# **Rate Descriptions**

The following are meant to be helpful descriptions of Green Mountain Power's rate schedules, but ultimately the language of the tariff takes precedence. The charges listed for each rate are applicable for new service locations, effective prior to March 31, 2019. For a full list of charges, including legacy customers and scheduled changes, please see

<u>https://greenmountainpower.com/rates/</u>. We'd also like to answer any questions you have! Call us: 888-835-4672.

# **Glossary**:

**kW**: stands for kilowatt, this is a unit of power, an amount of energy at a given instant. 1 kW = 1000 watts.

**kWh**: stands for kilowatt-hour, this is the unit of electricity used for billing purposes. It is the average power (kW) over the course of one hour. As an example, ten 100-watt light bulb turned on for one hour will consume 1 kWh.

**Peak**: an event characterized by high electricity demand (kW). The term may be used to describe a customer's highest demand over a given period or the system-wide demand for all GMP customers.

**Customer charge**: a fixed amount that covers a portion of the fixed costs of serving a customer (billing, accounting, metering) regardless of how many kWh they consume during the month. The customer charge is billed on a daily basis.

**Usage charge**: a charge based on the amount of energy (measured in kWh) consumed. Expressed as a \$/kWh charge it is also referred to as an energy charge.

**Demand charge**: a charge paid by mostly non-residential customers based on their highest electrical demand (measured in kW) in given month. The demand charge is collected separately from the energy charge and is meant to recover the cost of the parts of the GMP system that are related to capacity. GMP is required to have sufficient capacity in the equipment (generation facilities, distribution lines, transformers, etc.) required to serve customers at all times and demand charges are used to share these costs fairly among customers where the customers who set higher demand share a larger responsibility of these costs. Some classes of smaller customer (mostly residential) recover these capacity costs via the energy charge and therefore do not have demand charges.

**Rider**: a discount (e.g. for demand response) or additional cost (e.g. for renewable energy) that rides on top of an existing rate. Riders are mostly voluntary and can apply across multiple rates.

**Wholesale electricity:** Electricity that is bought and sold among utilities and independent power producers. In New England, the ISO-NE (grid operator) administers markets for generating capacity and energy, among other products. These costs can fluctuate throughout the year according to the economic principles of supply and demand but may also be influenced by system disturbances like a large-scale power plant going off line unexpectedly.

**1-phase**: a type of power distribution used to serve most household electrical loads.

**3-phase**: a type of power distribution that allows for more power to be distributed using less material. 3-phase power is also an economical way to provide power to large motors like industrial machines and compressors to cool buildings.

**Renewable energy certificate (REC):** the environmental attribute associated with renewably generated electricity. RECs are helpful to track who can take credit for renewables because once the electricity is on the grid, it's impossible to determine its exact source.

**Time of Use rate:** a rate where the rates are different depending on the time of day or day of week. This type of rate schedule allows for higher rates during times when the cost to serve customers is highest and lower rates when the costs are lower.

# **Residential Rates:**

#### Rate 1: Residential Service

**Overview**: Available to all single-family homes, individual apartments, and farms, with the same price for electricity at every hour of the day.

The numbers	
Customer charge	\$0.480/day
Usage	\$0.16446/kWh

Why we have this rate: It is straightforward, easy to understand, and can be used by customers who may not use much electricity or who may *not* have an easy ability to shift when they use the electricity.

Who is it good for: customers looking for simplicity who don't want to think about the timesensitivity of electricity use.

#### Rate 3: Off-Peak Water Heating Service

**Overview**: Rate 3 service is separately metered to the customer's electric water heater. Note that this is in addition to regular service and so Rate 3 customers will have two meters. Customers pay a lower kWh rate in exchange for allowing GMP to cut power to the water heater for up to 9 hours each day. The hours that GMP does not make service available changes by season.

The numbers	
Customer charge	\$0.306/day
Usage	\$0.09847/kWh

Why we have this rate: water is really good at retaining heat when well-insulated. And because water tanks are often kept at a temperature much hotter than you would ever want to shower with, we can cut off power to the water heater without a significant drop in the temperature of the water you use in your house. In exchange for allowing GMP to do this when the cost of electricity is typically high, we are able to offer customers a lower rate when compared to Rate 1.

Who is it good for: customers who are comfortable with GMP cutting off power to their water heaters during part of the day because their water tanks are very well-insulated and have good storage capacity. As opposed to a time of use rate in which electricity *access* is unaffected but prices are higher during peak times, under Rate 3 power is cut off entirely. This is why the program requires a separate meter. During the shutoff hours electricity will be available as usual to the rest of the home. Both residential and small commercial customers are eligible for this rate. The heating element capacity must not exceed 60 watts per gallon, or 4500 watts, whichever is greater.

#### Rate 9: Residential Critical Peak Pricing Service

**Overview**: Similar to Rate 1, but customers pay a slightly lower energy rate. However, during GMP-defined critical peak events the energy rate is much higher. Customers will be notified in advance of these critical peak events and if they can avoid using much electricity during these hours they will enjoy lower bills compared to Residential Rate 1. Customers will be asked to reduce their energy use for up to ten critical peak energy days throughout the year.

The numbers	
Customer charge	\$0.480/day
Usage	
Peak	\$0.66921/kWh
Off-peak	\$0.15795/kWh
Peak hours	Between noon and 8 pm on up to ten days
	between May 1st and September 30th

Why we have this rate: Peak power use for each utility in the region is used to calculate costs their customers will pay for the grid. Every kW saved during these "critical peak" hours (which often corresponds to extreme high and low temperatures) translates into savings for all GMP customers. You can save on your own electric bill if you are by reducing energy consumption during peaks, and customers on this rate are rewarded with a slightly lower energy rate at all other times. However, the cost during the peak events is more than 4 times higher than regular Rate 1 to discourage consumption at those times.

Who is it good for: customers who have the flexibility to reduce afternoon/evening power use on demand during the spring and summer months. This can be achieved by changing behavior

or scheduling devices to turn off automatically. Customers are notified of these peak events via email or text message.

#### Rate 11: Residential Time of Use Service

**Overview**: Available to single family homes, individual apartments, and farms. This is a time-of-use rate with periods of higher-priced peak kWh and lower-priced off-peak kWh.

The numbers	
Customer charge	\$0.635/day
Usage	
Peak	\$0.26114/kWh
Off-peak	\$0.11131/kWh
Peak hours	Monday-Friday 1:00pm – 9:00pm

Why we have this rate: the wholesale price of electricity in the New England market generally corresponds with demand. The price is therefore highest on weekdays in the afternoon and evening ("on-peak" hours), as people return home from work and turn on lights and appliances, causing electricity demand to increase. Rate 11 allows customers to pay less for electricity during "off-peak" hours, in exchange for paying a premium to use on-peak.

Who is it good for: customers who typically use significantly less electricity during the afternoon and evening compared to other times, or who have the flexibility to consistently shift their power use away from peak hours through direct action (e.g. choosing to run a laundry machine later in the evening) or by scheduling smart devices like thermostats and water heaters.

#### Rate 13: Electric Load Management Services

**Overview**: a separately metered service to the customer's electric storage space heating equipment. Customers limit space heater charging to off-peak periods and pay a lower off-peak usage rate in return for controlling the charging of this equipment themselves.

The numbers	
Customer charge	\$0.928/day
Usage	
Peak	\$0.90684/kWh
Off-peak	\$0.08374 /kWh
Peak hours	7:00am – 11:00pm

Why we have this rate: Rate 13 is designed for electric storage space heating units, which are not required to be running on a continuous basis. Instead, they can charge up at certain times and release that stored energy over the course of the day, usually through the use of high-density ceramic bricks. This lets you charge up when wholesale electricity prices are less expensive, which we incentivize through lower off-peak and higher on-peak usage charges. This aligns the customer's goals with GMP's, resulting in savings for all customers. Similar to Rate 3, Rate 13 takes advantage of thermal heat retention, but unlike that rate, customers are responsible for controlling the charging of the electric storage equipment themselves.

Who is it good for: customers with electric thermal storage units who can adjust the consumption of the unit at different times of day. The fully charged unit should be capable of serving the building's heating load for up to 16 hours.

# Rate 14: Residential Time-of-Use & Critical Peak Pricing Service

**Overview**: Similar to Time-of-Use Rate 11, but customers pay slightly lower energy rates. However, during GMP-defined critical peak events the energy rate is much higher. Customers will be notified in advance of these critical peak events and if they can avoid using much electricity during these hours they will enjoy lower bills compared to Residential Rate 11. Customers will be asked to reduce their energy use for up to ten critical peak energy days throughout the year.

The numbers	
Customer charge	\$0.635/day
Usage	
Critical Peak	\$0.67216/kWh
Peak	\$0.25428/kWh
Off-peak	\$0.10839/kWh
Critical peak hours	Select weekdays between noon and 8 pm
	on up to ten days between May 1st and
	September 30th.
Peak hours	Monday-Friday between 1:00 - 9:00 pm

Why we have this rate: Peak power use by each utility in the region is used to calculate costs their customers will pay for the grid. Every kW saved during these "critical peak" hours (which often corresponds to extreme high and low temperatures) translates into savings for all GMP customers. If you can reduce your energy use when we anticipate a peak, you can get slightly lower energy rates. But, the cost during the peak events is much higher than regular Rate 11 to discourage consumption at those times.

Who is it good for: customers who can limit energy use year-round on weekdays in the afternoon/evening and have the flexibility to reduce load in response to critical peak events during the summer.

# Rate 22: Residential Seasonal Time-of-Use

**Overview**: Similar to Rate 11 but incorporating seasonality into the peak/off-peak times, Rate 22 is available to single family homes, individual apartments and farms.

The numbers	
Customer charge	\$0.635/day
Usage	
Peak	\$0.26114/kWh
Off-peak	\$0.11131/kWh
Peak hours	
5/1 – 10/31	Mon – Fri 1:00pm to 9:00pm
11/1 – 4/30	Mon – Fri 7:30am – 11:30am AND
	4:30pm – 8:30pm

Why we have this rate: similar to Rate 11, Rate 22 rewards usage at times when the regional electricity price is typically low. During the winter months, price spikes can also happen during the morning. So, Rate 22 has two, shorter peak periods (morning and late afternoon) instead of one longer one. This is an alternative for customers interested in a time-of-use rate, but whose regular power use might not be a great fit for Rate 11.

Who is it good for: customers who have the flexibility to shift their power use away from the morning and late afternoon/early evening during the winter months.

# **Residential Riders:**

# Electric Assistance Program (EAP) Rider

A discounted rate available to residential customers on Rate 1 or 11 who meet all EAP requirements, including a household gross income at or below 150% of the federal poverty level. An EAP participant must reapply for the EAP rate once per year. EAP participants are eligible to have all past due balances set to zero upon enrollment.

The numbers		
Rate 1		

Customer charge	\$0.360/day
Usage	\$0.12334/kWh
Rate 11	
Customer charge	\$0.476/kWh
Usage	
Peak	\$0.19585/kWh
Off-peak	\$0.08348/kWh
Peak Hours	Monday-Friday 1:00pm – 9:00pm

# Voluntary Renewable Service Rider

Also known as "Cow Power," this rider allows customers to choose to purchase renewable energy certificates from Vermont farmers who operate methane digesters that use agricultural byproducts and waste for fuel. This rider can be overlaid on top of the usage charge of any rate and costs **\$0.04/kWh**. Customers can choose to purchase an amount equivalent to 25%, 50%, or 100% of their energy consumption. Additionally, commercial and industrial customers on Rate 63/65 may purchase 10% of their consumption.

# Renewable Energy Rider

Similar to Cow Power, except instead of purchasing renewable energy certificates (RECs) from methane digesters on Vermont farms, in this case the RECs come from wind, solar, and hydropower and cost **\$0.03/kWh**. Residential customers can choose to purchase an amount equivalent to 25%, 50%, 75%, or 100% of their energy consumption. For commercial and industrial customers, the percentage must equal a multiple of 10%.

# Innovative Service Rider – GMP Tesla Battery Pilot Program

Available to customers in GMP's Tesla Powerwall pilot program. In exchange for a discounted cost on the system, customers allow GMP to control the equipment in order to reduce system-wide peaks. GMP will charge the battery to its full capacity if an outage is expected due to extreme weather. GMP owns the system and the customer pays a monthly fee for a period of 10 years.

# **Commercial and Industrial Rates:**

# Rate 3: Off-Peak Water Heating Service

Identical to Rate 3 for residential customers. See above for details.

#### Rate 6: General Service

**Overview**: Customers are able to use electricity at any hour of the day at one uniform energy rate, as long as your power use each month does not go above a set amount. Rate 6 does not have a separate demand charge. Instead, those costs are included in the energy rate. With a fixed energy rate, this does not offer customers the ability to save money by managing demand.

The numbers	
Customer charge	\$0.635/day
Usage	\$0.16178 /kWh

Why we have this rate: It is straightforward, easy to understand, and can be used by customers who may not use much electricity or who may *not* have an easy ability to shift when they use the electricity.

**Who it is good for:** Rate 6 is usually best suited for small commercial customers who don't want to be concerned with demand charges or time of electricity consumption. This rate is not available to customers with a maximum demand 200 kW or greater or whose average consumption over a four-month period exceeds 7600 kWh per month.

#### Rate 8: General Service

**Overview**: This rate class has a demand charge component (kW at any single point in time) and a usage charge component (the total kWh consumed). The demand charge component is determined by the customer's highest peak (measured kW in 15-minute intervals) during the current month, or 50% of the highest peak during the previous 11 months, whichever is higher.

The numbers		
Customer charge		
1-phase:	\$0.622/day	
3-phase:	\$1.054/day	
Usage		
First 500 kWh	\$0.17080/kWh	
Next "A" kWh	\$0.17080/kWh	
Additional kWh	\$0.10301/kWh	
Demand		
First 5 kW	\$0.000/kW	
All additional kW	\$16.740/kW	

**Why we have this rate:** Rate 8 gives customers an opportunity to lower their overall average cost by managing their demand. We encourage this because reducing demand on the system reduces GMP's reduces costs for all customers. The "A" block of kWh is determined by the peak demand using the formula "A" = 3.0 \* (peak kW demand - 5 kW) \* number of days in the

current billing period. When peak demand is less than 5, "A" = 0. The kWh in the A block are charged a high rate, which acts like a pro-rated demand charge for customers who use between zero and 5 kW.

**Who it is good for:** small commercial customers who can manage their peak demand effectively, which will reduce the demand charge portion of their bill. The best way to understand this is to go through an example. Let's say customer XYZ consumes an average of 6000 kWh per month and has a maximum load of 10 kW. This energy profile is typical of small retail shops like corner grocery stores. The following table shows what XYZ would pay under Rates 6 and 8.

	Rate 6	Rate 8
Customer charge	30 days * \$0.635/day =	30 days * \$0.622/day = <mark>\$18.66</mark>
	\$19.05	
Usage charge	6000 kWh * \$0.16178 =	First 500 kWh: 500 kWh *
	\$970.68	\$0.17080/kWh = <mark>\$85.40</mark>
		Next "A" kWh:
		A = 3 * (10 kW – 5 kW) * 30
		days = 450 kWh
		A * \$0.17080/kWh = <mark>\$76.86</mark>
		Additional kWh: (6000 kWh –
		500 kWh – A kWh) *
		\$0.10301/kWh = <mark>\$520.20</mark>
Demand charge		(10 kW – 5 kW) * \$16.740 =
		\$83.70
Total	\$989.73	\$784.82

This customer comes out better under Rate 8 because of a small peak demand. In contrast, if the customer had a maximum demand of 20 kW, they would instead pay \$1013 under Rate 8, making Rate 6 a better choice.

Like Rate 6, this rate is not available to customers with a maximum demand 200 kW or greater or whose average consumption over a four-month period exceeds 7,600 kWh per month.

Rate 13: Electric Load Management Services

Identical to Rate 13 for residential customers. See above for details.

Rate 63/65: Commercial and Industrial Time of Use Service

**Overview:** Rate 63/65 is available to all non-residential and farm customers on an optional basis and required for customers consuming 7,600 kWh or more per month or with an average demand of more than 200 kW. Customers can save money by effectively managing their maximum demand. Like Rate 8, the demand charge component is determined by the customer's highest peak (measured kW in 15-minute intervals) during the current month, or 50% of the highest peak during the previous 11 months, whichever is higher.

The numbers	
Customer charge	\$3.370/day
Usage	
Peak kWh	\$0.10657/kWh
Off-peak kWh	\$0.08003/kWh
Demand	
Peak kW	\$15.015/kW
Off-peak kW	\$4.104/kW
Voltage discounts	
Primary	2.50%
Sub-transmission	12.48%
Sub-transmission > 20 MW	26.44%
Transformer ownership credit	\$0.8199/kW
	demand
Peak Hours	Monday –
	Friday 6:00am
	– 11:00pm

Why do we have this rate? This is a typical rate structure for medium and large commercial and industrial customers. If your demand exceeds 200 kW, you can manage maximum power use and create bill savings through the rate's separate demand charge. The voltage discounts reflect a lower cost to serve customers who receive electricity at higher voltages (and therefore do not require GMP to own and service equipment to bring the voltage down to the distribution level). This rate also includes a transformer ownership credit to reimburse customers for owning their own equipment, which saves money for all GMP customers. Like many other rates, Rate 63/65 has peak and off-peak periods, which helps align customer incentives with GMPs.

Who it is good for: medium to large commercial and industrial customers, ideally with dedicated facility management systems to manage peak demand and modulate consumption to align with off-peak periods.

Rate 70: Commercial and Industrial Transmission Service

**Overview:** Rate 70 is available to Commercial and Industrial accounts who take service directly from the high-voltage transmission grid and have peak demands in excess of 10 MW.

The numbers		
Customer charge	\$162.314/day	
Usage		
Peak kWh	\$0.09067/kWh	
Off-peak kWh	\$0.06973/kWh	
Investment Charge		
Peak demand	\$4.387/month/kW	
Off peak demand	\$2.952/month/kW	
Peak Hours	Monday – Friday 6:00am –	
	11:00pm	

Why we have this rate: for certain large customers, it makes financial sense to own and operate their own distribution-level electrical infrastructure as opposed to paying GMP (through higher rates) to do it for them. In this case, GMP still provides the electricity but serves the customer at the transmission-level voltage (a much higher voltage than electricity flowing to your house) and the customer then buys and maintains the equipment to step it down to the right voltage and distribute it. GMP offers the lower rate because serving customers this way costs less. Because these customers still draw from the grid, they are responsible for paying their fair share of the system-wide peak-related costs, which is covered through the investment charge. Rate 70 also has a peak and off-peak component to reflect the dynamic price of wholesale electricity throughout the day.

Who is this rate good for: large manufacturing plants and campuses with a dedicated facilities staff to maintain electrical equipment and manage peak demand.

# **Commercial and Industrial Riders**

# Curtailable Load Rider / Critical Peak Rider / Load Response Rider

These three riders are all similar, and customers voluntarily reduce power use at the request of GMP in expectation of a large system-wide peak. The load reduction creates cost savings for GMP, which is shared with the participants in the form of either a direct reimbursement or lower rates. Each rider has a different compensation mechanisms and requirements for participation, but in all cases GMP notifies the customer by 3pm one day before the peak period in which they will be asked to reduce load.

• <u>Curtailable Load Rider (CLR)</u>: typically used by ski areas who have considerable flexibility in operating their snowmaking equipment (and currently on Rate 63/65). There will be at least one event called every 30 days. The participant's demand during the event sets the on-peak demand charge for the month. In other words, the on-peak window

changes from 6am-11pm Monday-Friday to those hours falling within peak events. This better aligns customer costs with GMP's. The off-peak demand charge applies to all hours that have not been declared peak event hours. In order to participate, the customer must be able to shed at least 25% of its peak load and respond to all events called throughout the year. In 2018, 29 such events were called, lasting between 4 and 8 hours each. If a participant misses an event, they may be removed from the rider but will not pay a higher charge than they otherwise would have under Rate 63/65.

• <u>Critical Peak Rider</u>: targeted at more typical C&I customers like schools and commercial buildings. This rider amounts to adding a high-cost critical peak pricing period to Rate 63/65, so that customers are incentivized to use less electricity during critical peak events. In exchange, participants have the opportunity to save money by paying lower usage and demand charges in regular peak and off-peak times. Events are called less frequently than the CLR rider, but there is a direct penalty for ignoring a critical peak event, reflected in the higher charges. The updated rates are as follows:

The numbers	
Customer charge	\$3.730/day
Usage	
Critical peak kWh	\$0.38384/kWh
Peak kWh	\$0.10389/kWh
Off-peak kWh	\$0.08003/kWh
Demand	
Critical peak kW	\$10.051/kW
Peak kW	\$10.808 /kW
Off-peak kW	\$4.104/kW
Voltage discounts	
Primary	2.50%
Sub-transmission	12.48%
Sub-transmission > 20 MW	26.44%
Transformer ownership credit	\$0.8199/kW demand
Critical peak hours	Called at GMP's discretion,
	shall not exceed 8 hours in
	any day or 150 in a
	calendar year
Peak Hours	Monday – Friday 6:00am –
	11:00pm

• <u>Load Response Rider</u>: in this case the customer is only rewarded if GMP saves money as a result of the load curtailment. The savings are proportional to the load reduction during the monthly or annual peak, with 70% of the savings shared with the participant. This is different from the previous two riders, in which case the customer can save money regardless of GMP's accuracy in predicting a peak. All customers on Rate 63/65 are eligible for the Load Response Rider, although this is best taken advantage of by

large customers who have a considerable amount of flexible load to curtail without interrupting operations.

Participants in all riders should have a dedicated energy manager (or multiple) who can act on the event notices to reduce peak demand.

#### Economic Development Incentive Program

This rider contains temporary reduced rates for Rate 63/65 or Rate 70 customers expanding or starting new business in the GMP service territory. These customers pay lower rates if they meet the program criteria, including committing to participating in energy conservation programs and certifying that reduced electricity rates played a significant role in deciding to expand or add operations in Vermont. The bill discounts are as follows: Months 1-48: 20.00%

#### Voluntary Renewable Service Rider

Same as for residential. See above for details.

<u>Renewable Energy Rider</u> Same as for residential. See above for details.

#### Innovative Service Rider - Tesla Battery

Same as for residential. See above for details.