

REPORT TO THE VERMONT STATE LEGISLATURE

Act 55: 2024 Report on Electric Rates for Electric Vehicles

Submitted by the Vermont Public Utility Commission to the Senate Committees on Finance, on Natural Resources & Energy, and on Transportation, and to the House Committees on Energy & Technology and on Transportation

January 15, 2024

I. Introduction and Statutory Basis

On June 3, 2021, Act 55, an act relating to the Transportation Program and miscellaneous changes to laws related to transportation, was signed into law.¹ Among other things, Act 55 directs the Vermont Public Utility Commission (“Commission”) to file a report to the Legislature annually for four years regarding progress on rates related to electric vehicles (“EV”)² and electric vehicle supply equipment (“EVSE”). This is the third report filed by the Commission.

Section 33 of Act 55 directs distribution utilities to develop rates that manage loads for greater cost containment, while supporting greater customer participation in such efforts and promoting the adoption of electric vehicles. Utilities are required to offer rates to their customers by June 30, 2024.

Section 33 also requires the Commission “in consultation with the Department of Public Service and State electric distribution utilities” to “file written reports...that address the goals delineated in subdivisions (c)(1)(A)–(F) of this section, as applicable, and any progress barriers towards the goals contained in subsections (a) and (b) of this section.”^{3,4} This year’s report is the third of four reports that will be filed with the

¹ Public Act No. 55 (2021 Vt., Bien. Sess.) (“Act 55”).

² Section 1(b)(4) of Act 55 states that “‘Plug-in electric vehicle (PEV),’ ‘plug-in hybrid electric vehicle (PHEV),’ and ‘battery electric vehicle (BEV)’ have the same meanings as in 23 V.S.A. § 4(85).” 23 V.S.A. § 4(85) explains that “[a] ‘plug-in electric vehicle’ includes both a ‘battery electric vehicle’ and a ‘plug-in hybrid electric vehicle’” and provides definitions. We use the term “EV” in this report to refer to PEVs as that term is used in Act 55.

³ Act 55, Section 33, (c)(1)(A)-(F): “(c) PEV rates approved by the Public Utility Commission under subdivisions (1) and (2) of this subsection comply with subsection (b) of this section. (1) The Public Utility Commission shall approve PEV rates that it finds, at a minimum: (A) support greater adoption of PEVs; (B) adequately compensate PEV operators and owners of EVSE available to the public for the value of grid-related services, including costs avoided through peak management; (C) adequately compensate the electric distribution utility and its customers for the additional costs that are directly attributable to the delivery of electricity through a PEV rate; (D) include a reasonable contribution to historic or embedded costs required to meet the overall cost of service; (E) do not discourage EVSE available to the public; and (F) do not have an adverse impact to ratepayers not utilizing the PEV rate.”

⁴ Act 55, 2021, Section 33, (a)-(b): “(a) This section serves to encourage efficient integration of PEVs and EVSE into the electric system and the timely adoption of PEVs and public charging through managed loads or time-differentiated price signals. (b) Unless an extension is granted pursuant to subsection (e) of this section, all State electric distribution utilities shall offer PEV rates, which may include rates for electricity sales to an entire customer premises, for public and private EVSE not later than June 30, 2024. These rates shall, pursuant to 30 V.S.A. § 225, be filed for review and approval by the Public Utility Commission and encourage: (1) efficient use of PEV loads consistent with objectives of least-cost

Legislature. But it is also the last report that will be submitted before the June 30, 2024, deadline for utilities to implement EV rates. The Commission focused this year's data collection on the utilities' progress toward meeting the June 2024 deadline for rate implementation.

In preparing the 2024 report, the Commission requested two rounds of stakeholder comments, each followed by a workshop with stakeholders to discuss the comments and any additional topics. The Commission also provided guidance to the utilities on filing tariffs, requesting exemptions, and requesting extensions, including an October 16 deadline for utilities to file requests for approval of new EV tariffs, exemption requests, and extension requests. Participants in the workshop and comment process included the Vermont distribution utilities, the Vermont Department of Public Service, and ChargePoint, Inc. The information gathered from the comments received and workshop discussions has been integrated into this report. Like past years' reports, this report specifically and narrowly addresses the topics raised by Act 55.⁵

As of the filing of this report, all utilities have either submitted new EV tariffs, requested exemptions for existing tariffs, or requested additional time to submit new tariffs.

Twelve utilities have submitted new EV tariffs to the Commission for review:

- The Vermont Public Power Supply Authority ("VPPSA"), which represents eleven municipal utilities,⁶ filed a preliminary proposal for an EV rate that would

integrated planning, set out in 30 V.S.A. § 218c, and 30 V.S.A. § 202(b) and (c); (2) participation in the PEV rates; (3) travel by PEV relative to available alternatives; and (4) greater adoption of PEVs."

⁵ Act 55, section 33(f): "The Public Utility Commission, in consultation with the Department of Public Service and State electric distribution utilities, shall file written reports with the House Committees on Energy and Technology and on Transportation and the Senate Committees on Finance, on Natural Resources and Energy, and on Transportation that address the goals delineated in subdivisions (c)(1)(A)–(F) of this section, as applicable, and any progress barriers towards the goals contained in subsections (a) and (b) of this section not later than January 15, 2022, January 15, 2023, January 15, 2024, and January 15, 2025."

⁶ Barton Village, Inc., Electric Department ("Barton"); Village of Enosburg Falls Electric Department ("Enosburg"); Town of Hardwick Electric Department ("Hardwick"); Jacksonville Electric Company ("Jacksonville"); Village of Johnson Water & Light Department ("Johnson"); Village of Ludlow Electric Light Department ("Ludlow"); Town of Lyndon Electric Department ("Lyndon"); Village of Morrisville Water & Light Department ("Morrisville"); Town of Northfield Electric Department ("Northfield"); Village of Orleans Electric Department ("Orleans"); and Village of Swanton, Inc., Electric Department ("Swanton").

be implemented by all of its member utilities. VPPSA's preliminary rate proposal would account for fluctuating energy-market conditions.

- VEC has filed a new residential EV tariff for review by the Commission, which would move VEC's current Flexible Load Home Charger Program into a tariff.

Four utilities have requested an exemption for existing tariffs:

- The City of Burlington Electric Department ("BED"), Green Mountain Power Corporation ("Green Mountain Power"), and Vermont Electric Cooperative, Inc. ("VEC"), have requested exemptions for existing rates.
- GF Power LLC ("GF Power"), which was authorized by the Commission in 2022 to operate as a public utility serving the GlobalFoundries facility in Essex, Vermont, has also requested a determination that the rate approved in its certificate of public good meets the goals of Act 55.

Finally, three utilities have requested extensions of time to file their EV tariffs:

- The Town of Stowe Electric Department ("Stowe Electric") has requested an extension of time to implement an EV rate while it completes the implementation of a new enterprise software system. Stowe Electric explains that the software implementation project requires significant staff resources and that the new software will provide additional capabilities that may affect its EV-rate design. Stowe Electric has requested an extension until June 30, 2024, to file its EV tariff.
- Washington Electric Cooperative ("WEC") has requested an extension to file an EV tariff with the Commission to allow it time to upgrade its existing metering infrastructure. WEC explains that it expects to propose an EV tariff by March 14, 2025, with implementation to occur in at least part of WEC's service territory by January of 2026 and across its entire service territory during 2027 as its metering upgrades are completed.
- The Village of Hyde Park Electric Department ("Hyde Park Electric") has requested a two-year extension of time to file EV rates. Hyde Park Electric also identifies the need to upgrade its current metering system as the basis for its extension request, as well as the need to evaluate the rate impacts that will occur due to the upgrades.

As described in this report, there remains a wide range of progress on EV-rate implementation by Vermont's distribution utilities, with some utilities having existing

EV-specific rate offerings that have been in place for several years, some proposing new EV rates, and others identifying technology and infrastructure limitations to be resolved before an EV rate can be implemented. However, if approved by the Commission, the new tariffs filed and existing tariffs for which exemptions have been requested would result in approximately 95% of Vermont utility customers having access to an EV rate that meets the requirements of Act 55.⁷

We also note, as discussed by stakeholders over the course of the Commission's proceeding, that opportunities remain for all of the utilities to continue to work to improve their existing EV rates and to introduce new rate options, particularly to address the areas of demand charges, multi-unit properties, and fleet charging. The Commission is, as always, grateful for the time and effort of stakeholders in preparing comments for this report.

The following sections of this report include an overview of the utility filings, including a description of any existing or newly proposed EV tariffs.

II. Utilities Requesting Exemptions from the Requirements of Section 33(b) for Pre-Existing EV Rates

A. City of Burlington Electric Department

BED has requested an exemption under Section 33(d) of Act 55 based on its EV Rate and EV Charging Station Rate.⁸

1. Rate Overview

a) EV Rate

BED began offering residential EV charging rates in 2018. In 2021, BED expanded its EV rate offering to include all non-time-of-use rate classes, including its small general and large general classes, and added a real-time peak scheduling option.⁹ BED's EV rate offers three options:

⁷ Based on the U.S. Energy Information Administration's 2022 Form EIA-861 utility census data, available at <https://www.eia.gov/electricity/data/eia861/>. These cases are currently pending before the Commission and have not yet been approved under the Act 55 requirements.

⁸ *Burlington Electric Department's request for exemption from Section 33(d) of Act 55*, Case No. 23-3611-PET.

⁹ The Commission approved the eligibility expansion of BED's EV rate to include small general and large general rate classes in addition to BED's residential rate class on July 1, 2021, in Case Numbers 21-1832-TF, 21-1833-TF, and 21-1834-TF.

(1) Under “fixed EV charging,” customers receive a bill credit if they restrict charging to the designated charging times (10 PM - 12 PM (next day)).

(2) Under the “flexible load” option, BED varies the level of EV charging according to market and load information, including the current wholesale price of energy and the probability of a peak, or due to local grid constraints. BED gives customers advance notice of designated restricted hours. Customers can opt out and charge during restricted hours, but will lose the bill credit for that billing period.

(3) Under the “flexible real-time load” option, BED dynamically varies charging levels, but without advance notice to customers. If customers override BED’s signal and opt to charge during peaking hours, they lose the bill credit for that billing period.

BED has also developed a multifamily property charger program to encourage property owners to expand charging opportunities for BED customers who rent their homes (60% of Burlington homes are renter occupied).¹⁰ Multi-family charging would occur under the Small General rate class and the EV Rate.

Details

EV Rate Charging Hours	
Fixed EV Charging off-peak hours	10 p.m. – 12 p.m. (next day)
Flexible Load peak hours	Designated by Burlington Electric in advance
Flexible Real-Time Load peak hours	Designated by Burlington Electric
EV Charging Credit	
Energy credit – Residential Service	\$0.079854 per kWh
Energy credit – Small General Service	\$0.079854 per kWh
Demand credit – Large general service	\$23.61 per kW

b) Public EV Charging Station Rate

BED has had a tariff for public EV charging stations that are owned or maintained by BED in effect since April 1, 2015. BED’s EV Charging Station Rate includes an energy charge of \$0.20358 per kWh and a \$1.00 per-hour fee starting after four hours of continuous occupation for all charging stations except those designated by BED for overnight parking.

¹⁰ Public Utility Commission 2023 Investigation into Rates Related to Electric Vehicles, Case No. 23-1364-INV, BED 9/22/23 Comments at 5.

c) Other Rate Options

Customers using BED’s primary service (“PS”) rate class do not have access to BED’s EV Rate. The PS tariff is a mandatory time-of-use rate for customers taking service at 13.8 kV and can be used for EV charging. BED customers in BED’s residential, small general, and large general rate classes may also use the whole-premises time-of-use rate applicable to their rate class for EV charging. BED has 61 customers enrolled in its four time-of-use rates.

2. Enrollment

As shown in the graph below, there are currently 225 customers enrolled in BED’s EV rate.

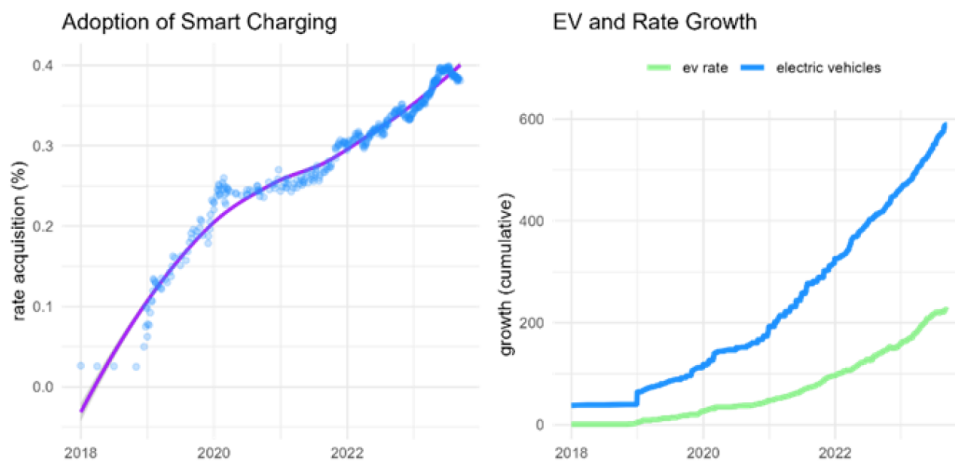


Figure 1: BED Percent Adoption and EV-rate enrollment.

Participation in the EV Rate requires a customer to purchase and install a BED-approved measuring device or, in the case of the Flexible Load Option or Flexible Real-Time Option, a BED-approved load-control device, which enables BED to submeter and control the customer’s EV charging as needed.

3. Effectiveness

For customers enrolled in EV rates, the rates are highly effective at directing charging away from peak times. As shown in the graph below, BED customers comply with the charging times of their rate options more than 85% of the time on average.

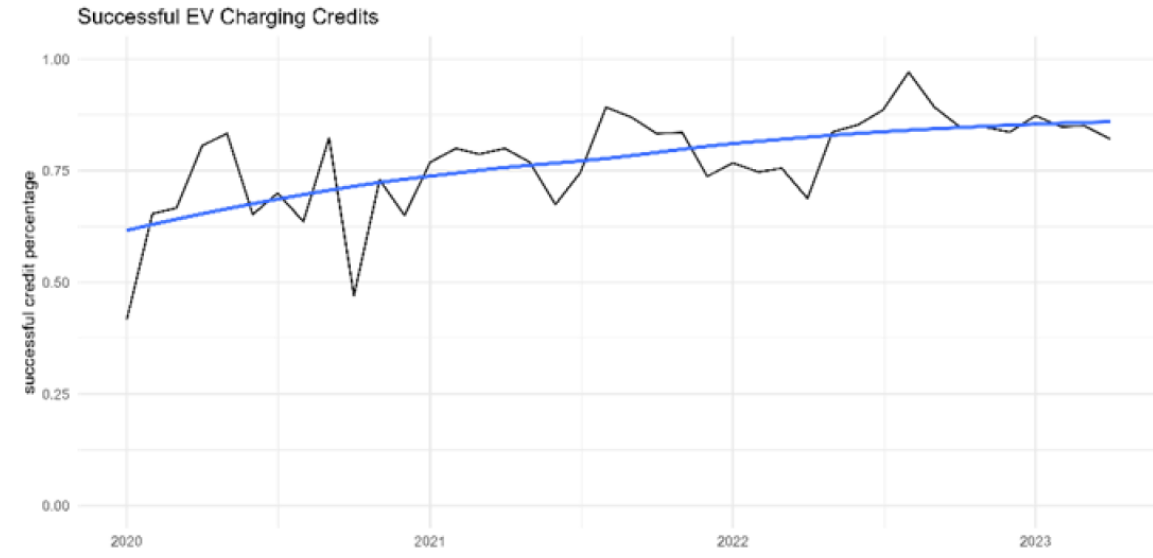


Figure 2: BED Successful Charging Credits.

B. Green Mountain Power Corporation

GMP has requested an exemption under Section 33(d) of Act 55 based on its Off Peak Electric Vehicle Residential Rate 72 (“Rate 72”) and Time-of-Use Electric Vehicle Residential Service Rate 74 (“Rate 74”) and its EV Charging Equipment Exemption in Rate 6 for commercial customers.¹¹

1. Rate Options

GMP offers two EV-specific rate options to its residential customers.¹²

a) Off-Peak EV Residential Rate 72

GMP’s Rate 72 was approved on July 20, 2020,¹³ and is available to all GMP residential customers. Rate 72 requires customers to have reliable Internet access and a compatible charger, whether provided by GMP or independently acquired, and receive their non-EV-related electric service under GMP’s residential Rate 1.

¹¹ *Petition of Green Mountain Power requesting confirmation that its existing electric vehicle tariff programs satisfy the requirement for “plug-in electric vehicle” rates pursuant to Section 33(b) & (d) of Act 55, Case No. 23-3612-PET.*

¹² GMP also offers a non-EV-specific residential time-of-use rate, which provides an alternative option for customers with EVSE that do not elect to take service on Rate 72 or Rate 74.

¹³ *Tariff filing of Green Mountain Power Corporation for approval to implement two new electric vehicle charging rates, Case No. 19-3586-TF.*

Rate 72 requires customers to enroll their EVSE in GMP’s energy management platform, which provides GMP the ability to control EV charging, including disabling the customer’s EVSE during times of peak demand (“Peak Events”). Customers are notified of Peak Events anywhere from 4 to 24 hours in advance. At any time after the receipt of a Peak Event notification from GMP, customers may override the Peak Event and continue charging at the Peak Event rate. If a customer does not override the Peak Event, GMP will control the EVSE during the Peak Event period.

Customers are also required to provide access to the manufacturers of the EVSE for purposes of operation, maintenance, and support.

Details

Off Peak Event EV rate	\$0.15029 per kWh
Peak Event EV rate	\$0.77270 per kWh

Off-peak charging under Rate 72 provides a savings of \$0.03761 per kWh compared to residential Rate 1.

b) [Time-of-Use EV Residential Rate 74](#)

GMP’s Rate 74 was also approved on July 20, 2020,¹⁴ and is available to all GMP residential customers. Rate 74 requires customers to have reliable Internet access and a compatible charger, whether provided by GMP or independently acquired, and receive their non-EV-related electric service under GMP’s residential Rate 1.

Rate 74 requires customers to enroll their EVSE in GMP’s Energy Management Platform, which provides GMP with access to the EVSE for the purpose of measuring electricity use. Customers are also required to provide access to the manufacturers of the EVSE for purposes of operation, maintenance, and support.

Details

Hours	
Peak	1:00 p.m. to 9:00 p.m., Monday through Friday
Off-peak	All other times
Rates	
Off-peak hours EV rate	\$0.14452 per kWh
Peak hours EV rate	\$0.18989 per kWh

¹⁴ *Id.*

Off-peak charging under Rate 74 provides a savings of \$0.04309 per kWh over residential Rate 1.

c) [General Service Rate 6 EVSE Exemption](#)

GMP offers commercial and industrial customers service under General Service Rate Schedule 6, which has a daily customer charge and a flat kWh rate. For usage restricted to public EVSE, the 200 kW demand and 7,600 kWh/month consumption service limitations are waived. Without this exemption, the default rate schedule for usage above the service limitations would be Commercial and Industrial Time-of-Use Rate Schedule 63/65, which consists of a customer charge and time-of-use kW demand charges and kWh charges.

Details

Rate 6	
Customer charge	\$0.690 per day
Per kWh charge	\$0.19306 per kWh

Without the Rate 6 EV exemption, the effective cost for participating public EV chargers through the end of 2022 would have been \$0.308 per kWh rather than the \$0.18366 per kWh actually charged during the same time period.¹⁵

d) [Generic Special Contract for Electric Bus Charging](#)

GMP also has a generic special contract for electric bus charging.¹⁶ Customers taking service under the special contract must have a separately metered account used for the primary purpose of charging electric buses used for transporting students or the general public. GMP provides electric service under the special contract according to the Rate 6 rates, and customers are exempt from the 200 kW demand or 7,600 kWh/month consumption limitations. This contract has been used by four GMP customers: the Franklin West Supervisory Union, the Champlain Valley School District, the Barre Unified Union School District, and Valley Regional Transit.

¹⁵ *Public Utility Commission 2023 Investigation into Rates Related to Electric Vehicles*, Case No. 23-1364-INV, GMP 9/22/23 Comments at 4 (quoting *Tariff Filing of Green Mountain Power Corporation for approval to implement new public electric vehicle charging station rate schedule exemption*, Case No. 20-3832-TF, GMP EV Rate 6 Exemption Filing Letter (filed 3/1/23)).

¹⁶ This generic special contract was approved by the Commission on December 8, 2021, in Case No. 21-4593-SC and was extended through July 2024 in Case No. 23-1992-SC.

GMP extended the contract in 2023 to allow time for its customers to transition their fleets to alternative service offerings, such as its Flexible Load Management pilot.

e) [Flexible Load Management Pilots](#)

The South Burlington School District enrolled in GMP's Flexible Load Management 2.0 pilot for its fleet of electric buses. The pilot allowed them to share in the benefits of the peak shaving and grid services by curtailing their EVSEs during peak events.

GMP is currently working on a revised Flexible Load Management 3.0 pilot, which will offer a whole-premises time-of-use rate without demand charges that was designed, in part, to address commercial fleet charging needs.

2. [Enrollment](#)

GMP has 2,632 customers enrolled in its residential EV-specific rate programs, 34% in Rate 72 and 66% in Rate 74. 3,720 GMP customers have received a free Level 2 charger from GMP and are eligible to enroll once the charger is installed. GMP has seven publicly accessible DC fast charger locations using the Rate 6 exemption.

3. [Effectiveness](#)

GMP has found that its managed charging Rate 72 and time-of-use Rate 74 are effective at directing load away from peak times. In 2023, only 0.25% of Rate 72 customers opted out of managed charging during a Peak Event. For customers using GMP's time-of-use Rate 74, 91% of EV charging occurred during off-peak hours.

C. [Vermont Electric Cooperative, Inc.](#)

VEC has requested an exemption under Section 33(d) of Act 55 based on its commercial and industrial time-of-use rates, Service Classification 2.2 and 2.3.¹⁷

1. [Rate Overview](#)

a) [Commercial Time-of-Use Rates](#)

VEC offers Service Classification 2.2 for Small Commercial members and 2.3 for Large Commercial members that participate in one of VEC's Energy Transformation projects, which include EV incentives and public charging EVSE. Service Classification 2.2 and 2.3 are non-demand time-of-use rates, provided that the customer remains under certain usage thresholds (less than 15,000 kWh for Service Classification 2.2; less than

¹⁷ *Petition of Vermont Electric Cooperative, Inc. requesting limited exemption from PEV tariff requirements of Act 55, Case No. 23-4176-PET.*

130,000 kWh for Service Classification 2.3). The rates apply to all-premises usage, including EVSE. Usage above 130,000 kWh will be moved to Service Classification 2, which includes a demand charge.

Details

Service Classification 2.2 (≤ 15,000 kWh)	
Hours	
On-Peak	5:01 p.m. to 9:00 p.m., Monday - Friday
Mid-Peak	7:01 a.m. to 5:00 p.m., Monday - Friday
Off-peak	9:01 p.m. to 7:00 a.m., Monday – Friday, all day weekends and holidays
Rates	
Customer Charge	\$20.81
On-Peak	\$0.33763 per kWh
Mid-Peak	\$0.18813 per kWh
Off-Peak	\$0.13587 per kWh
Service Classification 2.3 (>15,000 kWh, ≥ 130,000 kWh)	
Hours	
On-Peak	5:01 p.m. to 9:00 p.m., Monday - Friday
Mid-Peak	7:01 a.m. to 5:00 p.m., Monday - Friday
Off-peak	9:01 p.m. to 7:00 a.m., Monday – Friday, all day weekends and holidays
Rates	
Customer Charge	\$34.69
On-Peak	\$0.33763 per kWh
Mid-Peak	\$0.18813 per kWh
Off-Peak	\$0.13587 per kWh

2. Enrollment & Effectiveness

VEC states that none of the approximately 20 commercial or industrial members that host Level 2 or Level 3 chargers in VEC’s service territory participates in Service Classification 2.2 or 2.3; instead, all have remained on their pre-existing rates. This includes two dedicated Level 3 charger accounts, which have low usage and have not yet triggered demand charges.

D. GF Power LLC

On October 21, 2022, GF Power was granted a certificate of public good (“CPG”) to form and operate a public service company in Case No. 21-1107-PET. GF Power is a wholly owned subsidiary of GlobalFoundries U.S. 2 LLC and, under the terms of its CPG, GF Power can only sell power to GlobalFoundries at its facility in Essex, Vermont. GF Power’s CPG does not allow it to sell power to the general public.

GF Power has requested a determination from the Commission that it satisfies the requirements of Act 55 and does not need to file additional EV charging rates or tariffs. GF Power explains that it plans to install EVSE at its Essex Facility for employees and visitors under the terms of its existing CPG, which allows GF Power to pass through all of its costs and savings resulting from GlobalFoundries’ management of the loads at the Essex facility.

III. Utilities Requesting Extensions of Time to Implement EV Rates

A. Town of Stowe Electric Department

Stowe Electric has requested an extension under Section 33(e) of Act 55 until June 30, 2024, to file new EV tariffs as required by Section 33(b).¹⁸

1. Basis of Extension Request

Stowe Electric states that it does not have the technical ability to implement an EV rate because it is implementing a new enterprise software system. Stowe Electric has identified the lack of adequate software and administrative staffing as a barrier to its meeting the requirements of Act 55. Once the implementation of the enterprise software system is complete, Stowe Electric anticipates that the software will mitigate most of Stowe Electric’s utility-side barriers to implementing a rate structure for EVs and EVSE, although customer-side barriers to adoption—such as panel upgrades, metering, broadband connectivity, and interconnection costs—may remain. Stowe Electric has stated that it will undertake a comprehensive rate design in early 2024,

¹⁸ *Petition of Town of Stowe Electric Department for extension of PEV filing and implementation deadlines pursuant to Section 33(e) of Act 55*, Case No. 23-3615-PET. Act 55 requires utilities to “offer” EV rates by June 30, 2024, following review and approval by the Commission. Because these rates must be offered by June 30, the Commission required parties to file their EV tariffs by October 16, 2023, to allow time for the statutory review periods prescribed in 30 V.S.A. §§ 225(b) and 227(a).

which will result in new EV tariffs using its new enterprise software system or revision of existing tariffs consistent with the Act 55 criteria.

2. Existing Rate Options

Stowe Electric does not offer a residential EV charging rate. Stowe Electric does have a residential time-of-use /critical peak pricing (“CPP”) rate, Residential Rate 3, that was approved by the Commission before July 1, 2021, and informs customers who own EVs about the rate and best practices for EV charging, such as limiting charging to overnight hours. Stowe Electric has explained that few, if any, customers have opted for Rate 3.¹⁹

Stowe Electric also has an EVSE rate, Rate 35, also approved before July 1, 2021, in use at each of the utility’s public charging stations that are managed by Stowe Electric. Rate 35 does not by its terms apply to public EVSE owned by third parties, although Stowe Electric states that it would be open to third-party-owned chargers with Stowe Electric oversight.²⁰ Stowe Electric does not have a commercial, residential, or multi-family EV charging rate.

Details

Hours (Time-of-Use/CPP)	
Summer On-Peak (June-September)	12:00 p.m. to 7:59 p.m., Monday – Friday excluding holidays
Summer Off-Peak (June-September)	8:00 p.m. to 11:59 a.m., Monday – Friday, all day Saturday, Sunday, and holidays
Winter On-Peak (October-May)	4:00 p.m. to 7:59 p.m., Monday – Friday excluding holidays
Winter Off-Peak (October-May)	8:00 p.m. to 3:59 p.m., Monday – Friday, all day Saturday, Sunday, and holidays
Rates (Time-of-Use/CPP)	
Customer Charge	\$18.53 per month
Summer Off-Peak	\$0.1472 per kWh
Summer On-Peak	\$0.2334 per kWh
Summer CPP Peak	\$0.8123 per kWh
Winter Off-Peak	\$0.1803 per kWh
Winter On-Peak	\$0.3093 per kWh
Winter CPP Peak	N/A, CPP only called in summer period
Rates (Public Charging)	

¹⁹ 23-1364-INV Workshop Tr. (10/2/23) at 42.

²⁰ 23-1364-INV Workshop Tr. (6/23/23) at 68-69.

Energy Charge	\$0.2076 per kWh
Level 2 Fee	\$1.00 per session initiation, \$1.00 per hour after four hours (unless designated for overnight parking)
Level 3 Fee	\$2.00 per session initiation, \$2.00 per hour after one hour (unless designated for overnight parking)

B. Washington Electric Cooperative

WEC has requested an extension under Section 33(e) of Act 55 through 2027 to implement new EV tariffs required by Section 33(b).²¹

1. Basis of Extension Request

WEC states that it plans to provide an EV rate through a time-of-use rate, and that it does not presently have the technical ability to implement a time-of-use rate because its current advanced metering infrastructure (“AMI”) is inadequate and needs to be replaced. WEC states that it is in the process of obtaining grants and hiring consultants to replace its current AMI system. WEC is proposing to file an EV tariff by March 14, 2025, so that the tariff would be in place for the initial deployment of WEC’s new AMI around January of 2026. WEC anticipates that a time-of-use rate could first be available in some of WEC’s territory by January 2026 and available throughout WEC’s service territory by 2027.

WEC states that it has considered other temporary EV-rate options to bridge the period between the June 30, 2024, Act 55 deadline and January 2026 when its new AMI is implemented, but is reluctant to impose the additional costs of implementing a temporary rate on its members, which would be in addition to the costs of implementing its updated AMI.

2. Existing Rate Options

WEC has an archived time-of-use rate with no current members enrolled. WEC also offers participants in its Powershift program a virtual and voluntary time-of-use rate to charge EVs. The Powershift program allows charging between 10:00 P.M. and 3:00 P.M. the next day, with no charging between 3:00 P.M. and 10:00 P.M.

²¹ *Petition of Washington Electric Cooperative, Inc. for extension of plug-in electric vehicle rates filing and implementation deadlines pursuant to Section 33(e) of Act 55, Case No. 23-3607-PET.*

C. Village of Hyde Park Electric Department

Hyde Park Electric has requested a 24-month extension under Section 33(e) of Act 55 to implement new EV tariffs required by Section 33(b).²²

1. Basis of Extension Request

Hyde Park Electric states that it does not have the technical ability to implement EV or EVSE tariffs because its current analog metering and software system capabilities cannot identify separate loads related to EV or EVSE electricity usage. Hyde Park Electric explains that it needs to implement AMI and update its software to properly bill customers for EV-related usage.

Before it can implement AMI, however, Hyde Park Electric states that it needs additional time to address an ongoing distribution study and the potential impact of required upgrades on its current rates. Before implementing an EV or EVSE tariff, Hyde Park Electric explains that any rate adjustments for interim upgrades must be identified to ensure that any EV or EVSE tariff that is implemented is based on accurate cost-of-service bases.

2. Existing Rate Options

Hyde Park Electric does not have any current EV-rate options. EV-related charging that occurs in Hyde Park Electric's service territory occurs under the established tariff rates in place for the relevant customer class.

IV. Utilities Filing New EV Tariffs

A. VPPSA Utilities

VPPSA, on behalf of itself and its member utilities, has filed a petition for review of a tariff rider program template for a Commercial & Industrial EV Rate and a Residential EV Rate, which would measure and bill incremental EV loads through an hourly, formula-based cost-component rate structure.²³ VPPSA explains that its member utilities have not yet adopted the tariff templates filed with its petition, which VPPSA proposes will occur after receiving feedback from the Department of Public Service and the Commission.

²² *Petition of Village of Hyde Park Electric Department requesting an extension of time for extension of PEV filing and implementation deadlines pursuant to Section 33(e) of Act 55, Case No. 23-3582-PET.*

²³ *Petition of Vermont Public Power Supply Authority for approval of a proposed EV/EVSE tariff rider program for its member utilities, Case No. 23-3604-PET.*

Both EV Rates are structured as riders to the base customer rates and will specifically apply market-informed incremental rates to EV loads, providing hourly pricing on a day-ahead basis for EV charging. Day-ahead pricing information will be automatically communicated to the enrolled customer on a regular schedule to facilitate optimized charging at the most beneficial rate. Current and historical pricing information will also be publicly available. For billing purposes, the monthly incremental EV/EVSE kWh energy usage and total amount due for that usage will be separately identified on the customer's utility account bill.

VPPSA's Residential EV Rate is made up of four main pricing components. The first component (1) is the 24-hour set of day-ahead locational marginal prices ("DALMP") published by ISO-New England Inc. ("ISO-NE") each day, which reflects current conditions in the New England energy markets on an hourly basis. VPPSA proposes to add to the DALMP (2) additional hourly per-kWh charges reflecting peak market transmission and capacity costs, (3) program delivery costs, and (4) a contribution to fixed costs reflecting a portion of embedded distribution operations, maintenance, administrative, and general costs. VPPSA explains that the components related to peak transmission and capacity costs will be relatively static, changing only as needed, and will be concentrated in hours associated with monthly transmission and annual capacity peaks. The remaining components will be spread across all hours. The resulting rates for each day will reflect the current conditions in the energy market and provide a strong incentive for consumers to choose to manage their EV charging load away from peak hours.

VPPSA plans to have the communication platform needed for the proposed tariff riders implemented for testing purposes by the end of the first quarter of 2024, and full implementation by June 30, 2024. Under the proposed tariff, VPPSA will manage the data needed for the tariff while member utilities will be responsible for integrating the resulting billing data into their individual billing systems.

B. Vermont Electric Cooperative, Inc.

VEC has filed a new tariff for its Flexible Load Home Charging Program for residential members.²⁴

²⁴ *Tariff filing of Vermont Electric Cooperative Inc. for Flexible Load Home Charging Program for residential members to be effective June 30, 2024, Case No. 23-4175-TF.*

1. Flexible Load Home Charger Program

VEC offers an opt-in load-management program for members who use Level 2 EVSE as part of its Tier 3 incentives under the Renewable Energy Standard.²⁵ Beginning in 2019, VEC enrolled compatible Level 2 chargers in a platform that could communicate with the chargers to request that they not charge during peak periods. For chargers that were not compatible with the communications platform, VEC also allowed members to set a static charging schedule to avoid charging during specified periods.

Under past versions of the program, members with enrolled chargers received a \$300 incentive and an \$8 monthly credit provided that they did not charge during peak events. VEC estimates peak events occur 5-6 times per month, for up to 3-4 hours per event. Members who set a static charging schedule received a \$250 incentive.

VEC's current program, which is embodied in its proposed tariff, provides an enrollment incentive of either a free home Level 2 charger or a \$50 bill credit, and a monthly credit of \$8 for continued participation. VEC states that the \$8 monthly credit is the result of an economic analysis of avoided costs, with approximately 55% of the value going to the individual participant and 45% retained as a benefit to all members.

2. Enrollment & Effectiveness

VEC currently has 98 chargers enrolled in the Flexible Load Home Charging Program using the communications platform, with another 50 chargers pending (up from 40 customers last year). VEC has 107 chargers with static schedules that avoid charging during specified periods (5:00 – 9:00 p.m.) (up from 60 customers last year). Between managed and set-schedule charging, VEC's participation rate is 46%. VEC has a goal of increasing participation to 75%.

V. Challenges and Barriers

A. Metering and Software

Metering and billing for EV-related electricity usage remain a challenge for Vermont utilities. Several utilities have requested extensions of time to implement EV tariffs while they upgrade their software systems, meters, or both. Other utilities have used charging data obtained from EVs or EVSE sufficient for billing purposes provided the customer has Internet connectivity.

²⁵ 30 V.S.A. §§ 8005(a)(3).

B. Demand Charges

Demand charges also remain a barrier to EVSE deployment. Several of the Vermont utilities, such as GMP and VEC, have rates available for commercial EVSE that do not include demand charges. However, the Department of Public Service explained to the Commission that demand charges continue to present a challenge, particularly for EVSE in more rural areas.²⁶ In its comments to the Commission, ChargePoint, Inc. provided examples of demand-charge solutions in other states, such as volumetric pricing or reduced demand charges for low-usage EVSE, which are similar to the approaches followed by Vermont utilities with demand-charge-free EVSE options.

C. Multi-Family Residences

The Department of Public Service and several utilities note that multi-unit dwellings remain a challenge for EVSE. The Department of Public Service explains that difficulties associated with multi-unit residences include meter configuration, assigned customer class, lack of assigned parking, and lack of authority to install a charger at a rental property. These and other barriers also make participation in an EV rate difficult, thereby effectively prohibiting some multi-unit residents from accessing lower EV rates.

D. Whole-Premises Time-of-Use Rates

The Commission also discussed with stakeholders the effectiveness of whole-premises time-of-use rates. Several utilities have identified existing or revised whole-premises time-of-use rates as potential rate options to satisfy the requirements of Act 55. The Commission and utilities have noted throughout the preparation of this year's report that customer participation in whole-premises time-of-use rates has historically been limited.

The Department of Public Service identified two limiting aspects related to the use of whole-premises time-of-use rates to encourage EV load management. First, customers who participate in a whole-premises rate must understand the entirety of their home's electricity use and not just the EV load. This requires customers to manage all home loads, not just EV charging alone, which can result in an additional disincentive to adoption.

Second, time-of-use rates become less valuable as monthly and annual grid peaks become less predictable. In an environment of unpredictable loads, dynamic load management presents a better solution than static, time-based rates. While this affects

²⁶ 23-1364-INV Workshop Tr. (10/2/23) at 65-67.

all time-of-use rates (including EV-only rates), EV charging loads are flexible while other premise loads may not be. As a result, the Department of Public Service explained, whole-home time-of-use rates may be less valuable than EV-specific rates as a tool for managing EV loads and achieving the goals of Act 55.

VI. Conclusion

This interim report is the third of four reports on this topic that the Commission will provide to the Legislature. The Commission looks forward to continuing to monitor this developing field and to updating the Legislature as utilities continue to develop their EV and EVSE rates pursuant to the Act 55 goals and requirements.