plan**

**Schedule G-4
Capital Folder for DC Fast Charging Project**

To be provided as a separate document

**Green Mountain Power
Multi-Year Regulation Plan**

**Schedule G-5
Capital Folder for V2G Project**

To be provided as a separate document

**Green Mountain Power
Multi-Year Regulation Plan**

**Schedule G-6
Capital Folder for Span Pilot**

To be provided as a separate document

**Green Mountain Power
Multi-Year Regulation Plan**

**Schedule G-7
Capital Folder for Enphase Battery Pilot**

To be provided as a separate document

**Green Mountain Power
Multi-Year Regulation Plan**

**Schedule G-8
Pilot Filing for Frequency Regulation Innovative Pilot**

To be provided as a separate document

**Green Mountain Power
Multi-Year Regulation Plan**

**Schedule G-9
Pilot Filing for Workplace Charging Pilot**

To be provided as a separate document

**Green Mountain Power
Multi-Year Regulation Plan**

**Schedule G-10
Pilot Filing for Flexible Load Management 2.0 Pilot**

To be provided as a separate document

**Green Mountain Power
Multi-Year Regulation Plan**

**Schedule G-11
Financial Analysis for C&I BYOD 2.0**

To be provided as a separate document