2021-2023 TRANSPORTATION ELECTRIFICATION PLAN

SEMI-ANNUAL REPORT

PROCEEDING NO. 20A-0204E

October 3, 2023

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SECTION 1. INTRODUCTION AND OVERVIEW

INTRODUCTION

Public Service Company of Colorado ("Public Service", or the "Company") is pleased to provide its October[1] 2023 Transportation Electrification Plan ("TEP") Semi-Annual Report as required through Decision No. C21-0017 in Proceeding No. 20A-0204E. With the State's goal of 940,000 light-duty electric vehicles ("EV") on the road by 2030, the Company's TEP is essential to achieving this goal. The 2021-2023 TEP is serving customer demand for electric transportation, supporting emissions reductions, and keeping electric bills low, while benefiting the electric grid. Through this and future reports, the Company is pleased to demonstrate how the TEP empowers and assists customers in their EV journey, including by helping them adopt EVs and optimize charging to save money and reduce carbon emissions. In addition to the data reported in the following sections, the Company also includes Attachments A-F, providing the following additional detailed information:

- Attachment A provides program participation and costs
- Attachment B provides load profiles for residential participants
- Attachment C provides information specific to participants of the Income Qualified ("IQ") EV Purchase/Lease Rebate Program
- Attachment D provides information related to Community Advisory engagement with higher emissions communities ("HEC")
- Attachment E provides information related to Fleet Electrification Advisory Program assessment details that took place in HECs
- Attachment F provides results of residential customer evaluation

The Company continues to be encouraged with how the TEP generates strong stakeholder engagement, enhances opportunities to partner with our customers and communities, and is dedicated to increasing access to electric transportation for IQ customers and HECs. This semi-annual report, building on previous reporting for the TEP's programs, continues to grow the collection of information on participation, budgets, and program learnings to help inform both current and future programs and continue to support the electrification of all types of transportation for our customers.

[1] The Company files its semi-annual reports on October 1 and April 1; however, because October 1, 2023 falls on a weekend and October 2, 2023 is a state holiday, the Company is filing its October 2023 TEP Semi-Annual Report on October 3, 2023.

OVERVIEW AND TIMELINE

Since the Commission's final approval of the Company's 2021-2023 TEP in March 2021, the Company has implemented all contemplated customer programs across the TEP's six portfolios. In addition to launching the customer programs, in the time since the Commission's approval of the TEP, the Company has initiated seven projects within the Partnerships, Research, and Innovation ("PRI") portfolio through the Commission-approved 60-Day Notice process, all of which have launched. The Company has now achieved participation across all customer programs.

Since the last semi-annual report, the Company has seen continued success, with most programs seeing significant growth year over year. One of the major points of success involves Electric Vehicle Supply Infrastructure ("EVSI") programs. Implementation of EVSI programs saw an increase from 69 to 162 active ports since our last report, and 1,283 additional ports in the pipeline[2]. Across residential, multifamily, and commercial participants, the Company has also been able to collect information about the customer experience and evaluate program implementation. Customer satisfaction across programs is high and is a metric we continue to track and improve upon across our portfolio of programs.

As of June 31, 2023, there are 74,856[3] EVs registered in the Company's Colorado service territory, and for the State of Colorado there are 86,019 EVs on the road.[4] If the Company's service territory were considered a state, it would rank second in the U.S. for percentage penetration of EVs, with a percentage penetration of 1.9 percent, second only to the State of California's 4.3 percent. These are promising signs for the Colorado EV market and TEP program participation.

ALIGNMENT WITH POLICY DEVELOPMENTS

State clean transportation policy in Colorado continues to progress through recently passed legislation, implementation of existing policy, and state agency rulemakings. Additionally, efforts persist to implement federal policy and incentives passed through the United States Congress to advance clean transportation.

Some notable successes coming out of the state's 2023 legislative session included an increase in EV tax credits across vehicle classes, adoption of the EV-ready building code in the state's electrical code, and a requirement to count EV-ready parking spaces in minimum parking requirements. The Company also supports Colorado's Medium- and Heavy-Duty ("M/HD") EV goals, as described in the state's recently released 2023 Electric

[2] Please see "EV Suppy Infrastructure Program Demand" section for more detail
[3] I.H.S. Markit Data
[4] As of July 7, 2023, EValuateCO Dashboard

Vehicle Plan to increase adoption of M/HD zero emission vehicles ("ZEV") to at least 30 percent of new sales by 2030, and 100 percent of new sales by 2050. Additionally, the Company supported the state's passage of the Advanced Clean Trucks rule earlier this year.

Key transportation electrification components of the 2022 Inflation Reduction Act ("IRA") and the 2021 Infrastructure Investment and Jobs Act ("IIJA") continue to support the industry transition in Colorado. Notably, the State of Colorado has begun awarding new federal formula funding for EV charging and vehicle electrification made available through the IIJA, announcing $17 million in awards for 36 different public fast-charging sites through the Direct Current Fast Charging ("DCFC") Plazas Program. The Company continues to evaluate public funding opportunities in support of transportation electrification at both the state and federal levels but has not applied for any NEVI funding at this time.

EV SUPPLY INFRASTRUCTURE PROGRAM DEMAND

A significant positive uptick in the Company's EVSI program participation is occuring. We have two primary EVSI portfolios – multifamily and commercial. Currently, the Company is on track to fully utilize our estimated multifamily EVSI capital budget as outlined in the TEP for the current year. This achievement is a testament to our team's dedication and the high customer demand for our programs and initiatives.

For the commercial EVSI programs, while Public Service anticipates coming in under the 2023 TEP estimated capital budget for the remainder of this year, its pipeline of projects (including executed agreements and those progressing toward execution) for 2024 continues to grow. The Company has proposed to combine the multifamily and commercial EVSI programs into a single program in 2024[5], and the combined EVSI program significantly exceeds the Company's total expected investment for 2023.

In fact, the demand has been so robust that the Company already has a substantial number of projects in the pipeline for the upcoming year, significantly surpassing original estimates for the 2024 budgets, which are currently at issue in the Company's 2024-2026 TEP proposal. This is a promising indicator of rapidly increasing market demand, and the positive impact of the Company's efforts in the transportation electrification market. Public Service is committed to managing these additional projects efficiently to ensure that it meets the growing demand. The Company has also requested in the pending 2024-2026 TEP proceeding "authority to extend its existing TEP programming into 2024, pending receipt of a final Commission decision and the Company's ability to implement the revised

[5] The Company's 2024-2026 TEP was filed on May 15, 2023 and is currently an open proceeding before the Colorado Public Utilities Commission in Proceeding No. 23A-0242E.

or changed programs."[6] Said proposal will assist the Company as it enters the year 2024 to meet the growing demand.

Overall, this growth underscores the strategic importance of maintaining budgetary flexibility across our commercial and multifamily programs, as well as program continuity and market demand responsiveness, as the Company strives to provide a consistent and seamless customer experience while TEPs are being considered before the Commission. An adaptive approach is accordingly necessary to allow the Company to effectively allocate resources in response to dynamic market demands and ensure compliance with competing budgetary demands consistent with regulatory outcomes. The Company intends to address how the rapidly increasing market demand for its commercial portfolio will likely impact its originally proposed budgets for the 2024-2026 TEP through the processes ongoing in Proceeding No 23A-0242E.

[6] Hearing Exhibit 101, Direct Testimony of Jack Ihle, at 15:20-16:8, Proceeding No. 23A-0242E.

SECTION 2. TEP PORTFOLIOS

The 2021-2023 TEP is comprised of six portfolios: (1) Residential, (2) Multifamily Housing ("MFH"), (3) Commercial, (4) PRI, (5) IQ EV Purchase/Lease Rebates, and (6) Advisory Services (comprised of program support and activities supporting various customer classes).[7]

The EV Accelerate At Home ("EVAAH"), (Home Charging Service) program, the EV Charger and Wiring Rebate Program, and Residential Advisory Services are addressed in Subsection I, ("Residential Portfolio"). MFH programs and Advisory Services are addressed in Subsection II ("Multifamily Housing Portfolio"), Commercial programs and Advisory Services in Subsection III ("Commercial Portfolio"), and PRI initiatives in Subsection IV ("Partnerships, Research, and Innovation Portfolio"). The IQ EV Purchase/ Lease Rebate Program is addressed in Subsection V.

Unless noted otherwise, the information and data presented in the following sections and in Attachment A are cumulatively reported as of August 1, 2023,[8] and include the dollar amount expended by the Company for work completed. Figures are rounded to the nearest dollar.

I. RESIDENTIAL PORTFOLIO

Program uptake by residential customers continues to increase year over year. The following graph and table demonstrate the trajectory the Company expects programs to follow based on the rate of growth in Residential programs to date.

[7] Advisory Services activities will be discussed throughout this report in the Residential, MFH and Commercial portfolio sections, as applicable.

[8] In the October 1, 2021 TEP Semi-Annual Report, it was stated, "the Company will provide data collected up to the beginning of the month prior to filing the next semi-annual report (e.g., September 1 for the October 1 filing and March 1 for the April 1 filing)." As more data is being collected, the Company now intends to provide data collected up to the beginning of the month two months prior to filing the next semi-annual report to support increased time for review and processing data for reporting (e.g., August 1 for the October 1 filing and February 1 for the April 1 filing).

Figure 1: Residential Program Participation Growth Over Time

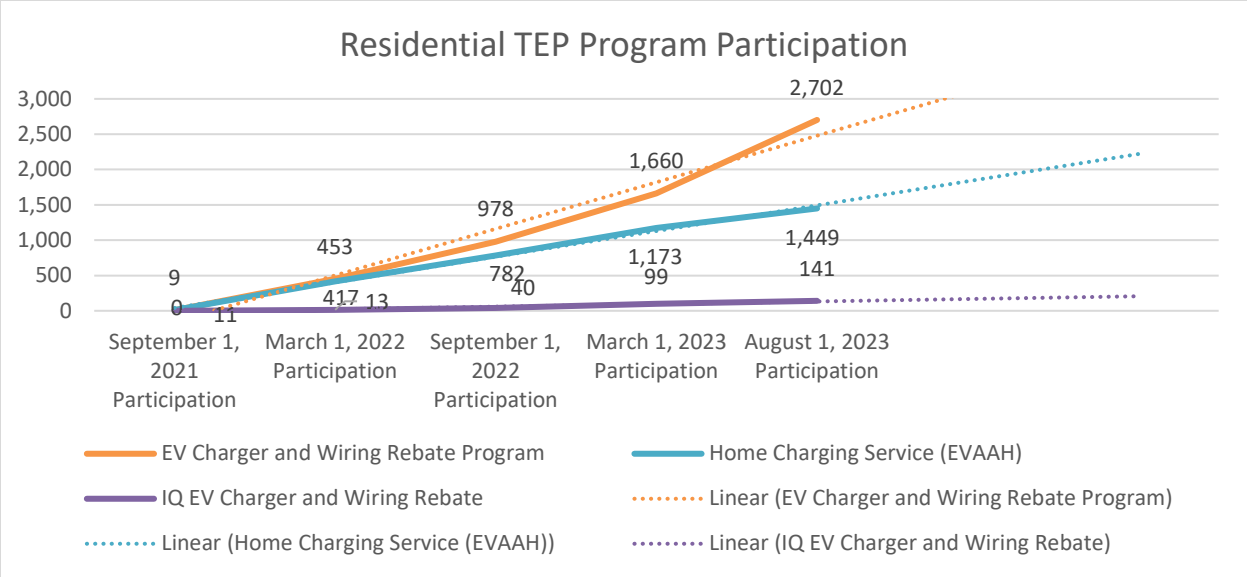


Table 1: Residential Program Participation for Reporting Period

Program	Participants (as of 3/1/2023)	Participants (as of 8/1/2023)	Original TEP Initial Forecast Program Participants (through 12/31/2023)[9]	Percent of Forecast	Five Month Growth (as of 8/1/2023)[10]
Home Charging Service (EVAAH)	1,173	1,449	10,100	14%	24%
Standard EV Charger and Wiring Rebate	1,660	2,702	15,100	18%	63%
IQ EV Charger and Wiring Rebate	99	141	300	47%	42%

[9] For all programs throughout the report, the initially forecasted program participants reflects the total program participants forecasted for years 2021, 2022, and 2023, as provided in in Proceeding No. 20A-0204E.
[10] The Company is reporting on the rate of growth since the last semi-annual report, which due to the new data cutoff date discussed above, is a 5-month period for this report (i.e., March 1 – August 1).

Customer Programs

"EV Accelerate At Home"- Home Charging Service

Through the EVAAH program, residential electric customers are provided a Level 2 charger from the Company without paying any upfront costs for the charger, standard installation, set up, and maintenance of the charger. These program participants pay a bundled service charge of $13.29 per month that appears on their monthly Xcel Energy bill. Electricians contracted by the Company and licensed by the State of Colorado arrive at the customer's home to hardwire and program the Level 2 charger. The electricians also inform the customer of their eligibility for the EV Charger and Wiring Rebate program. The electricians can provide the EV Charger and Wiring Rebate "up front" by subtracting the rebate amount from their final invoiced amount to the customer for any qualifying home wiring work. EVAAH launched in August 2021. Total revenue collected for the program in 2023 is $117,376.

There are 1,449 active participants in the program with chargers already installed, and 273 applicants in the queue waiting for a Level 2 charger to be installed. Average charger and installation costs have been $819, while average wiring costs have been $1,500.

Overall satisfaction with the program is very high, at 96 percent. When participants were asked if they would refer EVAAH to a friend, 94 percent of respondents reported that they are highly likely to recommend it.

EV Charger and Wiring Rebate Program

Through the EV Charger and Wiring Rebate program, residential electric customers can receive a rebate of up to $500, with an enhanced rebate of $1,300 available to IQ customers, to offset the cost of purchasing an eligible Level 2 charger for their home and upgrading their wiring to accommodate the Level 2 charger. The wiring rebate is available to both EVAAH customers who rent a charger from the Company, and as a standalone offering for customers who choose to purchase their own qualifying charger. In order to be eligible for the wiring rebate, customers must participate in a managed charging program (Optimize Your Charge or Charging Perks Pilot) for a minimum of one year. The Company's contracted electricians can provide the rebate at the time of installation for EVAAH customers by subtracting the wiring rebate value from their invoiced amount to customers for qualifying wiring work.

IQ customers are eligible to receive the full $1,300 rebate, even if the cost to install the dedicated circuit is less than the rebate amount. In that scenario, IQ customers are sent a check for the remaining rebate amount to help continue to offset the costs of transitioning to an EV.

Customers who purchase their own qualifying charger and participate in a managed charging program may provide proof of qualifying purchases (i.e., dedicated circuitry work and/or charger purchases) and receive a check for the rebate amount.

There are 2,702 participants in the standard EV Charger and Wiring Rebate program and 141 participants in the IQ EV Charger and Wiring Rebate program.

The Company has worked closely with dealerships in its network to ensure that customers who are buying EVs are aware of their home charging options at the time they purchase their vehicles. The Company has introduced a QR code that customers can scan at the dealership and be directed to the Company's EV program enrollment page. This feature has increased participation in the Company's optimization programs and the EV Charger and Wiring Rebate program.

The Company has also implemented a digital enrollment process for the EV Charger and Wiring Rebate, which has streamlined the customer's enrollment experience and has shortened the amount of time between the application and the issuance of a rebate check to the customer.

Optimization Programs

While not a part of the Company's 2021-2023 TEP, as described above, eligibility for certain TEP Residential programs is dependent upon participation in one of the Company's two current Residential EV optimization programs, approved by the Commission as part of the Company's Demand Side Management ("DSM") portfolio through Decision No. R21-0081 in Proceeding No. 20A-0287EG.

The Company launched its *static* optimization program, Optimize Your Charge, in August 2021. Optimize Your Charge is an off-peak charging incentive program. The Company requires all customers applying for the EV Charger and Wiring Rebate, or those with a Level 2 charger provided by the Company through the EVAAH program, to participate in Optimize Your Charge for at least one year, unless they are participating in the Company's other optimization pilot, Charging Perks. IQ customers receiving the enhanced $1,300 EV Charger and Wiring Rebate can, however, have the ability to opt-out of participating in Optimize Your Charge. The Optimize Your Charge program requires customers to choose from three different off-peak charging schedules, each of which is a period of nine hours. Customers are then required to charge during the schedule they have selected for at least 25 percent of the time, and in return they receive an annual credit on their electric bill of $50 for each year that they participate in the program. The credit is issued to participating customers in October.

There are 4,532 participants in the Optimize Your Charge program. Of the current participants, over 98 percent are complying with the program requirements by charging at least 25 percent of the time within their selected charging schedule. Our customer care

agents reach out to non-compliant participants to remind them of the 25 percent off-peak charging schedule requirement and help them get back on track. The Company reviews compliance and conducts outreach to non-compliant participants quarterly. Furthermore, the Company has been working with its third-party evaluator, Opinion Dynamics, to collect EV charging interval telemetry data for participants in the Optimize Your Charge Program from ChargePoint, Enel X, and WeaveGrid on a monthly basis. The Opinion Dynamics team leveraged this data to develop average aggregated load curves for participants in the Optimize Your Charge Program from program launch through August 1, 2023. This analysis produced estimates of average electricity in kilowatts ("kW") and energy in kilowatt hours ("kWh") consumed per 24-hour period by vendor, day of the week, weekday, weekend, and season, as well as load level ranges within plus and minus one standard deviation. This analysis supports the Company's TEP reporting requirements and helps it understand how Optimize Your Charge participants are impacting the grid. These results are included in Attachment B.

The Charging Perks Pilot is a *dynamic* optimization pilot program that rewards EV drivers for charging during times that help the energy grid operate more efficiently and periods when there is more renewable energy available. Unlike static optimization, it is not based on a set schedule. Every time a participating customer plugs in their EV at home, the Company and either its EV energy-service provider or the customer's automaker will work together to automatically establish the car's dynamic charging schedule. The customer's EV will then charge at the best time when renewables are abundant, demand on the grid is low, and ahead of the deadline when their vehicle must be ready to go. Customers receive a $100 gift card upon enrollment and can earn $50 for Level 1 charging or $100 for Level 2 charging annually. The pilot was made available to Tesla drivers in June 2021. The pilot expanded to drivers of certain EV models from Ford, BMW, Honda, and General Motors in late September 2021. Unfortunately, Honda decided to exit the pilot program in early 2023. The Company plans to add more models in 2023, through collaboration with the OEMs, to expand the dynamic optimization program.

There are 935 customers participating in the Charging Perks Pilot program which is capped at 1,000 participants. Given that the Company is approaching the participation cap of the program, the Company, as a part of its DSM programming, is proposing to lift the cap through a 60-day notice process.[11]

Advisory Services and Outreach

The activities described below support education and engagement across all program portfolios.

[11] Additional information is available here: https://www.xcelenergy.com/staticfiles/xe-responsive/Company/Rates%20&%20Regulations/Regulatory%20Filings/CO-DSM/60%20Day%20Notice%20Summary%20-%20Electric%20Vehicle%20Optimization.pdf

1. Public Events

Electric Vehicle Showcases and Community Events. The Company has participated in seven events in 2023 where EVs were displayed and staff was present to answer questions and talk with the public about the benefits of driving electric.

List of EV Showcases

- Lafayette Cars and Coffee. March 4, 2023, Lafayette, CO
- Denver Water EV Event. April 6, 2023, Denver, CO
- Denver Auto Show. April 12-16, 2023, Denver, CO
- Eco Edgewater. April 29, 2023, Edgewater, CO
- Earthday Lakewood. April 29, 2023, Lakewood, CO
- Evergreen Rodeo. June 17-18, 2023, Evergreen, CO
- Electrify Your Ride Showcase. June 27, 2023, Louisville, CO

In collaboration with Drive Electric Colorado, the Company conducted 1,619 ride and drive events of 14 different EV models during the 2023 Denver Auto Show and provided educational resources for visitors.

Additionally, the Company sponsored a community access pilot program conducted by Drive Electric Colorado in which the organization provides community members with EV education in an approachable format, focused on targeted outreach in disproportionately impacted communities. A key component of this pilot program is the continued presence in a community, allowing for multiple opportunities for community members to participate. The focus of these events is education on the Company's IQ incentives, EV tax credits (state and federal), and charging options. Drive Electric Colorado has conducted five of these EV Showcases and Test Drive events in 2023 to date (not included in the Company's *List of EV Showcases above*).

Commercial Customer Tradeshows/Events. The Company participated in several in-person and virtual events in which staff answered questions and promoted the benefits of transportation electrification and Public Service's programs.

List of Commercial Tradeshows/Events:

- Colorado Webinar Series for Commercial and Industrial, Fleet and Community Customers, February 28 – March 2, 2023
- Xcel Energy Expo, Denver, March 4, 2023, Denver, CO
- Advance Clean Transportation Expo, May 2 - 4, 2023, Anaheim, CA
- Breckenridge Brewery Bike to Work Event, May 19, 2023, Littleton, CO

2. Digital Outreach, Website, and Digital Tools

Several digital educational initiatives have been developed by the Company, including its EV Awareness & Education digital advertisement campaign that highlights EV benefits and helps customers realize that switching to an EV is simple and beneficial. Digital advertising includes search engine advertising, display network advertising, and social media advertising. In addition to communicating EV benefits, the campaign includes ads to drive awareness of the Company's EVAAH and EV Charger and Wiring Rebate programs as well as to provide answers to customers' questions about EV charging. All efforts direct customers to the Company's online resources for EV information. The Company's EV website, ev.xcelenergy.com, provides information about equipment installation guidelines and provides online program enrollment options.[12] Multiple email campaigns were conducted to build awareness of EV benefits and the tools, information, events, and programs the Company offers to help make it easy and less costly for customers to drive electric.

Outreach efforts directed customers to the Company's online resources for EV tools, information, and program sign-up. The online EV catalog includes both new and used EV models, helps customers find EV-focused auto dealers in our EV Dealer Network, and provides information to explore available tax credits and incentives on the website. The Home Charging Advisor can help customers compare EV home charging programs and find the best one for their lifestyle.

In addition to English, residential EV program pages and digital tools on ev.xcelenergy.com are offered in Spanish. Website visitors can toggle between the two language options.

3. Traditional Media and Marketing

The Company continues to maintain a catalog of printed materials for general EV education and to promote our programs. Printed materials for IQ customer programs are available in both English and Spanish.

4. EV Dealer Network

To help the Company's customers wherever they are on their EV journey, the Company launched the "Xcel Energy EV Dealer Network" in March 2021. There are now 48 members in the dealer network across Colorado, with the Company now focusing on growth outside metro areas. Currently, dealerships in the network are members in good standing with the Colorado Auto Dealers Association. Of those members, 47 offer new and used EVs, with at least one dealership member focused only on used EV sales. Concept conversations have begun with the Colorado Independent Auto Dealers

[12] https://ev.xcelenergy.com/ev-charging-programs

Association to explore adding dealerships that are independent and vetted for best practices to the Company's EV Dealer Network to increase visibility of our offerings.

Through the network, the Company is offering services that directly address barriers that dealers can face regarding EVs including:

- Staff training – the Company conducts ongoing staff and management training at our Colorado dealership partners, educating them on how to engage with shared customers and promote Company programs at the point of purchase. Dealership feedback has indicated that having these programs has helped address customer concerns on how to charge their new EV.
- Customer education in showrooms via signage, brochures, digital tools, and/or hands-on experiences with Level 2 charger models.
- Co-op marketing support to advertise EVs, including messages to drive awareness of EV benefits and the Company's programs. From March 2022 through the end of this reporting period, over 30 dealerships in the Company's network have utilized co-op marketing to drive broadcast, television, radio, internet, and social media campaigns. These co-op marketing efforts created over 15 million gross impressions in Colorado. These impressions have helped create market awareness about EVs, dealerships who support our EV adoption goals and our EV programs. The co-op program began a drawdown as of July 1, 2023, to more efficiently manage the network. OEMs have increased their commitment to EV advertising and promotions in significant numbers. The co-op program was intended, in part, to help promote EV adoption at the dealership when OEM support dollars were not forthcoming. With the ending of the co-op support, dealers in the network may no longer choose to report EVs sold to the Company.

In March 2023, a new instant income verification process was debuted at EV dealers in the Company's network to help more customers take advantage of IQ Rebates. In the past, a customer had to be prequalified to receive the IQ EV Rebate instantly at a dealer in our network. Now, a determination on income eligibility can be confirmed at the dealer's location, removing up to two weeks of pre-qualification time. Customers who qualify and acquire an EV within the network can have the rebate amount applied to the purchase or lease price of the EV, making it more affordable. The instant qualification at the dealership has led to an increase in dealerships promoting the rebate and has also increased dealership interest in joining the network.

II. MULTIFAMILY HOUSING PORTFOLIO

In June 2021, the Company launched a robust set of advisory services to support customers in applying for MFH programs. Interested MFH building owners, property managers, residents, and others can work directly with a Company EV advisor by submitting a short intake form linked on commercial webpages. These advisors will meet with individual customers to assess the organization's charging needs and calculate costs to develop a customized plan. From there, the advisors meet regularly with customers to

keep them informed and guide them through the project's application, design, installation and commissioning processes.

The Company offers both shared parking and assigned parking programs. Of these, the assigned parking model continues to be significantly more popular than expected. The pass-through billing model facilitates direct billing to the end user and minimizes the need for the building manager or homeowners' association to manage the chargers on a daily basis, as is the case in the shared parking model. Additionally, the cost associated with running wire from the meter to each parking space can be prohibitively expensive for an individual to bear, and that cost can be alleviated by participating in the Company's MFH program. The tables below show MFH participation, including ports awarded (i.e., in the process of being installed), ports installed, and rebates delivered.

Table 2: MFH EVSI Program Participation for Reporting Period

Program	Ports Active (as of 3/1/2023)	Ports Active (as of 8/1/2023)	Ports Awarded (as of 8/1/2023)	Original TEP Initial Forecast Ports Supported by Program (through 12/31/2023)	Percent of Forecast Installed	Five Month Growth Since Last Report
MFH – Shared Parking EVSI	22	30	96	460	7%	36%
MFH – Assigned Parking EVSI	0	61	488	250	24%	N/A

Table 3: MFH Rebate Participation for Reporting Period

Program	Customers/ Rebates or Ports Delivered (as of 3/1/2023)	Customers/ Rebates or Ports Delivered (as of 8/1/2023)	Applications Pending (as of 8/1/2023)	Original TEP Initial Forecast Rebates Supported by Program (through 12/31/2023)	Percent of Forecast Delivered (Ports)	Five Month Growth Since Last Report
MFH New Construction Market Rate Wiring Rebate	0 customers, 0 ports	1 customer, 8 ports	6	475	2%	N/A
MFH IQ/HEC L2 Charger Rebate	2 customers, 8 ports	2 customers, 8 ports	2	96	8%	0%

The Company has installed 61 ports as part of the MFH – Assigned Parking EVSI program, and an additional 488 ports have been awarded. As part of the MFH – Shared Parking EVSI program, the Company has installed 30 ports, with an additional 96 ports in the pipeline. As discussed in the "EVSI Program Demand" section above, we are currently on track to fully utilize our MFH EVSI capital budget for the current year.

For both the assigned and the shared parking programs, the cost of completed projects includes average costs for charging installations, including EVSI and charging equipment, of approximately $30,000 per port. Both MFH shared parking and assigned parking projects have now been completed and are in service, and with 61 MFH assigned parking spaces now active, the Company is providing real solutions for MFH residents who want to charge their EVs at home. The Company continues to refine its billing process to ensure a seamless customer experience for MFH assigned parking participants.

Several MFH projects have been delayed due to the need for long-lead materials or a service policy exception process to determine final equipment placement details. The Company continues to work to improve the overall timeline for delivering its EVSI programs, including faster materials procurement and earlier resolution of the exception process so that the scope of work is fully determined by the time the customer signs an agreement. Nine customers have declined to move forward with the company's MFH or Commercial EVSI program specifically due to the four-port minimum requirement. Additional customers have also dropped out for unspecified reasons, which may include reluctance to install a minimum of four ports.

Table 4: Rate Schedules by Participating Customers, by MFH Portfolio Program[13]

Program	Residential General	Residential TOU	Schedule C	S-EV	SG	S-EV-CPP	Total Customers[14]
MF Assigned EVSI	-	6 customers, 61 ports	-	-	-	-	6
MF Shared EVSI	-	-	2 customers, 8 ports	4 customers, 18 ports	-	1 customer, 4 ports	7
MFH Market Rate New Construction Wiring Rebate	-	-	1 customer, 8 ports	-	-	-	1
MFH IQ/HEC L2 Charger Rebate	-	-	-	-	2 customers, 8 ports	-	2

Optional Charging Equipment Billing Update

In August 2023, upon reviewing revenue data for Company-provided MFH shared L2 chargers, the Company discovered that billing was not set up properly for three projects. The lost revenue from this billing error is $2,589. This process has been remedied and corrected.

III. COMMERCIAL PORTFOLIO

Customer Programs

In September 2021, the Company launched the application process for a suite of Commercial EV programs to support communities, fleets, workplaces, and businesses with their EV charging infrastructure needs. Prior to launch in June 2021, the Company commenced a robust set of advisory services to support customers in applying for the Commercial Programs with EV advisors to guide them on the journey of electrification and utilize the programs best suited for their needs.

Fleet, Workplace, and Public EVSI have completed installations accounting for 71 active ports with 699 additional ports in the pipeline of projects. These nearly 700 projects, which are currently in various stages of design and construction, will likely cause the Company to surpass its original estimates for necessary EVSI program budgets as currently proposed in the 2024-2026 TEP filing. As discussed previously in the "EVSI Program Demand" section, the robust pipeline is an indicator of strong and increasing market demand for our commercial EVSI offerings.

[13] Initially, two customers in the MF Assigned EVSI program were placed on a rate other than the Residential TOU rate, and two customers in the MF Shared program were placed on a residential rate. All customers' rate schedules have been corrected as of the date of this report and process improvements have been put in place to verify rate code assignments upon meter activation. The table shows these customers on their correct rate schedules.

[14] The total number of customers for each row corresponds with participation as provided in the two above tables displaying current participation in the MFH EVSI and MFH charger rebates

For completed projects, average costs for charging installations, including EVSI and charging equipment, is $28,235/port.

The table below summarizes commercial EVSI participation.

Table 5: Commercial EVSI Participation for Reporting Period

Program	Ports Active (as of 3/1/2023)	Ports Active (as of 8/1/2023)	Ports Awarded (as of 8/1/2023)	Original TEP Initial Forecast Ports Supported by Program (through 12/31/2023)	Percent of Forecast Installed	Five Month Growth Since Last Report
Fleet EVSI	9	13	203	1032	1.3%	44%
Workplace EVSI	26	34	307	1033	3%	31%
Primary General EV Pilot	4	4	12	180	2%	0%
Community Charging Hubs	0	0	12	314	0%	N/A
Public EVSI	8	20	145	186	11%	150%
Xcel Energy Public DCFC[15]	0	0	20	24	0%	N/A

Overall timeline for EVSI projects, which includes customer intake, executing agreements, design, and construction has ranged from 12 - 23 months, depending on various factors. The Company has identified equipment procurement and supply chain bottlenecks and is undertaking efforts to mitigate these challenges.

The Company launched a Commercial EVSI Customer Satisfaction Survey to learn more about the customer experience with EVSI installations. Results are available for customers that have completed installations in MFH and Commercial EVSI and show that program participants are very satisfied with their experience on multiple metrics, as indicated in the below table.

[15] Please see the "Company Owned Public DCFC" section for a full update on the program.

Table 6: Key Results of EVSI Customer Satisfaction Survey

Survey Indicator	Results
Overall satisfaction?	84%
How satisfied were you with the installation of your EV infrastructure?	95%
How satisfied were you with the responsiveness and availability of your Xcel Energy Installation Project Manager?	88%
How easy or difficult was the transition from the Advisory phase to the Installation phase?	78%
How satisfied were you with the communication during the installation phase (including scheduling process, topics covered, vendor involvement, and feeling engaged during the site visits and meetings)?	77%
How likely are you to recommend Xcel Energy's Commercial EV Installation Service program to someone else?	90%

The Company recently updated its internal business operations process and moving forward, each project will have a Project Manager assigned to it through the entire pre-design and construction process. This will allow for an easier transition for the customer from the advisory phase to the installation phase, addressing an opportunity for improvement that was suggested by customers in the survey.

Fleet & Workplace IQ/HEC Charger Rebate program participation has increased since the previous report filed in April, with the Company delivering 17 rebates with another 12 rebates pending.

The Company has issued four small Business Market Rebates and two Small Business IQ rebates. Throughout the implementation of these programs, the Company has learned that many commercial customers who are interested in the Small Business Program have monthly electricity usage that is too high for them to qualify for the program. Customers must either receive electric service on Rate Schedule C or use less than 50kW a month. Customers could potentially qualify for the Company's Fleet & Workplace IQ/HEC Charger Rebate or the Company's EVSI program, but customers have indicated that they do not want to install a minimum of four ports, as is required to participate in the current EVSI program.

The Community Charging Hubs - IQ Rebate program has issued one rebate since the Company's April 2023 report. The low participation of this program, which is limited to government entities, municipalities, and neighborhood organizations, is due in part to the focus of some of these entities on fleet charging. For example, certain municipalities have applied for and have been awarded fleet rebates from the Company.

Table 7 below shows Commercial rebates delivered. Table 8 shows current rate schedules of customers in both the Commercial EVSI and Commercial rebate programs.

Table 7: Commercial Rebate Participation for Reporting Period

Program	Customers /Rebates or Ports Delivered (as of 3/1/2023)	Customers/ Rebates or Ports Delivered (as of 8/1/2023)	Original TEP Initial Forecast Rebates or Ports Supported by Program (through 12/31/2023)	Percent of Forecast Delivered (Ports)	Five Month Growth Since Last Report
Fleet & Workplace IQ/HEC Charger Rebate	9 customers, 26 ports	17 customers, 46 ports	160 ports	29%	77%
Small Business IQ/HEC Charger Rebate	3 customers, 5 ports	3 customers, 5 ports	4 ports	125%	0%
Small Business Market Rate Wiring Rebate	3 customers, 9 ports	4 customers, 10 ports	4 ports	250%	11%
Community Charging Hub IQ/HEC Charger Rebate	0 customers, 0 ports	1 customer, 4 ports	216 ports	2%	N/A

Table 8: Rate Schedules by Participating Customers, by Commercial Portfolio Program

Program	RE TOU	PG	C	SG	SGL	S-EV	S-EV CPP	Total Customers[16]
Fleet EVSI	-	-	1 customer, 2 ports	1 customer, 4 ports	-	1 customer, 5 ports	1 customer, 2 ports	4
Workplace EVSI	-	-	7 customers, 46 ports	-	-	-	-	7
Public EVSI	-	-	3 customers, 12 ports	-	-	1 customer, 8 ports	-	4
Community Charging Hubs IQ/HEC Charger Rebate	-	-	-	-	1 customer, 4 ports	-	-	1
Fleet and Workplace IQ/HEC Charger Rebate	1 customer,[17] 2 ports	1 custom er, 2 ports	1 customer, 2 ports	14 customers, 40 ports	-	-	-	17
Small Business Market Rate Wiring Rebate	-	-	3 customers, 4 ports	1 customer, 5 ports	-	-	-	4
Small Business IQ/HEC Charger Rebate	-	-	2 customers, 4 ports	-	-	-	-	2

Optional Charging Equipment Billing Update

In August 2023, upon pulling revenue for Company provided commercial L2 chargers, the Company discovered that billing was not set up properly for two projects. The lost revenue from this billing error is $2,889.

This process has been remedied and the Company has notified the two customers who were not billed correctly to inform them that an issue was discovered with their bill and that it has been corrected.

Other Commercial Offerings

Fleet EV Solutions

Understanding that Commercial and Industrial customers are commonly looking for initial support on developing their fleet electrification plans, the Fleet Electrification Advisory Program ("FEAP") is often their first request for advisory support. For eligible customers, the Company provides a free suitability assessment, data analysis, and advisory services using the fleet's own operation data and business goals. FEAP assessments typically take three to six months to complete but can last up to a year. Currently, 15 projects have

[16] The total number of customers for each row corresponds with participation as provided in the two above tables displaying current participation in the Commercial EVSI and Commercial Charger Rebate programs.

[17] The Company awarded one rebate to a customer project initiated by a governmental customer prior to verifying the premise rate as a commercial rate.

been completed with 1,273 vehicles, and an additional 33 projects in progress with 6,482 vehicles being assessed.[18]

Most FEAP participants to date are municipalities, and the Company has heard from smaller municipalities that they are unable to pay the upfront cost for the program. Therefore, the rebate process has changed to allow customers to participate without having to produce funds upfront. Once the study has completed, we are now sending the rebate check directly to our vendor on behalf of the participant. This change in the terms and conditions has allowed more customers to participate as the financial barrier has been removed. Previously, the Company reimbursed the customer for the FEAP assessment at the completion of the assessment, causing the customer to pay an upfront cost to the vendor, ranging from $8,000 - $75,000, depending on the size of the fleet. In July, the Company changed the program to an instant rebate, similar to our EV Rebate program.

Community EV Advisory

Community Planning provides resources to assist communities in developing plans that provide roadmaps for achieving their unique goals in areas such as engaging residents, supporting fleets, or evaluating opportunities for siting public charging infrastructure. The Company has completed 18 community EV plans and has four more in development, with expected completion late in 2023.

Electric School Bus Rebate

This program will provide up to $2.2 million in rebates, up to a maximum of $275,000 per bus, for the costs incurred to procure an electric school bus and the charging equipment necessary for operations. Launching in October 2021, the Company has held four webinars across its service territory and conducted continuous account management outreach.

A total of eight rebates are available for school buses. In August 2023, the Company achieved a major milestone with the successful payout of its first-ever school bus rebates, supporting two electric buses. The Company expects at least five more school bus rebates to get paid out this year.

Company Owned Public DCFC

The program has identified a total of six sites that will install 14 DCFC charging stations, for a total of 20 ports.[19] Since the April semi-annual report, the Company has been focused on progressing these six sites through the various stages of site host agreement

[18] FEAP projects in process include projects in the scoping phase and the number of vehicles are subject to change.
[19] In the previous semi-annual report, the Company had listed two additional sites totalling 4 ports as part of its scope for Xcel Energy Owned Public DCFC. At this time, the Company is focusing its efforts on the identified six sites totaling 20 ports due to budget capacity, material availability, and deployment schedules.

contracting, final design, procurement, construction, and testing. The status of each site is as follows:

- Severance: construction was substantially completed in December 2022. Extensive testing and commissioning have been taking place with numerous challenges as detailed below. Site opening to follow.
- Eaton: construction is underway and expected to be completed in October 2023. Testing, commissioning, and site opening to follow.
- Monte Vista: construction underway and expected to be completed in November 2023. Testing, commissioning, and site opening to follow.
- Breckenridge: site is in final design and permitting. Construction is expected to start in October and be completed in December 2023. Testing, commissioning, and site opening to follow.
- Lakewood: design is complete but awaiting final site host contract completion. Construction and site opening timing subject to site host contract execution.
- Central City: design is underway for an alternate location, which is being pursued due to space constraints at the initial location. Awaiting final site host contract. Construction and site opening timing subject to site host agreement execution.

The Company is committed to building out the above-described approved Public DCFC stations but is facing challenges that are impacting the Company's ability to deliver this service with the reliability and customer experience that the Company expects. In its April, 2023 semi-annual report, the Company highlighted items such as inadequate charger power output, lack of power sharing, and issues with pricing and payment related to the vendors' hardware and software. Additional items that have been observed with the Severance station include outdated firmware, loss of network connectivity, and lack of credit card payment terminals on the chargers. The Company has worked diligently with the charging management vendor and has been disappointed by the lack of effort and urgency from the vendor and its subcontractors to resolve issues. Given the number of issues and slow resolution time, the Company has not yet re-opened the Severance station to the public.

In an effort to better understand and control the issues prior to site re-opening, the Company has undertaken an extensive in-person testing process involving Company personnel taking EVs to the Severance station and attempting to charge. Since April 2023, the Company has performed test charging sessions at least once per month, with a total of 39 charging sessions totaling 647 minutes of charging time. Through these sessions, the Company has frequently experienced instances of failing to initiate a charge. The failure causes appear to be unpredictable, and often cannot be explained by the Company's charging management vendor. Examples of issues observed during the testing sessions include charging session not initiating due to "communication problems"; charging session terminating suddenly due to "internal problem"; and charger randomly showing unavailable in the charging vendor's mobile application. In aggregate,

the frequency and unpredictability of the vendor's software issues gives the Company concern that the chargers will operate without issue once the chargers are opened to the public. Additionally, we have recently learned that our charging management vendor is exiting its third-party support focus of its business.

In various key ways, the Company's experience is representative of the challenges facing the public fast charging industry nationwide and illustrates the fact that the hardware and charging management software ecosystem is still developing, having not yet reached a mature state. The Company's experience also demonstrates the challenges presented when vendors enter and exit the business. The Company has reached out to other utilities, consultants and engineering firms to help develop its approach to resolving these issues; feedback received is that the Company's challenges are very common in the industry. For example, a study focused on fast chargers in the Bay Area of northern California demonstrated strong concern about public charging – on both distances between chargers and charger reliability – in addition to the results of one study showing only approximately 70 percent of public fast chargers were operational when assessed in 2022.[20] Additionally, in 2022 the Company partnered with ChargerHelp! to survey the landscape of public chargers specifically in the Company's service territory in Minnesota. The ChargerHelp! survey found only about 62 percent of public fast chargers were operational. Of the 21 fast chargers they assessed, 13 were found to be operational, and the eight fast chargers that were unable to charge a vehicle suffered from one or more issues related to physical damage, error messages on the screen, firmware inoperability issues, and other reported problems.

The Company is determined to deliver a strong customer experience as we prepare to re-open the Severance location and commission additional public fast charging sites, which is difficult given the inherent charging software and hardware issues noted above. Given the challenges thus far, the Company is proceeding forward with a great deal of caution, which may lead to sites opening later than initially planned to allow more time for issue resolution. The Company continues to work with its charging vendors on a daily basis to address the outstanding items. The Company has developed a strategic soft-launch plan that will allow for more thorough testing, monitoring, and troubleshooting as each site is brought online. Additionally, Public Service plans to invite customer feedback on the charging experience via a sign with a QR code that will be placed at our charging locations. The Company will also be actively monitoring public charging feedback through organizations such as PlugShare to address issues and concerns quickly that may not be readily available through network monitoring. Lastly, the Company is exploring options for a different charging management vendor in an effort to better meet customer expectations and provide the necessary level of service.

[20] *See* David Rempel et al. *Reliability of Open Public Electric Vehicle Direct Current Fast Chargers*, https://arxiv.org/ftp/arxiv/papers/2203/2203.16372.pdf (last accessed Dec. 15, 2022).

V. PARTNERSHIPS, RESEARCH, INNOVATION PORTFOLIO

Through the PRI portfolio, the Company has developed partnerships with local communities, non-profits focusing on addressing climate change and promoting equity and cultural diversity, EV charging vendors, innovative start-up companies, EV manufacturers, dealerships, academia, research organizations, and other stakeholders. To date, the Company has been providing project development updates to our stakeholders and soliciting feedback.

As a reminder, the Company has begun using a branded name for the PRI program, EV Accelerate Innovation ("EVAI") for external audiences and in promotional and other marketing, communications, and outreach materials. The Company will continue to reference the program as PRI for purposes of reporting on this TEP.

Using the 60-Day Notice process, the Company has issued notices, received stakeholder feedback, and provided final summary reports and revised notices where required and necessary to initiate PRI projects. The table below summarizes the seven projects that have completed the 60-Day Notice process and have launched. Detailed descriptions of each of the seven PRI projects were provided in the Company's April 2022 TEP Semi-Annual Report filed in Proceeding No. 20A-0204E.

Table 9: Status of PRI Projects as of Reporting Period

Project Name (As Filed)	**Branded Name**	**Original Date Issued**	**60-Day Notice Status**
Electric Car Sharing for Underserved Communities Pilot	EV Equitable Car Sharing	11/5/2021	Complete
Electrify Paratransit Mobility Pilot	EV Paratransit Fleets	10/29/2021	Complete
Municipal Refuse Fleet Electrification Pilot	EV Refuse Fleets	10/29/2021	Complete
Residential Resiliency and Managed Charging Project	Not yet externally branded	10/29/2021	Complete
V2X and Resilience Project		10/29/2021	Complete
DCFC Charging + Storage Demonstration Project		1/31/2022	Complete
EV Load Disaggregation Project		4/29/2022	Complete

PRI Project Implementation Updates

As implementation continues, PRI programs have delivered valuable take aways regarding implementation challenges. These include availability of equipment and qualified engineering contractors for construction, availability of hardware and software providers, and permitting constraints.

Table 10: PRI Project Implementation Updates

Project Name	**Implementation Milestones**
Electric Car Sharing for Underserved Communities Pilot	• All currently planned (25 in total) light duty EVs for the program are procured, in Colorado Car Share's possession, and actively being placed with site hosts. • Site hosts' Electric Vehicle Supply Equipment ("EVSE") & EVSI build continues with anticipated completion for almost all sites by late 2023. • Many site hosts continue to experience delays with sourcing necessary EV infrastructure and charging equipment. • Community outreach and project communication programs are in active development and launch with site hosts and Colorado CarShare. • Data and insights will be collected across the program as vehicles are put into regular use and operation across 2024.
Electrify Paratransit Mobility Pilot	• Site host dwelling locations EVSE and EVSI development underway, with an anticipated completion by late 2023. Some delays are possible into 2024 due to sourcing challenges for necessary EV infrastructure and charging equipment, and finding electricians who can help design and install that equipment. • Participants have ordered their EV paratransit buses. The vehicles have been delivered and are being wrapped, outfitted for use, and will be put into regular

Project Name	Implementation Milestones
	operation upon completion of staff and operator training, and pending infrastructure launch. • Community outreach and communication programs are in active development with participants and impacted communities for a late 2023 launch. • Three additional paratransit busses at the full $350,000 per rebate level, and one at the 70% funding level are being contingently awarded across two existing paratransit operators for a total of four additional buses and routes being added to the program. Electrified paratransit service operation expansion will bring the benefit of electric transportation to more community members and vehicle riders with special needs. Rebates for these vehicles are expected to be made in late 2023. Rebates for charging and infrastructure, where needed and applicable for the vehicles, will additionally be considered. • Data and insights will be collected across the program as vehicles are put into regular use and operation across 2024, collected on a quarterly basis.
Municipal Refuse Fleet Electrification Pilot	• Participants have ordered their EV refuse trucks. Two of the five have been delivered and are being wrapped and put into operation. Three remain to be delivered following body construction completion. Manufacturing delays for the chassis, batteries, and vehicle bodies are driving protracted timelines. Discussions with participants indicate vehicle deliveries in late 2023. • Site host dwelling locations are in active EVSE/EVSI development and build out, with an anticipated completion late in 2023. Delays are possible into 2024 due to sourcing challenges for necessary EVSE and EVSI equipment, and finding electricians who can help design and install that equipment. • Community outreach and communication programs are in active development with participants and impacted communities for a late 2023 launch. • Data and insights will be collected across the program as vehicles are put into regular use and operation across 2024, collected on a quarterly basis.
Residential Resiliency and Managed Charging Project	• Development with the National Renewable Energy Laboratory ("NREL") for the new "Residential Resiliency" grid planning tool continues. • The tool will be launched in mid-2024. • Sub-workstream updates as follow: o *Mobility Te*am: - 50,000 EV charging sessions were analyzed to understand EV charging behavior in Colorado plus an analysis of EV adoption rates, travel itineraries, and vehicle energy consumption. - Simulations reviewed EV plug-in vs. plug-out time distribution models. o *Grid Team:* - Confidential feeder and secondary circuit data is being modelled to understand EV impacts among individual households, service transformers, and feeder load profiles, including charging load shapes. - EV charging control algorithms are being benchmarked. - LoadSeer integration of EV charging load curves is underway. o *Modeling and* Analysis Team: - Verification and power flow analysis for primary grid models; realistic secondary grid model generations; and comprehensive simulation of primary and secondary grid models are all underway. o *Electric Vehicle Grid Infrastructure (EVGI) Team: EV charging hardware testbed*

Project Name	Implementation Milestones
	- EVSE and data collection equipment installed for Hyundai Ioniq5 & Ford F-150 with networking configuration in progress. - 15-minute building load models will be used via tools developed by NREL. - EV charging test data will be integrated as available. - A framework to connect the modeling tool to OpenDSS is established.
V2X and Resilience Project	• The project team completed work on the whitepaper, "The Potential of V2X" and presented their findings at the June Quarterly TEP Stakeholder meeting. The paper was also filed as an exhibit as part of the Company's 2024-2026 TEP in support of continuing further V2X work. • For the Vehicle to Home ("V2H") project, the Company has worked with a major automotive OEM, and their national installer to deploy three V2H, Home Integration Systems. These systems allow for consumer grade Vehicle to Grid ("V2G") capable trucks to provide backup power to a home during a grid outage. Two of the systems are deployed at customer homes, providing the Company with general insights into system functionality, installation costs, performance, and customer perception and experience. The third installation is at the SolarTAC facility where more in-depth testing can be performed without impacting customers' homes. The Company is currently working with the OEM and installer to develop a full test plan for this site. • For the Vehicle to Building project, electrical work has begun at one small business site and is scheduled for a second small business site for the installation of bi-directional chargers. The charger manufacturer in this instance experienced delays in receiving UL certification for over a year and does not expect to be able to deliver their bi-directional charger until late in 2023. Due to this delay the project team does not expect to have the two sites operational until early 2024. • For the V2G project, electrical work has been scheduled for the installation of a bi-directional charger at one of the Company's partner schools (V2G Partner A). The installation will support a new V2G enabled electric school bus being acquired this November. A second proposed V2G demonstration at a second school (V2G Partner B) has been delayed until 2024 due to long lead-times for procuring electrical equipment. The V2G software provider in this instance recently filed for Chapter 11 reorganization. The delay in equipment procurement will provide time for the Company to determine if the equipment provider can successfully deliver on the project in 2024 or if this particular demonstration should be eliminated. An additional school district (V2G Partner C) is being evaluated for inclusion into the project, with a goal to help promote V2G learnings.
DCFC Charging + Storage Demonstration Project	• A Request for Information ("RFI") to assess technological availability and feasibility, concluded in October 2022 and final verbal decision on awardee concluded in Q3 of 2023. However, the awardee contract execution is pending until a site is selected and finalized. • When the project was first approved and began in 2022, only one potential capacity constrained area that included or planned to soon include DCFC was identified on the Colorado system. • Now, potential capacity constrained sites have been identified in several communities the Company serves, each with multiple locations for proposed project siting and implementation. The number of communities and specific locations represent an over five-fold increase in the number of current, or soon-

Project Name	Implementation Milestones
	to-be, capacity-constrained sites resulting from the addition of DCFC to the system. • An initial project location that was proposed encountered challenges procuring the land in August. This is a setback for the project, delaying procurement of a physical site to build the battery system. • While the number of capacity-constrained, or soon to be capacity-constrained, sites identified has grown over five-fold over the past year, the biggest obstacle facing the project is acquiring the land necessary and gaining the necessary permitting and approvals to build the battery. Challenges include site development aesthetics, safety concerns, and higher real estate values, coupled with community desire to locate new housing developments. • The Company is in discussions with other potential site hosts to identify a viable site that serves a capacity constrained feeder need coupled with DCFC.
EV Load Disaggregation Project	• Project added to the PRI portfolio per the Advanced Grid Intelligence and Security Settlement Agreement. • The Company concluded a Request for Proposal ("RFP") in Q2, 2023. • The Company is working with a vendor, who under an existing contract provides limited EV Detection and Disaggregation functionality. • The project team is designing a customer facing pilot program participation plan to include a mix of 1,000 current EV owners and likely EV adopters. • Recruiting expected late in 2023 to early 2024 with insights captured mid to late 2024.

Table 11: PRI Project Implementation Performance Metrics

PRI Project	Participant Goal (Target)	Applications Received	Final Awarded to Participants	Status Notes
Electric Car Sharing for Underserved Communities Pilot	*17 sites	41 Sites 241% of goal	21 Sites 124% of goal	• 25 light duty EVs purchased for placement across 21 sites • Procuring remaining six EVs • Six of 21 site host sites have rebates paid out, with others in process • One participant, representing two sites withdrew. Those two sites and vehicles are being considered for re-deployment to Colorado CarShare's existing fleet, where EV charging is available, replacing internal combustion engine vehicles due for retirement.
Electrify Paratransit Mobility Pilot	*Three sites (routes)	Five sites (routes) 167% of goal	Five Sites (routes)167% of goal	• Five paratransit vehicle rebates paid out. • Associated charger and infrastructure rebates undergoing active processing • Four additional buses being contingently awarded. If fully recognized, this brings the program to 9 vehicles serving special needs customers.
Municipal Refuse Fleet Electrification Pilot	*Four sites (routes)	Seven sites (routes) 175% of goal	*Five sites (routes) 125% of goal	• Five refuse vehicle rebates paid out. • Associated charger and infrastructure rebates in active processing
Residential Resiliency and Managed Charging Project**	One EV grid planning tool in active development			• Ongoing regular co-development work and alignment with NREL • Prepare for software tool launch • Collect data and insights
V2X and Resilience Project**	• V2H-Two residential beta participants identified and signed. • V2B-Two small business participants signed. • V2G-Two school district participants identified and being finalized.			
DCFC Charging + Storage Demonstration Project**	• Site selection is under active review. • One RFI, and One RFP released • In negotiations with vendor for site development and project build-out			
EV Load Disaggregation Project	1000 projected***	• Program will begin recruitment in late 2023, and primary insights gathering to occur during the 2024-2026 TEP • Application recruitment process in design phase		

* One application per site location proposed. One site host may propose multiple locations.

** Not designed as an application program

***approximately 700 EV Owners and 300 Non-EV Owners

VI. EV PURCHASE/LEASE REBATES PORTFOLIO

The Company's EV Purchase/Lease Rebate program is designed to support affordable access to EVs for IQ customers (referenced as the EV Rebate program in this report). The EV Rebate is only available to the Company's IQ customers and provides $3,000 off the purchase or lease of a used EV and $5,500 off the price of a new EV purchase or lease. The rebate program went live in August 2021. At the time of launch, with pandemic related issues in supply and delivery, vehicle inventory was a challenge for dealerships as well as dealers becoming familiar with the process. In March 2023, an instant income verification process was implemented across our EV Dealer Network. This process provides a way for these dealers to make customers aware of our rebate, confirm they qualify while in the showroom and provide the savings to qualified customers that day. This new process was piloted with a single dealership and showed signs of increasing the uptake of the rebates and made for a more customer and dealership friendly experience. Since the launch of the instant income verification process, eight dealers have distributed 20 EV rebates. Additionally, in July 2023, the team launched a digital application form, allowing customers to apply for the EV rebate through the software application MyAccount, provided to all Xcel Energy customers, including the Company's. This enhancement allows for a quicker application process and turnaround time. Since the launch of the digital application form, the program has received 140 qualified applications.

The table below shows 236 EV rebates have been issued to IQ customers who purchased or leased an EV.

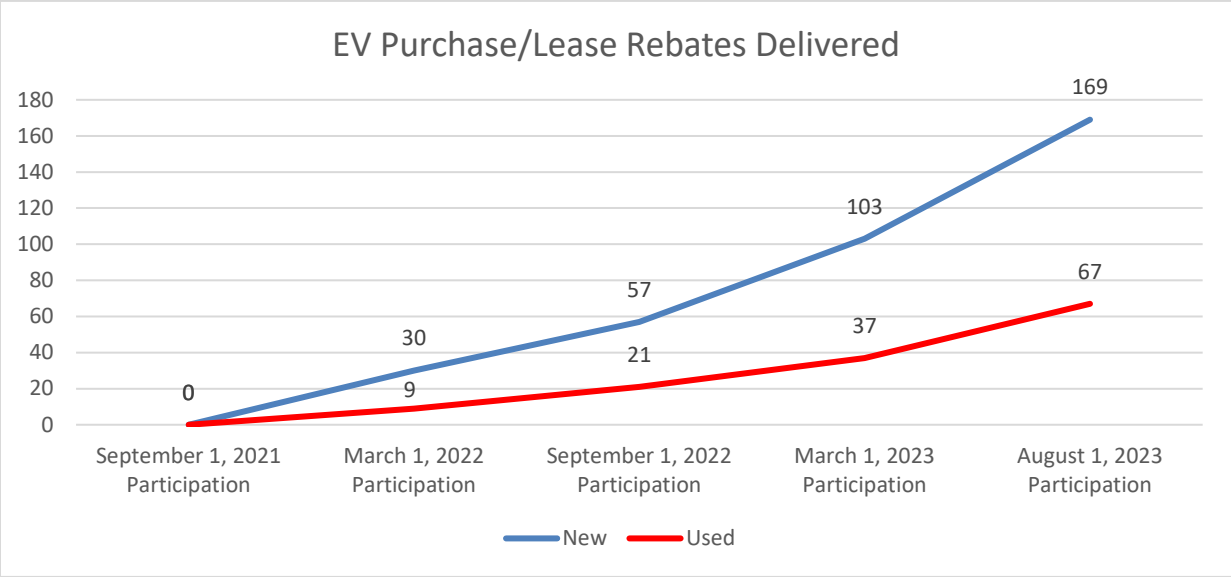
Table 12: EV Purchase/Lease Rebate Participation for Reporting Period

Program	Rebates Delivered (as of 3/1/2023)	Rebates Delivered (as of 8/1/2023)	Original TEP Initial Forecast Rebates (through 12/31/2023)	Percent of Forecast	Five Month Growth
New EV Purchase/ Lease Rebates	103	169	375	45%	64%
Used EV Purchase/ Lease Rebates	37	67	700	10%	81%

The Company has made and continues to make improvements to the application and income qualification process on an internal basis and has worked to streamline its system so that customers experience minimal delays in the processing and approval of their rebate application. In addition to implementing an on-site instant income-qualification

program at the dealership and scaling that program, the Company is actively pursuing options to further refine the income-qualification process and improve the customer experience. Since launch, the program has seen steady growth as shown in the graph below and currently has another 140 qualified applications in progress.

Figure 2: EV Purchase and Lease Rebates Deliverved



Attachment C contains further reporting information, including aggregated income and city data for program participants; make, model, and year of the EV purchased; purchase price; whether the EV Rebate impacted the customer's decision to buy or lease the EV; and how the customer learned about the EV Rebate program.

SECTION 3. INCOME QUALIFIED AND HIGHER EMISSIONS COMMUNITIES

In approving the Company's TEP, the Commission authorized the Company to offer a wide range of EV programs designed to increase access to EVs for IQ communities and populations, consistent with Senate Bill 19-077. The Company will dedicate at least 15 percent of the total 2021-2023 TEP budget, 15 percent of the Advisory Services portfolio budget, and 30 percent of the PRI portfolio budget to support IQ customers and Higher Emissions Communities ("HEC"). The Company has spent 22 percent of total TEP spend, 33 percent of total Advisory Services spend, and 75 percent of total PRI spend on equity-based offerings.

The Company's Residential, MFH, and Commercial portfolios offer enhanced rebates to customers and communities that meet certain criteria that identify them as an underserved population. As previous sections have illustrated, residential equity rebates have seen consistent growth, while the Company has worked hard to achieve MFH and

Commercial equity rebate participation. The table below shows rebate growth and applications in process.

Table 13: IQ/HEC Rebate Participation for Reporting Period

Program	Rebates Delivered (as of 3/1/2023)	Rebates Delivered (as of 8/1/2023)	Applications Pending (as of 8/1/2023)	Original TEP Initial Forecast Rebates Supported by Program (through 12/31/2023)	Percent of Forecast	Five Month Growth
EV Charger and Wiring Rebate Program – IQ Rebate	99	141	204	300	47%	42%
EV Purchase/Lease Rebates IQ Rebate	140	236	140	1075	22%	69%
MFH – IQ/HEC Rebate	2	2	2	96	2%	0%
Fleet & Workplace – IQ/HEC Charger Rebate	9	17	12	160	11%	89%
Small Business IQ/HEC Charger Rebate	3	3	4	4	75%	0%
Community Charging Hubs – IQ/HEC Rebate	0	1	0	216	< 1%	N/A

EQUITY OFFERINGS

Through the TEP proceeding, the Company and stakeholders proposed, and the Commission approved, the use of a broad range of eligibility criteria to allow the Company's equity focused EV programs to be broadly inclusive, and several of these programs offer enhanced support to HECs. The following table highlights these rebate programs with eligibility criteria.

Table 14: Eligibility Criteria for IQ/HEC Programs

Program	Rebate	Criteria for Participation
EV Charger and Wiring Income-Qualified Rebate	EV Charger and Wiring: $1,300	Enrolled in SNAP or TANF Enrolled in LEAP, CO WAP, DSM IQ participation, CARE Income below 60 percent of state median or below 200 percent of federal poverty or below 80 percent of area median
EV Purchase & Lease Rebate	New EV: $5,500 Used EV: $3,000	Enrolled in SNAP or TANF Enrolled in LEAP, CO WAP, DSM IQ participation, CARE Income below 60 percent of state median or below 200 percent of federal poverty or below 80 percent of area median
MFH –Income Qualified Rebate	Up to $8,500 per port	Participated in affordable housing weatherization, multifamily weatherization, affordable housing rebate program in last five years or currently meet income qualification requirements for those programs, or located in an HEC
Commercial Fleet & Workplace – Income Qualified Rebate	Up to $2,200 for each L2 port – Up to $45,000 for each DCFC port	Demonstrate that organization is non-profit eligible to participate in Xcel Energy non-profit efficiency programs, or Public organization that provides services to IQ customers or communities
Community Charging Hubs – Income-Qualified Rebate	Up to $2,200 for each L2 port (4 port minimum) and up to $31,200 for each DCFC port	Located in a census block where 50 percent or more of households have incomes at or below 80 percent of area median income, or located in an HEC
Small Commercial	Up to $2,500 for EVSI costs per port and up to $2,000 for charger equipment costs per port (up to 3 ports)	Income qualification: For MFH customers, an IQ customer must have participated in affordable housing weatherization, multifamily weatherization, or affordable housing rebate program in the last five years, or currently meet income qualification requirements for those programs. For other commercial customers, an IQ customer must demonstrate that such customer is a non-profit eligible to participate in Xcel Energy non-profit efficiency programs or is a public organization that provides services to IQ customers or communities. HEC qualification: The project must fall within one of the census blocks identified as HECs by the Company

EQUITY PERFORMANCE INCENTIVE MECHANISM

As part of the 2021-2023 TEP, the Commission approved an Equity Performance Incentive Mechanism ("PIM") to better align the interests of the Company with the state's goal of extending transportation electrification to people with low and moderate incomes and underserved communities.[21] The PIM evolved with input from multiple stakeholders and allows the Company to earn a per-port incentive for projects where customers install chargers in HEC or IQ communities. To date, the Company is eligible for a PIM reward of $69,900 for 2022 equity program participation. As noted below, this award has been included in the Company's TEPA rates to become effective January 1, 2024 in Advice No. 1898.

For the Company's approved Equity PIM, Public Service will provide:

- *The number of port and EV rebates provided on a port-type basis and an aggregated description of how rebate recipients met the required Equity portfolio eligibility requirements, including how the recipient was deemed eligible (provided income verification to a third party, enrolled via the Low-Income Energy Assistance Program, etc.)*
    - The table below provides the number of ports and EV rebates on a port-type basis.
    - The Company contracts with a third party to conduct income verification and determine rebate eligibility.
- *Approximate hours of staff time and financial resources devoted to rebate programs on a port type basis, to understand the relative effort or ease of per port rebate categories*
    - The table below provides the total costs that include staff time and financial resources to support the delivery of equity rebates.

[21] In Decision No. C21-0117, in Proceeding No. 20A-0204E, the Commission ordered the Company to work with stakeholders to develop the mechanics of the Equity PIM. After engaging stakeholders and more fully developing the Equity PIM, the Company received approval to implement an Equity PIM in Proceeding No 21AL-0494E.

Table 15: Cost to Deliver Equity Rebates for Reporting Period

Program	Rebates Delivered (as of 8/1/2023)	Ports Supported (as of 8/1/2023)	Total Costs (as of 8/1/2023)[22]
EV Charger and Wiring Rebate Program – IQ Rebate	141	L2: 141	$163,525
EV Purchase/Lease Rebates IQ Rebate	236	N/A	$913,000
MFH – IQ/HEC Rebate	2	L2: 8	$12,358
Fleet & Workplace –IQ/HEC Charger Rebate	17	L2: 100 DCFC: 14	$196,953
Small Business IQ/HEC Charger Rebate	3	L2: 5	$18,000
Community Charging Hubs – IQ/HEC Rebate	1	L2: 4 DCFC: 0	$8,800

- *Detailed results of community and fleet assessments*
  - Community EV Assessments in HECs: The Company has not conducted any Community EV Assessments in HECs.
  - FEAP HEC Assessments: The Company is currently engaged with three customers located in HECs and conducting fleet assessments.
- *For each of the Company's fleet and community assessments associated with its equity focused programs, Public Service will provide the details below when available.*
  - *Meeting and/or call minutes,*
  - *Number of meeting and/or call attendees,*
  - *Organizations present at meetings and/or calls,*
  - *Information presented by Public Service at meetings and/or calls,*
  - *Comments and questions received from the community and fleet entities that the assessment pertains to,*
  - *Results of any surveys or questionnaires,*
  - *Follow-up communications,*
  - *Installations of EV charging stations or other TEP rebate offerings,*
  - *Marketing and outreach efforts included targeted communication, and*
  - *Optional narrative that is in addition to the information listed above.*
    - Attachment D provides a summary of communities the Company engaged with for Community EV Assessments in HECs. To date, customers participating in the program have been focused on broader community planning and haven't moved forward with a Community EV HEC assessment.

[22] Total costs include capital, O&M, and income verification, outreach, and rebate delivery with third party vendor.

- Attachment E addresses the details listed above for FEAP HEC Assessments.

SECTION 4. REVENUE REQUIREMENT AND COST RECOVERY

As approved by the Commission in Advice No. 1865,[23] Public Service will report on the prior program year's actual revenue requirement as part of the April 1 semi-annual update. However, final previous year revenues are not known at the time of the April 1 filing and therefore the Company has committed to providing final revenues with its October 1 filings. Final TEPA revenues for 2022 were $10,079,609 resulting in an over-collection of $3,136,422 that will be refunded to customers. Final Company PIM Awards for 2022 were $69,900.

Advice No. 1934, filed contemporaneously with this semi-annual report for TEPA rates to become effective January 1, 2024, shows a forecasted 2024 revenue requirement of $21,756,126.[24]

The 2024 forecasted Revenue Requirement is from the Company's direct case filing in the 2024-2026 Transportation Electrification Plan, Proceeding No. 23A-0242E, currently before the Commission. This is an ongoing proceeding before the Commission and subject to a final Commission decision.

The effect of this filing on the Company's average, overall residential electric bill is an increase of $0.37 per month from $92.05 to $92.42, or less than one-half of one percent (0.40 percent), when compared to the current TEPA rate of $0.00011 per kWh. The effect of this filing on the Company's average, overall small commercial electric bill is an increase of $0.97 per month from $123.34 to $124.32, or 0.79 percent.

SECTION 5. RETAIL RATE IMPACT AND LOAD SUMMARY

SB19-077 requires that "[t]he retail rate impact from the development of electric vehicle infrastructure must not exceed one-half of one percent of the total annual revenue requirements of the utility." In Decision No. C21-0017, the Commission supported the

[23] In Advice No. 1865, the Company proposed filing a report in April detailing TEPA expenditures and revenues from the preceding year. The April 1 filing establishes the true-up and over/under recovery amounts that are included in the October 1 TEPA rate update. The Commission allowed Advice No. 1865 to become effective by operation of law at the Commissioners Weekly Meeting on December 29, 2021.

[24] The 2024 revenue requirement of $ 21,756,126 is made up of the 2024 revenue requirement of $ 24,822,649 as proposed in the 2024-2026 Transportation Electrification Plan, Proceeding No.23A-0242E, plus a refund adjustment of $3,136,422 from the true up of the 2022 TEPA, and an addition of $69,900 from 2022 Equity PIM awards

Company's formulation of the retail rate impact and provided additional guidance that revenues from EVs purchased prior to 2021 be excluded. The following table provides an update to the rate impact analysis based on the Company's 2023 TEP revenue requirement and updated 2023 estimate for sales to EVs and the cost to serve those sales.

Table 16: Retail Rate Impact Calculation

		2023
	Revenue from EV Charging	($36,759,890)
+	Cost to Serve EV Charging	$12,464,232
=	Net Revenue from EV Charging	($24,295,658)
+	TEP Revenue Requirement	$8,703,324
=	Retail Rate Impact	$15,592,334
÷	Approximate Total Retail Revenues	$3,365,475,938
=	Retail Rate Impact - Percentage	-0.46%

The revenues from EV charging in the table above are based on the Company's estimate of EV charging from various types of customers taking service on a mix of retail rates. The marginal cost to serve this EV charging load is then subtracted from this revenue estimate to derive a net benefit of EV charging that can be weighed against TEP-related revenue requirements to determine the net impact of the TEP. The table above shows that the net revenues from EV charging in 2023 surpass the revenue requirements related to TEP spending to date. In other words, for every $1.00 of TEP-related costs in 2023, there were approximately $2.79 of benefits .

The Company uses historical EV sales data from Markit-IHS data and forecasts sales going forward using two different methodologies.[25] The total sales associated with EV charging are based on average annual miles driven and average kilowatt-hour per mile. The following table summarizes the Company's estimate of EVs in our service territory and their incremental growth from 2020. Approximately 88 percent of the Company's sales to EVs are for light-duty vehicle charging.

[25] Please see the Company's April 1, 2021 filing in Proceeding No. 20A-0204E for a full description of EV forecasting methodology.

Figure 3: EVs in the Company's Service Territory[26]

# of Vehicles	2020	2023	Incremental Growth 2020 to 2023
Light Duty Vehicles	29,361	98,749	69,388
Medium Duty Vehicles	0	390	390
Heavy Duty Vehicles	36	253	217

Sales Volumes			Incremental Growth 2020 to 2023
Light Duty Vehicles	102,926 MWh	354,447 MWh	251,521 MWh
Medium Duty Vehicles	0 MWh	12,138 MWh	12,138 MWh
Heavy Duty Vehicles	6,481 MWh	38,347 MWh	31,866 MWh

2020 reflects Guidehouse total Megawatt hour ("MWh") estimate; 2023 reflects an updated calculation utilizing the Guidehouse per vehicle consumption estimate.

Reduced emissions

The Company estimates that for light-duty vehicles, each vehicle charging in its service territory results in a savings of 2.1 tons of CO_2 per vehicle, or 50 percent, based on an emissions rate of 4.2 tons for each internal combustion engine light-duty vehicle and a rate of 2.1 tons for a light-duty EV charged on the Company's system, using 2022 average emissions intensity data.

The Company estimates that each light-duty vehicle charging in its service territory results in a savings of 3.1 pounds per vehicle, or about 64 percent NOx reduction per vehicle, based on an emissions rate of 4.8 pounds per year[27] for each internal combustion engine light-duty vehicle and a rate of 1.7 pounds per year for a light-duty EV charged on the Company's system, using 2022 average emissions intensity data.

Demand

Because the load of EVs is not individually metered, it is not possible to know for certain how much peak demand is attributable to EV charging. Based on the number of EVs, an estimate of Level 1 and Level 2 home charging, and a survey of public EV charging stations, the Company calculated that there is potentially over 500MW of demand potential from EVs.

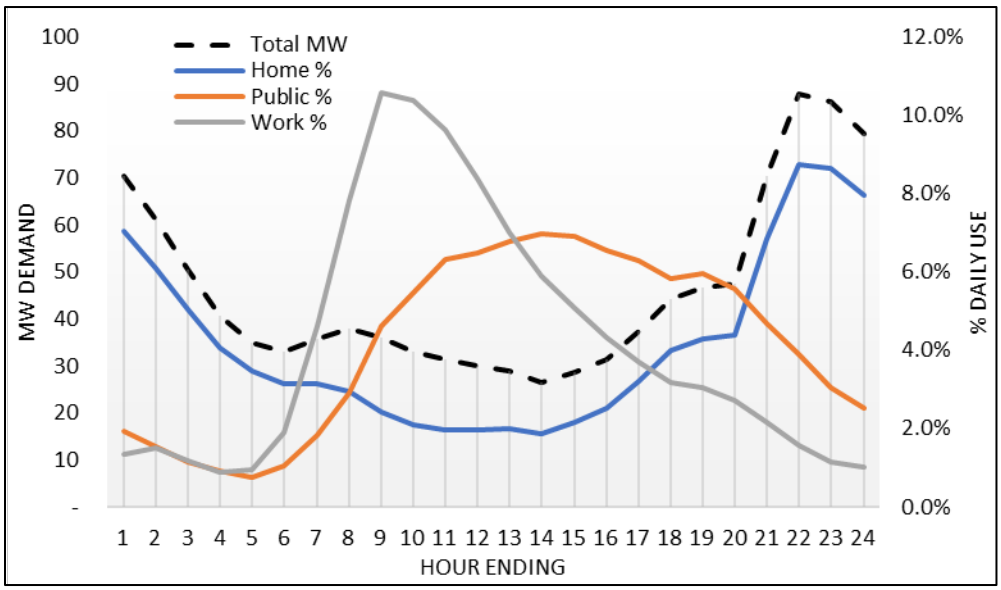
[26] EPRI, I.H.S Data (Includes BEV and PHEV, excludes vehicles registered with the U.S. DOT)
[27] https://www.bts.gov/content/estimated-national-average-vehicle-emissions-rates-vehicle-vehicle-type-using-gasoline-and

Figure 4: Total Charger Capacity

	Count	Avg. Capacity	Total
Home L1	45,918	1.8 kW	82,653 kW
Home L2	52,831	7.0 kW	369,815 kW
Fleet DCFC	390	50.0 kW	19,502 kW
Fleet DCFC	253	75.0 kW	18,940 kW
Public L1	34	1.8 kW	61 kW
Public L2	2,460	7.0 kW	17,220 kW
Public DCFC	576	~75 kW	43,200 kW

However, because it is implausible that all charging ports would be utilized at the same time and at full capacity, the actual peak demand attributed to EVs is much lower. To estimate hourly load patterns and peak demand, the Company developed load shapes for three types of EV charging based on location: home charging, work charging, and public charging. Based on these assumptions, and estimates of total load by location, the Company estimates an aggregated EV load shape that peaks at 88 MW (non-coincident peak) occurring at 9-10 pm.

Figure 5: EV Charging Load Patterns



The results show that the maximum EV demand is much lower than the maximum charging capacity and that during the on-peak hours (3:00 PM - 7:00 PM) when the Company's system typically reaches its maximum peak load, the EV load is even smaller still.

Figure 6: EV Demand Summary

Total Charger Capacity	551,392 kW
Maximum Non-Coincident Demand	87,758 kW
Average Demand On-Peak	39,878 kW
Average Load	46,225 kW

The Company's peak demand in 2023 is approximately 6,400 MW, and the Company tends to peak around 3-5pm in the summer months in 2023. During this time, the EV charging has a contribution of approximately 40 MW (coincident peak) or 0.6 percent of system peak. Approximately 56 percent of this EV charging load was on Time of Use rates with peak periods that encourage reduced load during the late afternoon.

The majority of EV charging load is at-home charging from customers on a mix of schedules R and RETOU. Workplace charging likely includes a mix of customers on schedules C and SG which are not TOU rates, in addition to CTOU and S-EV-CPP which are TOU rates. Public charging occurs from customers on schedule S-EV which is a public charging-specific rate schedule and is a TOU rate. There were approximately 69 public charging stations at the time of this reporting.

As of this report, approximately half of schedule R residential customers have migrated to the TOU rate, schedule RETOU, as per the Company's advanced meter deployment program. Small commercial customers on schedule C also began migrating to CTOU during 2023, albeit a smaller portion as compared to the residential customers. As more EV charging load takes service on TOU rates, the Company expects lower contributions to peak demand relative to total load.

As the Company's advanced meter deployment expands and as more customers are switched to TOU rates, the Company will continue to study EV charging patterns in order to identify any shifting to off-peak periods that may occur. The expected adoption of optimization programs described earlier in this report will be another key factor in encouraging customers to charge during off-peak hours in coming years.

SECTION 6. STAKEHOLDER ENGAGEMENT

As a part of the TEP, the Company has developed a robust process for gathering feedback and input from stakeholders. With the TEP stakeholder group, there has been continuous engagement, including with those that have previously participated in workshops and in the TEP proceeding. The Company has also provided instructions for other interested stakeholders to sign up for the TEP stakeholder distribution list.

The Company's TEP Stakeholder group consists of over 250 individuals including representatives of government agencies, municipalities, non-profit organizations, auto dealers, auto manufacturers, companies, and utilities.

TEP STAKEHOLDER GROUP GOALS

The Company's TEP Stakeholder Group meets quarterly in March (Q1), June (Q2), September (Q3), and December (Q4). The Company hosts stakeholder meetings to:

- Foster discussion about programs in-market;
- Gather ideas for continuing to improve the programs and portfolios; and
- Discuss whether additional projects and programs are necessary to support transportation electrification in Colorado.

UPDATES FROM STAKEHOLDER MEETINGS AND DISCUSSIONS

A summary of formal stakeholder meetings since the last semi-annual report is below. In addition to formal meetings, the Company regularly engages stakeholders individually on topics of interest to them.

June 29, 2023: The Company presented TEP program participation and rebate spending updates, provided an overview of the Company's 2024-2026 TEP filing, and shared results of the Company's V2X whitepaper.

September 28, 2023:The Company presented program updates, spend to date, and participation in TEP programs. The Company also presented an overview of the process going forward for the 2024-2026 TEP currently before the Commission.

SECTION 7. SUMMARY OF ONGOING EV PILOTS AND PROGRAMS IN OTHER XCEL ENERGY SERVICE TERRITORIES

The TEP reporting requirements include providing a summary of ongoing EV pilots and programs in other Xcel Energy service territories. Several of the Company's programs are similar to programs offered in other Xcel Energy service territories, though specific program terms, including the amount of monthly fees and eligibility requirements, vary state to state.

MINNESOTA

The table below summarizes Northern States Power Company Minnesota ("NSPM") EV filings:

Table 17: Summary of NSPM EV Filings

Filing Name	Docket Number	Pilot & Program Names	Status
Residential Electric Vehicle Charging Tariff	E002/M-15-111	- Time-of-Day – Separate Meter (Residential EV Service Tariff)	In market
Residential Electric Vehicle Service Pilot	E002/M-17-817	- EV Service Pilot	Complete
Transportation Electrification Plan	E999/CI-17-879	- Transportation Electrification Plan (Summarizes the Company's existing and potential future EV initiatives)	Next TEP to be filed on November 1, 2023
Electric Vehicle Pilot Programs	E002/M-18-643	- Fleet EV Service Pilot - Public Charging Pilot	In market (2020-2024); Fully Subscribed
Residential EV Subscription Service Pilot	E002/M-19-186	- EV Subscription Service Pilot	In market (2020-2024); Fully Subscribed
Electric Vehicle Home Service Program	E002/M-19-559	- EV Accelerate At Home	In market
Pilot Programs General Time-Of-Use Service Tariffs	E002/M-20-86	- General TOU Service Rate - Critical Peak Pricing ("CPP") Rate	Approved

Filing Name	Docket Number	Pilot & Program Names	Status
Multi-Dwelling Unit Electric Vehicle Service Pilot	E002/M-20-711	- MDU EV Service Pilot	In market (2021-2024); Fully Subscribed
COVID-19 Relief & Recovery (R&R)	E,G002/M-20-745	- EV Purchase Rebates – denied - Public Fast Charging Stations – approved - Xcel Energy Fleet Electrification – recovery will be considered in a future rate proceeding - Expansion of Existing Fleet EV Service Pilot – approved with modifications	Approved with modifications
Load Flexibility Pilot Programs	E002/M-21-101	- EV Optimization Pilot (EV Accelerate At Home – Optimize Your Charge) (EV Accelerate Your Fleet – Optimize Your Charge) - Electric School Bus V2G Demonstrations	Optimize Your Charge – In Market

WISCONSIN

The table below summarizes Northern States Power Company Wisconsin ("NSPW") EV filings:

Table 18: Summary of NSPW EV Filings

Filing Name	Docket Number	Pilot & Program Names	Status
Electric Vehicle Service Programs	4220-TE-104	- Residential EV Service Programs Tariff - EV Accelerate At Home (Standard and Voluntary) - Commercial EV Service Program Pilot (Infrastructure and Optional charger services) - Commercial EV Service Program Tariff	In market
Electric Rate Case	4220-UR-125	- Residential Advisory Services - Commercial Advisory Services - Fleet Electrification Advisory Program	In market
August 2022 EV Filing	4220-TE-113	- Multi-Family Housing Program - EV Accelerate At Home (Bring Your Own Charger)	Approved
Electric Rate Case	4220-UR-126	- Public Fast Charging Hubs - Advisory Services Expansion	Pending

NEW MEXICO

The table below summarizes Southwestern Public Service Company's (" SPS") New Mexico 2022-2024 TEP program implementation:

Table 19: Summary of SPS New Mexico TEP Implementation

Filing Name	Docket Number	Program Names	Status
Transportation Electrification Plan	20-00150-UT	- EV Charger and Wiring Rebate- IQ Charging Rebate - Home Charging Service - EV Optimization - Make-Ready for Public Charging Stations - Public Fast Charging Service - Advisory Services (Residential, Fleets, Communities)	In market

In late 2022, the New Mexico Public Utilities Commission adopted final rules for transportation electrification plan filings with procedural and substantive requirements. TEPs in New Mexico will be submitted on a 3-year cycle, with Southwestern Public Service Company filing their next TEP by April 1, 2024.

SECTION 8. THIRD PARTY CONSULTANT UPDATE

The 2021-2023 TEP evaluator, Opinion Dynamics, conducted three residential customer research efforts as part of our evaluation of the TEP to provide guidance for future improvements that will increase customer satisfaction, further EV and Level 2 charger adoption, and encourage off-peak charging. The three research efforts are summarized below, and detailed results are summarized in a memo included as Attachment F to this report.

RESIDENTIAL PARTICIPANT SURVEYS

Opinion Dynamics fielded a web survey of 262 for Public Service Residential TEP participants. The survey sample consisted of Xcel Energy residential customers who participated in at least one EV-related offering.

RESIDENTIAL INCOME-QUALIFIED PARTICIPANT INTERVIEWS

Opinion Dynamics conducted in-depth interviews with 16 Public Service Income-Qualified (IQ) residential customers who participated in at least one EV-related offering.

DEALERSHIP INTERVIEWS

Opinion Dynamics conducted interviews with staff from 13 dealerships in the Company's service territory, including seven dealership network members and six non-network members. Contacts included general managers, sales managers, sales representatives, marketing directors, and owners.

PROJECTS IN PROGRESS THAT WILL BE INCLUDED IN FUTURE REPORTS:

- Cross-Cutting EVSI Site Host Interviews (Multifamily, Fleet/Workplace, Community Charging Hubs, and Public DCFC)
- Community Partner Participant Interviews
- FEAP Participant interviews

SECTION 9. OTHER REPORTING REQUIREMENTS

While the Company intends to meet all reporting requirements, some data is still not available for this report. Below are reporting requirements that are still in progress due to limited data and availability.

- *Estimated consumption of electricity (in kilowatt-hours) by electric vehicles; estimated level of demand (in kilowatts) resulting from electric vehicles; estimates for the amount of energy sold to program participants during on-peak and off-peak time periods, where feasible.*
    - The Company is currently reporting these metrics for residential customers as mentioned in Section 2. For MFH and Commercial EVSI participants, the Company has begun pulling consumption data for its initial sites. With fewer than 30 active sites, and several new sites not yet consuming electricity, the Company requires additional sites to become active and to generate more consumption data before the Company can effectively report on these metrics without violating Rule 3033, the 15/15 customer aggregated data rule. The Company anticipates being able to report on MFH and Commercial consumption data in the April 2024 Semi-Annual Report.
- *Aggregated and anonymized data via third parties for information from MFH site hosts and Commercial program participants detailing site-specific data (start and stop times of charging, peak kW per charging session, number of charging sessions daily, amount of time each vehicle charges per session daily, whether station owner provides charging for free or if there are usage fees, operating costs, any technologies being used to manage demand).*
    - The Company has contracted with a third-party aggregator to work with charging network service providers to aggregate and anonymize charging session data. This work has begun, but again, with fewer than 30 active sites, additional active sites and consumption data is needed before the Company can report on these metrics without violating Rule 3033, the 15/15 customer aggregated data rule. The Company anticipates reporting on aggregated and anonymized site-specific MFH and Commercial data in the April 2024 Semi-Annual Report.
- For Company-owned DCFC Stations, Public Service will provide the details below when available. The Company has completed substantial construction of one of its approved DCFC stations, but it is not yet open to the public pending the resolution of final items at the site and final testing. Additionally, the Company has two other sites with a substantial amount of construction completed that it plans to open to the public in early Q4.
    - *Monthly revenues the charging station paid to the Company as a "customer" on Schedule S-EV or S-EV-CPP;*

- *Monthly revenues collected by the charging station from customers using the station;*
- *Underlying billing determinants, average load factors, and energy use by on-peak, off-peak, and CPP periods; and*
- *The extent of development of non-Company owned DCFC stations in surrounding areas.*

SECTION 10. CONCLUSION

The Company is excited to support its customers with the suite of EV programs described in this report and it looks forward to continued strong engagement and participation in these programs. The Company's 2021-2023 TEP programs are making EV charging easier and more affordable for its customers, empowering and assisting customers in their EV journey, and helping them drive electric to save money and reduce carbon emissions.

APPENDIX A

BACKGROUND

In May 2019, the Colorado General Assembly enacted Senate Bill 19-077 ("SB19-077"). SB19-077 represents a culmination of years of growing policy support in Colorado for a more coordinated effort to promote widespread transportation electrification. SB19-077 required each Colorado electric public utility to file with the Colorado Public Utilities Commission ("Commission") "an application for a program for regulated activities to support widespread transportation electrification" within its service territory for Commission approval by May 15, 2020, and on or before May 15 every following three years. *See* C.R.S. § 40-5-107(1)(a).

Under SB19-077, in addition to the criteria listed below, a TEP must "seek to minimize overall costs and maximize overall benefits," and may include:

> (I) Investments or incentives to facilitate the deployment of customer-owned or utility-owned charging infrastructure, including charging facilities, make-ready infrastructure, and associated electrical equipment that support transportation electrification;
>
> (II) Investments or incentives to facilitate the electrification of public transit and other vehicle fleets;
>
> (III) Rate designs, or programs that encourage vehicle charging that supports the operation of the electric grid; and
>
> (IV) Customer education, outreach, and incentive programs that increase awareness of the programs and of the benefits of transportation electrification and encourage greater adoption of electric vehicles.[28]

SB19-077 provides several considerations for the Commission to evaluate in determining whether to approve a utility's TEP and associated cost recovery requests. *See* C.R.S. § 40-5-107. Specifically, the Commission shall consider whether the investments and other expenditures are:

a. Reasonably expected to improve the use of the electric grid, including improved integration of renewable energy;
b. Reasonably expected to increase access to the use of electricity as a transportation fuel;
c. Designed to ensure system safety and reliability;

[28] C.R.S. § 40-5-107(1)(b).

d. Reasonably expected to contribute to meeting air quality standards, improving air quality in communities most affected by emissions from the transportation sector, and reducing statewide emissions of greenhouse gases by forty percent below 2005 levels by 2030 and eighty percent below 2005 levels by 2050;

e. Reasonably expected to stimulate innovation, competition, and increased consumer choices in electric vehicle charging and related infrastructure and services; attract private capital investments; and utilize high-quality jobs and skilled worker training programs as defined in section 8-83-303;

f. Transparent, incorporating public reporting requirements to inform design and commission policy; and

g. Reasonably expected to provide access for low-income customers, in the totality of the utility's transportation electrification programs, which may include community-based and multi-family charging infrastructure, car share programs, and electrification of public transit, while giving due consideration to the [e]ffect on low-income customers.[29]

As required by SB19-077, on May 15, 2020, the Company filed an application for Commission approval of its 2021-2023 TEP. The Company's approved TEP includes a broad array of new programs to support EV adoption through six portfolios: (1) Residential, (2) Multifamily Housing, (3) Commercial, (4) Partnerships, Research, and Innovation, (5) EV Purchase/ Lease Rebates for Income-Qualified[30] customers, and (6) Advisory Services. The Company's 2021-2023 TEP is intended to support the State's goal of getting 940,000 EVs on the road by 2030 and to help position Colorado as a national leader in vehicle electrification. The TEP is also informed by considerations of equity, accessibility, and fairness.

Designed to benefit all drivers, all customers, and the state by helping reduce greenhouse gas emissions and air pollution while keeping electric bills low, the TEP benefits the electric grid with a focus on expanding access to electricity as a transportation fuel. The TEP seeks to achieve these outcomes by fostering greater awareness of the opportunities and benefits of electric transportation; reducing barriers to adopting electric transportation; increasing access to the benefits of electric transportation; and encouraging EV charging in ways that reduce system costs and better enable the Company to further its vision for a 100 percent carbon-free electric grid. The Company's 2021-2023 TEP received input from a wide array of intervening parties.[31] On January 11,

[29] C.R.S. § 40-5-107(2).

[30] Based upon feedback received from stakeholders the Company agreed to change references of "low-income" to "income qualified".

[31] Intervening parties to the Company's 2021-2023 TEP (Proceeding No. 20A-0204E) were: Staff of the Colorado Public Utilities Commission ("Staff"); the Colorado Office of Consumer Counsel ("OCC") which became the Utility

2021, the Commission issued Decision No. C21-0017 approving with modifications the Company's application for its 2021-2023 TEP. On March 2, 2021, the Commission issued Decision No. C21-0117 resolving a number of issues brought forward for Rehearing, Reargument, or Reconsideration. Through Decision No. C21-0017, the Company is required to file TEP reports on a semi-annual basis. The Company files this October 2023 semi-annual report in compliance with Decision No. C21-0017 in Proceeding No. 20A-0204E.

APPENDIX B

S-EV AND S-EV-CPP REPORTING

The Company notes that additional reporting requirements have been established through Proceeding No. 21AL-0494E.[32] This section outlines these requirements and provides updates between the time period August 1, 2022 – August 1, 2023.

For Schedule S-EV and Schedule S-EV-Critical Peak Pricing ("CPP") Public Service will report:

- *Revenues associated with the S-EV and S-EV-CPP rates, through a comparison of cumulative revenues associated with the S-EV and S-EV-CPP rates to the revenues that would have been collected had those customers been taking service under Schedule Secondary General ("SG") and Schedule Secondary General Low-Load Factor ("SGL")*
    - The S-EV rate has saved customers $3,779,665 compared to if they were on the SG rate or $5,361,758 if they were on SGL rate.
    - S-EV Revenue: $3,672,161
    - S-EV-CPP Revenues: $350,078
    - Total Actual Revenues S-EV/S-EV-CPP: $4,022,239
    - Hypothetical SG Revenues: $7,801,903
    - Hypothetical SGL Revenue: $9,383,996

Consumer Advocate on September 1, 2021; the Colorado Energy Office ("CEO"); the Regional Transportation District ("RTD"); ChargePoint, Inc. ("ChargePoint"); Tesla, Inc. ("Tesla"); Electrify America, LLC ("Electrify America"); EVgo Services, LLC ("EVgo"); the Joint EV Charging Providers-consisting of Enel X North America, Inc. , EVBox North America, Inc., and Zeco Systems, Inc. d/b/a Greenlots; the City of Boulder; the City and County of Denver; Colorado Energy Consumers ("CEC"); the Environmental Organizations-consisting of Natural Resources Defense Council , Sierra Club, and Western Resource Advocates ("WRA"); the Southwest Energy Efficiency Project ("SWEEP"); the Environmental Justice Coalition - consisting of the Colorado Latino Forum, GreenLatinos, GRID Alternatives, and Vote Solar; Energy Outreach Colorado ("EOC"); and Walmart, Inc. ("Walmart"). Black Hills Colorado Electric, LLC, d/b/a Black Hills Energy ("Black Hills') participated as amicus curiae.

[32] Proceeding No. 21AL-0494E established two optional rates for fleet and public charging as Schedule S-EV and Schedule S-EV-CPP, established rates to be charged at Company-owned DCFC stations, and established an Equity Performance Incentive Mechanism.

- *Underlying billing determinants, average load factors, and energy use by on-peak, off-peak, and CPP periods, for both S-EV and S-EV-CPP*
    - S-EV
        - Billing Determinants: 40,511,920 kWh
        - Average Load Factors: 15 percent
        - S-EV On-Peak: 14,045,750 kWh
        - S-EV Off-Peak: 26,398,039 kWh
        - S-EV Critical Peak Energy (pre S-EV-CPP): 68,131 kWh
    - S-EV-CPP
        - Billing Determinants: 2,818,837 kWh
        - Average Load Factors: 12 percent
        - S-EV-CPP On-Peak: 765,511 kWh
        - S-EV-CPP Off-Peak: 1,970,142 kWh
        - S-EV-CPP: 83,184 kWh
- *An evaluation of whether the removal of the demand ratchet in this limited instance has material impacts on customers and/or the Company.*
    - The Company has not conducted this type of evaluation. The Company will plan to provide this in its next TEP report.