

**Green Mountain Power**  
**Capital Investment Multi-Year Summary**  
**FY 2023–2026**

We provide this summary in support of Green Mountain Power’s (“GMP”) proposed new regulation plan, Case No. 21-3707-PET (the “New Plan”). This summary provides a description of the type of needed capital investments GMP is forecasting to make during the New Plan period to continue to deliver on our commitments to customers. The summary provides a year-by-year description for each department of the types of capital investments forecasted to be done on behalf of customers. As expected, the project scoping is more detailed in the early years than it is in the later years. In 2020, the PUC approved GMP’s Climate Plan (Case No. 20-0276-PET) which laid out GMP’s plan for specific capital investments to make the system more resilient in the face of climate change-driven weather impacts. Starting in 2023, and going forward, we have merged that work directly into our capital planning cycle so that all projects will be accounted for in the forecast below. The capital investment forecast by department for the multi-year period is:

Construction Summary by Category	FY23	FY24	FY25	FY26
<b>Install</b>				
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 Line 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
	<b>131,109,457</b>	<b>115,000,000.00</b>	<b>115,000,000.00</b>	<b>115,000,000.00</b>

**Departmental Capital Investment Descriptions**

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## **Distribution Substations**

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

### **FY2024**

During this fiscal year, we are forecasting four significant and important substation rebuild projects for the Berlin #40, Londonderry, Bolton #41, and Arlington substations, based on our Long-Range T&D Plan. All these projects will improve substation safety and reliability for customers. The Berlin #40 project will rebuild the low side 12.47-kV bus, replacing the existing wooden structures, transformer, distribution breaker, and relays. This project will address clearance challenges and bring the substation up to modern standard design. We are estimating the substation rebuild at \$2.9M. The Londonderry project will upgrade major components of the substation's equipment, including relay equipment, replacing the RTUs, installing new breakers and security, and bringing this substation up to standard. We estimate this project at \$1.5M. The Bolton #41 project will replace major components including the transformer which has a nonstandard low side voltage. The project will replace existing wooden structures and motor operated air breaks that are problematic. The Bolton #41 rebuild is estimated at \$3M. The East Arlington substation will replace the low side structure and upgrade the distribution circuit breaker and relays. Also, the bushings and lightning arresters will be replaced. We estimate this project at \$1.0M.

In addition, the distribution transformer at Carvers Falls will be replaced with a larger unit. The larger transformer will increase the substation capacity and improve the system and line protection. This upgrade is estimated at \$600,000. We also plan to do an upgrade at the Bromley substation, which includes adding SCADA and an RTU for \$750,000. The X-10 portable transformer rewind will also be closed during this year at an estimated cost of \$800,000. Portable substations are critical pieces of equipment necessary to support and restore service to customers. The X-10 has recently had poor test results which indicate a failing transformer. Rewinding this transformer will bring this mobile back to like new.

The 46-kV bus voltage transformers will be replaced at the Quechee substation at an estimate of \$171,000. GMP will complete substation security projects at North Bennington and Stratton substations at estimated costs of \$146,000 and \$65,000 respectively, and an oil safety containment project at Wilmington for an estimated \$203,000.

### **FY2025**

During this fiscal year, we are forecasting three significant and important substation projects based on our Long-Range T&D Plan. The first project will be a rebuild of the Fair Haven substation. The substation will be relocated for safety and reliability given it is in a flood plain. The substation will be completely rebuilt with all new components and will include a voltage

conversion, which will increase its voltage to GMP's standard of 12.47-kV. We have been converting substations below this voltage up to that standard to increase reliability for customers. We estimate this project at \$2.9M. The second project will deliver reliability upgrades to our Wilder #70 substation. This project will upgrade major components of the substation's equipment, including relay equipment, replacing the RTUs, installing new breakers, and bringing the security devices up to standard. This project will bring the facility up to standard and improve area feeder backup capability. Two SCADA-controlled Motor Operated Load Breaks ("MOLBs") will be installed on the Wilder 711 and 712 switches. A MOLB improves reliability and facilitates restoration by providing sectionalizing capability during contingencies. The project is estimated at \$3.4M. The third distribution substation project is a rebuild at the Georgia substation. This project will replace the existing 200 PF high side fuses with a 34.5-kV high side breaker to comply with GMP's current standard practice to require a high side breaker for transformers 10 MVA and larger. It will also replace wooden structures, breakers, and relays and increase the regulator size for feeder backup. This project is estimated at \$2.9M.

#### **FY2026**

During this fiscal year, we are forecasting one significant and important substation project based on our Long-Range T&D Plan. This project will deliver reliability upgrades to our West Dummerston substation. This project will upgrade major components of the substation's equipment, including breaker and relay equipment, capacitor switch, replacing the RTUs, installing security to bring this substation up to standard. The project is estimated at \$2.5M.

## **Distribution Lines**

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

### **FY2024**

During this period, GMP will deliver several capital projects to improve the performance, reliability, and resiliency of our distribution line operations for customers to create a closer, connected, and empowered system that prepares for harsher storm conditions due to climate change. We expect to pursue a number of projects to replace existing plant that have gone beyond their useful age which can lead to reduced resiliency and need to be replaced in order to avoid near-term failure or poor performance, as well as re-locating distribution lines from off-road locations to roadside to improve reliability and resiliency for customers. Any projects that are completed will add additional benefits beyond resiliency with increased capacity for electrification and distributed generation, as well as adding pole space for broadband deployment. Cost effective underground projects to replace aging overhead assets will become much more prevalent each year as ground conditions allow.

These projects include but are not limited to:

- Chittenden Line 4: pole replacements, re-conductoring, and re-location to roadside. This project is estimated at \$462,000;
- Wallingford Line 27: pole replacements, re-conductoring, and re-location to roadside. This project is estimated at \$508,000;
- Stockbridge Line 1: pole replacements, re-conductoring, and re-location to roadside. This project is estimated at \$584,000;
- Londonderry to Weston Line 6: pole replacements and re-conductoring. This project is estimated at \$1,650,000;
- Danby Line 98: pole replacements, re-conductoring, and re-location to roadside. This project is estimated at \$393,000;
- Wardsboro Line 772 to Line VH4A15: pole replacements and re-conductoring. This project is estimated at \$251,000;
- Townshend Line VH4A Poles 1 to 27: pole replacements, re-conductoring, and re-location to roadside. This project is estimated at \$756,000;
- Townshend Line VH4A Poles 27 to 48: pole replacements, re-conductoring, and re-location to roadside. This project is estimated at \$553,000;
- Townshend Line VH4A Poles 49 to 86: pole replacements, re-conductoring, and re-location to roadside. This project is estimated at \$751,000; and
- Tie between Bethel Line 3 and Sharon Line 92: Re-build portions of lines and make this tie for reliability. This project is estimated at \$2,194,000.

## **FY2025 – FY2026**

During this period, GMP will continue to make investments necessary to deliver reliable power to its customers. Each year we will consider the distribution line infrastructure that has performed below reliability expectations or has reached an age where it is a candidate for replacement. We typically do analysis to identify these projects eighteen months in advance of the period when we begin construction. We have just started some FY24 distribution line planning and have not yet started detailed project planning beyond that period. We expect more overhead to underground rebuilds to take place in these years, leading to even greater benefits from projects for customers, along with the benefits listed previously that include reliability, additional capacity for electrification and distributed generation, and space for broadband deployment.

## **Transmission Substations**

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

### **FY2024**

During this fiscal year, we are forecasting one significant and important transmission substation project based on our Long-Range T&D Plan. This project is a reliability upgrade associated with VELCO's Substation Condition Assessment Project ("SCAP") to complete necessary upgrades, the majority related to in-kind replacement and modifications of existing equipment. This project will deliver improvements at the VELCO Middlebury substation. This project involves the replacement of all 46-kV breakers and associated protection and control systems, lightning arresters, disconnect switches, and insulators. The control building will be replaced. We estimate this project at \$1.5M.

We will also be completing four voltage transformer in-kind replacement projects to improve reliability for customers and address asset management concerns related to aging equipment. This equipment is used to provide voltage information to protective equipment and SCADA for remote indication. These projects will be at the East Barnard, Nason Street, Milton, and Bay Street substations at costs ranging between \$68,000 to \$117,500.

In addition, GMP will be adding MOLBs to the North Springfield 466 switch. A MOLB improves reliability and facilitates restoration by providing sectionalizing capability. This project is estimated at \$350,000.

### **FY2025**

During this fiscal year, we are forecasting three significant and important transmission substation projects based on our Long-Range T&D Plan. The first project will deliver reliability upgrades to our Irasville substation. This substation is tapped off from a 37-mile-long line between Middlesex and Montpelier with inadequate remote line protection. The upgrades to the substation would include oil containment improvements, 34.5-kV circuit breakers, relay protection upgrade, yard expansion associated fence, ground grid, and communications upgrades. The project is estimated at \$4.5M. The second and third projects are reliability upgrades associated with VELCO's SCAP to complete necessary upgrades, the majority related to in-kind replacement and modifications of existing equipment. Both SCAP projects will involve the replacement of all 46-kV breakers and associated protection and control systems, lightning arresters, disconnect switches, and insulators. One of these projects will implement upgrades at the VELCO St. Johnsbury substation at an estimated cost of \$1.0M. The other SCAP project will upgrade the VELCO Windsor substation. We estimate this project at \$2.4M.

## **FY2026**

During this fiscal year, we are forecasting four significant and important transmission substation projects based on our Long-Range T&D Plan. The first project upgrades the Fairfax substation to improve reliability. This project will upgrade major components of the substation's equipment, including breakers and associated relay equipment, replacing the RTUs and fence. We estimate this project at \$4.3M. The second project is a rebuild of our North Rutland substation. The primary reason for completing this project is to improve reliability for customers. The upgrades to the substation would be comprised of replacing breakers and associated relaying, ground grid, fence replacement, and control house. The radial bus configuration will be replaced with a breaker and a half configuration to improve reliability and flexibility for maintenance. The project is estimated at \$6.0M. The third project is comprised of reliability upgrades associated with VELCO's SCAP to complete necessary upgrades, the majority performing in kind replacement and modifications of existing equipment. This SCAP project will involve the replacement of all 46-kV breakers and associated protection and control systems, lightning arresters, disconnect switches, and insulators. This Project will complete identified upgrades at the VELCO East Fairfax substation at an estimated \$1.25M. An associated upgrade is the replacement of a breaker at East Fairfax at an estimated \$625,000. The last project will increase reliability with the replacement of the old breakers and relays at the Welden Street substation. There have been failures of this style and vintage of breakers. This project is estimated at \$1.0M.

## **Transmission Lines**

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

### **FY2024**

During this fiscal year, we are forecasting two significant and important transmission line projects based on our Long-Range T&D Plan. The first project will refeed the Belden and Huntington Hydro substations by connecting Line 60 Pole 113 to Line 77 Pole 17 near VELCO Middlebury. Motor Operators will be added at the junction of these two lines. This project will allow for the decommissioning of a nine-mile section of subtransmission line between Belden Substation and Salisbury. This project is estimated at \$2.1M. The second project is to address asset management concerns on the GMP transmission system. This project will replace 500 transmission poles. GMP has approximately 17,700 wood poles making up its transmission line infrastructure. Of these, there are currently 2,641 poles that are from 1959 or older (over 60 years old). GMP applies a systematic approach to pole replacement to assure that reliability will not begin to degrade, prevent higher reactive maintenance costs, and to also prevent higher future replacement costs due to increased quantities of older assets requiring replacement. The project is estimated at \$500,000.

There are four transmission line projects to add MOLBs to existing switches. These projects involve the addition of MOLB's and a control for the MOLBs. MOLBs will be added to the Brownsville 193 and 194 switches, Bromley 456 and 457 switches, the Fair Haven Tap 234 switch, and the Silk Road 626 and 824 switches. A MOLB improves reliability and facilitates restoration by providing sectionalizing capability during contingencies. The Brownsville MOLB and control project is estimated at \$550,000, the Bromley MOLB and control project is estimated at \$565,000, the Fair Haven project is estimated at \$240,000, and the Silk Road MOLB project is estimated at \$390,000.

### **FY2025**

During this period, we are forecasting two significant and important transmission lines projects. The first project is the continued systematic program to replace aged transmission poles to address asset management concerns on the GMP transmission system. This project will replace 500 transmission poles. The project is estimated at \$500,000. The second project will reconductor transmission line 102 from pole 25 to pole 252. This project is being completed to improve reliability for customers. VELCO's analytical studies in support of its most recent Long-Range Plan identified the Maple Avenue to Charlestown 46-kV path as potentially overloading under first contingencies at existing loads (i.e. loss of Lafayette Street to Highbridge), which does not meet GMP safety criteria. We estimate this project at \$4.7M.

There are two transmission line projects to add MOLBs to existing switches. These projects involve the addition of MOLBs and a control for the MOLBs. MOLBs will be added to the Randolph 921 and 922 switches and the Quechee 273 switch. A MOLB improves reliability and facilitates restoration by providing sectionalizing capability. The Randolph project is estimated at \$350,000 and the Quechee project is estimated at \$360,000.

GMP will also be constructing an Irasville bypass. This project is being completed in conjunction with the Irasville transmission substation rebuild. This project will be necessary because it is needed to maintain system reliability during the rebuild of the Irasville substation. The Project will allow for the continued networking of the 34.5-kV subtransmission system. This bypass will be temporary until the Irasville substation work is completed. This project is estimated to be \$150,000.

### **FY2026**

During this period, we are forecasting two significant and important transmission lines projects. The first project is the continued systematic program to replace aged transmission poles to improve reliability and address asset management concerns on the GMP transmission system for customers. This project will replace 500 transmission poles. The project is estimated at \$500,000. The second project will reconductor transmission line 3306 between the Websterville substation and VELCO Barre substation. VELCO's analytical studies in support of its most recent Long-Range Plan identified the Websterville to VELCO Barre 34.5-kV path as potentially overloading under first contingencies at existing loads (i.e. VELCO East Avenue 115/34.5-kV source), which does not meet GMP safety criteria. We estimate this project at \$2.0M.

In addition, there is a transmission line project to add MOLBs to existing switches. This project will involve the addition of MOLBs and a control for the MOLBs. The proposed project will add MOLBs to the East Middlebury Tap 416 and 417 switches. A MOLB improves reliability and facilitates restoration by providing sectionalizing capability during contingencies. The East Middlebury Tap MOLB project is estimated at \$390,000.

## **Power Production**

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

### **FY2024**

During this period, GMP will deliver a mix of projects to maintain and improve the strong operation of our generating assets. Many of these projects are smaller in scale and costs. They are necessary capital investments to avoid larger costs in the future to prevent the need to repair failed elements of the plants. Several of the projects delivered in this period will be larger in scope and cost and represent continued investment in these important generation facilities as GMP maintains its fleet of in-state, low-cost, renewable resources. Among these larger projects are:

- Emergency Spillway Upgrade:
  - Middlebury District, Goshen Dam: this project will upgrade the emergency spillway, which is critical to operating the plant under high water conditions. The work includes removal of existing gravel and till materials, expanding the flow capacity of the spillway and installation of new structural armoring and energy dissipating devices to prevent erosion of the spillway during floods. This is part of ongoing work at the Goshen Dam that was required by the FERC as part of an overall site inspection. The estimate for this project is \$5,500,000.
- Unit Refurbishment:
  - Montpelier District, Bolton Hydro: this project will do a refurbishment of the hydro #1 unit including inspection and overhaul of the turbine unit. This project is done for reliability and safety reasons to keep the facility in solid operating condition for the years ahead. The estimate for this project is \$2,900,000.

### **FY2025**

During this period, GMP will deliver a mix of projects to maintain and improve the operating characteristics of our generating assets. Many of these projects are smaller in scale and costs. They are necessary capital investments to avoid larger costs in the future to prevent the need to repair failed elements of the plants. Several of the projects delivered in this period will be larger in scope and cost and represent continued investment in these important generation facilities as GMP maintains its fleet of in-state, low-cost, renewable resources. Among these larger projects are:

- Water Control:
  - Colchester District, Gorge Hydro: a full upgrade of the intake including new headgates and headgate support structure. These improvements will allow for

the decommission of the existing large crane. This is a reliability project that will also improve safety and efficiency of operating the plant. The project is estimated at \$1,200,000.

- Cavendish District, Ottauquechee Hydro: a full upgrade of the electrical components of the plant to bring it to modern standards. This is a reliability project that will also improve safety and efficiency of operating the plant. The project is estimated at \$2,000,000.
  - NH/ME District, Somersworth Hydro: a full upgrade of the electrical components of the plant to bring it to standards. This is a reliability project that will also improve the safety and efficiency of operating the plant. The project is estimated at \$2,000,000.
- Unit Refurbishment:
    - Middlebury District, Weybridge Hydro: this project will be a refurbishment of the hydro unit including inspection and overhaul of the turbine. This project will improve the reliability and safety of the hydro facility. The estimate for this project is \$1,000,000.
  - Penstock Replacement:
    - Montpelier District, Marshfield Hydro: this project will inspect and replace the penstock at the surge tank location. Integrity of surge tank penstock is critical to the safe operation of the plant and required for operation. The estimate for this project is \$1,000,000.

## **FY2026**

During this period, GMP will deliver a mix of projects to maintain and improve the operating characteristics of our generating assets. Many of these projects are smaller in scale and cost. They are necessary capital investments to avoid larger costs in the future to prevent the need to repair failed elements of the plants. Several of the projects delivered in this period will be larger in scope and cost and represent continued investment in these important generation facilities as GMP maintains its fleet of in-state, low-cost, renewable resources. Among these larger projects are:

- Modernization of Plant Electrical Systems:
  - St. Johnsbury District, East Barnet Hydro: a full upgrade of the electrical components of the plant to bring it to up to standard. This is a reliability project that will also improve safety and efficiency of operating the plant. The project is estimated at \$800,000.
  - NH/ME District, Kellys Hydro: a full upgrade of the electrical components of the plant to bring it to up to standard. This is a reliability project that will also improve safety and efficiency of operating the plant. The project is estimated at \$700,000.

- Rubber Dam Installation:
  - Montpelier District, Bolton Hydro: this project will replace the rubber dam located on top of the timber crib dam. The rubber dam helps control river flows to maximize power generation or manage flows over the dam depending on plant operating conditions. The existing rubber dam has been damaged and repaired multiple times and has reached the end of its useful life. These are automated systems that allow the plant to be operated safely, effectively, and in compliance with operating permits. The estimate for this project is \$1,000,000.
- Unit Refurbishment:
  - Middlebury District, Middlebury Hydro: this project will do a refurbishment of the three hydro units including inspection and overhaul of the turbines. This project is done for reliability and safety reasons to keep the facility operating well for years. The estimate for this project is \$2,500,000.

## **Information Technology**

### **FY2023**

The capital investment planned for this period is described in GMP's FY23 rate filing.

### **FY2024 – FY2026**

GMP expects to continue to focus a large part of its IT capital investments on technology projects that create or enhance functionality and capabilities for efficient business operations, the security of our systems, and service to our customers.

During this period, we also plan to continue the updates and cycling of multiple key technology platforms. Given the rapidly evolving challenges the IT team manages, and the short planning horizons for projects, individual projects cannot be identified years in advance. However, there are areas critical to our operations and our customers that will continue to require investment, allowing us to identify at planning scale the types of projects and investments that will be needed during these years. These projects likely will encompass changes and upgrades to data centers, storage area networks, network switching and routing cores, SCADA networking and security infrastructures, telephone systems, AMI backend applications, and communications devices, as well as ongoing upgrades made necessary by the Company's application vendors to remain licensed and supported. One of the key projects that will require significant scoping and eventual investment is the migration to the next generation Oracle solution for Meter Data Management and Customer Care and Billing.

As we described in our 2021 Integrated Resource Plan, we think of the project work we expect to undertake in these years as those that create or enhance resiliency, meaning our ability to withstand cyber and weather events; expand our capabilities; improve our efficiency or enhance the availability of data we use; and secure our systems and operations.

- Creating Resiliency and Expanding Capabilities:
  - Enhancing the availability and durability of the communications infrastructures that monitor and connect the grid, provide access and information for customers, and generate telemetry for operations.
  - Facilitating uninterrupted functionality for key operational applications that serve our customers including outage management, GIS, Supervisory Control and Data Acquisition ("SCADA"), IVR, Customer Care, and web-based services.
  - Deploying cloud-based call center services as a failover to the potential physical loss of services.
  - Developing methods to establish minimum application functionality using cloud-based services and infrastructures if local services become unavailable.

- Piloting the operation of meter data management and billing systems functions in the cloud to keep data safe and secure.
  - Fortifying data and telecom networks to better withstand natural and manmade disasters—potentially burying some of these communications facilities alongside undergrounded distribution lines;
  - Making secure use of wireless and cellular technologies (like 5G) to provide telemetry, minimum functionality, and control of remote grid and network devices in the event of the loss of a communications circuit;
  - Enhancing improved storm response by co-locating certain functionality in the cloud, operational resiliency and failover capability, and to add additional application capacity, remote connectivity, and disaster recovery capabilities;
- Improving Efficiency and Enhancing Data:
    - Continuing to move, where appropriate, portions of our data and applications to the cloud;
    - Integrating and then expanding the use of Salesforce into GMP’s portfolio of data tools to achieve one-stop CRM;
    - Building new tools to improve outage, engineering, call center, generation, and revenue analytics;
    - Leveraging SCADA data, field device location data, maintenance data, battery storage and outage information, etc., to develop AI models that can predict faulty distribution devices and DERs;
    - Building and then expanding an Engineering Platform to detect things like phasing problems, hi-low voltage instances, and field device health;
    - Preserving data, so that GMP’s AMI infrastructure data is more secure. This enormous amount of data is critical to billing, GIS, outage management, and engineering studies, and significant advances in data and analytics allow GMP to better understand the operation and efficiency of the grid and its infrastructure, which benefits customers. Additional projects here to create the ability to back up and preserve this data will be critical;
    - Developing a nearly real-time system that will formulate a disaggregation AI model that can detect and alert customers and energy specialists to things like low generation and high consumption;
- Securing Infrastructure:
    - OT network, generation plant, and substation physical security and monitoring, including executing and expanding upon significant upgrades required at FERC plants and elsewhere;
    - Continued privacy and protection of customer data;

- Segmentation and isolation of critical resources;
- Endpoint detection and response;
- Expansion of Security Operations Center capabilities; and
- Resiliency of key information security resources.

## Meters

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

### **FY2024 – FY2026**

Capital investment related to the metering function will be specific to maintaining inventories of meters for installation and changeouts for each of the meter types used for customers. We will also continue to find new innovations to better serve customers, such as smart panels with energy measurement capabilities and/or on-site storage with energy measurement capability. Toward the end of this time period, we will be making decisions on the next generation metering technology for customers, and we feel the multiple benefits of these new technologies may lead us beyond the current systems in place for customer metering.

## **Property & Structures**

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

### **FY2024**

The FY2024 Facilities forecasted capital investments is focused on clean heating, energy efficiencies, and on the maintenance and upkeep of existing facilities to keep them in good working order and prevent more expensive downtime and repairs in the future. The types of investments planned include:

- HVAC Replacement
  - Royalton Roof Tops
  - Montpelier Heat Pumps
  - Energy Efficiency Improvements
  - WRJ Stockroom
- Parking Lot Re-paving
  - Westminster
- Facility Updates
  - Energy Efficiency Light Upgrades

### **FY2025**

The FY2025 Facilities forecasted capital investments is focused on clean heating, energy efficiencies, and on the maintenance and upkeep of existing facilities to keep them in good working order and prevent more expensive downtime and repairs in the future. The types of investments planned include:

- HVAC Replacement
  - Energy Efficiency Improvements
  - Middlebury Garage HVAC
- Parking Lot Re-paving
  - Colchester Paving
  - Poultney Paving
- Facility Updates
  - Energy Efficiency Light Upgrades

## **FY2026**

The FY2026 Facilities forecasted capital investments is focused on clean heating, energy efficiencies, and on the maintenance and upkeep of existing facilities to keep them in good working order and prevent more expensive downtime and repairs in the future. The types of investments planned include:

- HVAC Systems
  - Energy Efficiency Improvements
  - Montpelier Garage
  
- Roof Replacement
  - Saint Johnsbury
  - RDSC Garage Roof
  
- Backup Power Sources
  - Colchester Service Center/HQ  
Montpelier
  
- Facility Updates
  - Energy Efficiency Light Upgrades

### **Transportation/Fleet**

GMP's traditional fleet management practice has been to retire vehicles when they are no longer economically serviceable or will not pass annual safety inspections due to frame rot, major component failure (drivetrain), or similar catastrophic failures. While deferring replacement may be somewhat less capital intensive in the short run, this practice is short-sighted and not sustainable in the long term for maintaining a safe and reliable fleet, used exclusively for serving customers. Operation costs (fuel, maintenance) and carbon emissions also rise faster as a vehicle ages, peaking in the final years of service life.

GMP currently operates bucket trucks as old as 2007 and digger trucks as old as 2003. Vehicles of this vintage have between 300,000 miles to over 500,000 miles, including engine hour equivalent miles. This legacy practice bears the risk of incurring unpredictable costs from year to year when cost stability in rates is a priority and valued by customers. More importantly, it can start to stretch the ability of these vehicles to create a safe working environment for our team.

To achieve a balance between acquisition cost versus reliability, safety, and maintenance cost stability, GMP's transportation plan initiates vehicle replacement on a regular and predictable schedule. Over time, the plan will aim to shorten the average fleet age, improve reliability, lower fuel consumption and maintenance costs and reduce the carbon intensity of fleet operations. This will benefit customers, and GMP crews responding to provide service. As discussed further in testimony, GMP will be transitioning our large vehicle purchase from a straight capital purchase to a lease arrangement. After modeling the customer cost impacts of both, we have determined this to be a more cost-effective approach for customers.

Key features of the transportation plan:

- Line trucks (buckets/diggers) replaced after eight years of service (now using lease model);
- Medium trucks (3500–5500 series chassis) replaced after eight years of service; and
- Light duty vehicles (small trucks, cars, SUVs) replaced after eight years of service.

By 2025, 100% of GMP cars/SUVs will be electric along with 25% of light duty trucks. Electrification of light duty trucks will continue over time.

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

## **FY2024**

GMP will execute on our eight-year end-of-life cycle of vehicle retirements and replacements. In FY2024, GMP is forecasting to replace the following vehicle types that will reach the period of planned replacement:

- 18 Medium duty trucks (2500–5500 series), all model year 2016, and
- 25 light vehicles, including 10 pickup trucks and 15 small cars/SUVs.

## **FY2025**

In 2025, GMP will execute the end-of-life cycle of vehicle retirements and replacements. In FY2025, GMP is forecasting to replace the following vehicle types that will reach the period of planned replacement:

- 18 Medium duty trucks (2500–5500 series), all model year 2017, and
- 25 Cars/SUVs/light duty pickups (all fully electric).

By the end of 2025, GMP will have achieved 100% of fully electric vehicles in the cars/SUV category and 25% of all light duty trucks will also have been fully electrified.

## **FY2026**

In 2026 GMP will continue to execute the end-of-life cycle of vehicle retirements and replacements. All medium duty trucks will be within lifecycle in FY2026 so no replacements in that category are needed. In FY2026, GMP is forecasting to replace the following vehicle types that will reach the period of planned replacement:

- 25 light duty pickups (all fully electric)

Light duty pickup truck replacements will continue to be fully electric until 100% of replacements are achieved in 2029.

## New Initiatives

### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

### **FY2024 – FY2026**

We have forecasted each year to deliver the current and expanding portfolio of customer-facing programs that deliver a cleaner, more reliable and resilient grid. Most of our capital investments in the last several years have focused on energy storage systems that deliver value to participating and non-participating customers, cutting carbon and costs. We anticipate this will continue during this period, and that additional programs will be a mix of capital assets and non-capital assets. Advances in technology will guide the offerings that we provide each year, and we will remain flexible in choosing the best partners and technologies to bring to our customers.

#### Energy Storage Service Tariff Program

GMP is expecting continued capital spending for the ESS program that is open to 500 customers in each calendar year. To increase resiliency in the face of climate change, the program will continue to expand the number of highly important distributed resources that also provides value to all customers.

#### DCFC Installs

We will continue deploying Level 3 DC-Fast Chargers to upgrade and expand the network of fast chargers available in GMP territory. This is a critical need to ensure the increasing number of EV drivers have plenty of access to charging infrastructure to address range anxiety. GMP will focus on developing challenging locations that are not covered by various State programs.

#### Resiliency Zones

We have described resiliency zones in more detail in testimony, however we are expecting to continue after successful pilots in 2023. These projects will include both capital investments and other models, such as direct PPAs. Direct ownership models will include residential storage directly in homes and businesses, or at a community scale to be used for microgrids. The capital spending for these are included in our forecast of \$10M per year under New Initiatives.

### **Joint Ownership**

#### **FY2023**

The capital investment planned for this period is documented and included in GMP's FY23 rate filing.

#### **FY2024 – FY2026**

We have forecasted these years based upon our regular annual joint-ownership investments in these generation facilities:

- Millstone nuclear station
- McNeil biomass station
- Wyman generating station
- Stony Brook generating station