# 2021-2023 TRANSPORTATION ELECTRIFICATION PLAN

## SEMI-ANNUAL REPORT

PROCEEDING NO. 20A-0204E

April 1, 2024

Section 1. Introduction and Overview ..... 3

Introduction ..... 3

Overview and Timeline ..... 4

Continued Growth ..... 4

Alignment with Policy Developments ..... 5

Section 2. TEP Portfolios ..... 6

I. Residential Portfolio ..... 6

II. Multifamily Housing Portfolio ..... 14

III. Commercial Portfolio ..... 16

V. Partnerships, Research, Innovation Portfolio ..... 22

VI. EV Purchase/Lease Rebates Portfolio ..... 28

Section 3. Income Qualified and Higher Emissions Communities ..... 30

Equity Offerings ..... 31

Equity Performance Incentive Mechanism ..... 32

Section 4. Revenue Requirement and Cost Recovery ..... 34

Section 5. Retail Rate Impact and Load Summary ..... 35

Section 6. Stakeholder Engagement ..... 39

TEP Stakeholder Group Goals ..... 39

Updates from Stakeholder Meetings and Discussions ..... 39

Section 7. Summary of Ongoing EV Pilots and Programs in Other Xcel Energy Service Territories ..... 40

Minnesota ..... 40

Wisconsin ..... 42

New Mexico ..... 43

Section 8. Third-Party Consultant Update ..... 44

Section 9. Other Reporting Requirements ..... 45

Section 10. Conclusion ..... 47

Appendix A ..... 48

Background ..... 48

Appendix B ..... 51

S-EV and S-EV-CPP Reporting ..... 51

# SECTION 1. INTRODUCTION AND OVERVIEW

## INTRODUCTION

Public Service Company of Colorado ("Public Service" or the "Company") is pleased to provide its April 1, 2024 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-G, 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 results from EV Purchase/Lease Rebate customer research
- Attachment E provides information related to Community Advisory engagement with higher emissions communities ("HEC")
- Attachment F provides 2023 Transportation Electrification Programs Adjustment ("TEPA") true-up results
- Attachment G provides results of commercial customer evaluation

As the Company nears the conclusion of its first TEP, it has shown growth across all portfolios and recent quarterly stakeholder updates have seen some of the highest upticks in program participation. Since the last semi-annual report, major achievements include a significant increase in the number of completed EV Supply Infrastructure ("EVSI") projects, adding to the number of active charging sites across the Company's service territory. There has also been significant growth in equity rebates issued, most notably the EV Purchase and Lease Rebate program growing 109 percent over the past five months. Overall, 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.

## 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 60-Day Notice process, all of which have launched.

## CONTINUED GROWTH

There are 83,744 EVs registered in the Company's Colorado service territory, and 100,168 EVs on the road across the State of Colorado. Since the last semi-annual report, EV penetration in the Company's service territory has grown from 1.9 percent to 2.1 percent.[1] These are promising signs for the steadily growing Colorado EV market, building upon a variety of efforts from federal and state government initiatives, utility programs, and private market actors supporting pursuit of the state's 2030 EV goal.

As mentioned above, the Company continues to experience a significant positive uptick in EVSI program participation, with 384 active ports and 1,597 ports awarded[2] to customers.

**Table 1: EVSI Program Participation**

| Program | February 1, 2024 Ports (Awarded) | February 1, 2024 Ports (Active) |
|---|---|---|
| Workplace EVSI | 467 | 138 |
| Multifamily Housing – Assigned Parking EVSI | 354 | 91 |
| Multifamily Housing – Shared Parking EVSI | 56 | 66 |
| Public EVSI | 235 | 56 |
| Fleet EVSI | 455 | 29 |
| Primary General EV Pilot | 10 | 4 |
| Community Charging Hubs | 20 | 0 |

[1] I.H.S. Markit Data
[2] Throughout this report, "Ports Awarded" represents customers that have a signed agreement with the Company.

## ALIGNMENT WITH POLICY DEVELOPMENTS

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

Colorado's 2024 legislative session commenced in January. The Company is monitoring legislation related to the EV market and utility programs. Colorado also continues to administer grant funding for clean vehicles and EV charging infrastructure. More state funding for Level 2 charging, available through the Charge Ahead Colorado grant program, became available in the first quarter of this year through the most recent funding round. Additionally, state rebates and tax credits remain available to Coloradans to support the purchase of EVs, through the state Vehicle Exchange Colorado program and the Colorado Electric Vehicle Tax Credit.

Since the last TEP Semi-Annual Report, 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 continued to award federal funding for EV charging and vehicle electrification made available through the IIJA through its Direct Current Fast-Charging ("DCFC") Plazas program. The Colorado Energy Office ("CEO") closed the Fall 2023 funding round for the DCFC Plazas program in December 2023, stating that it anticipates approximately $15 million in funding for this round. Separately, two projects that will benefit Coloradans were awarded through the federal Charging and Fueling Infrastructure grant program in January of this year. Nearly $5 million in funding was awarded to the County of Boulder to install 94 Level 2 and 20 DCFC charging stations in low- and moderate-income neighborhoods, rural areas, and neighborhoods with a high density of multi-family housing. Led by Boulder County, the *Charge Up Boulder County* grant application was a collaborative effort with towns and cities across the county, six non-profits, two state agencies, and three utility companies including Xcel Energy. The Federal Highway Administration also awarded nearly $9 million in funding to Colorado State University to build three hydrogen fueling stations to serve medium- and heavy-duty vehicle fleets and future light-duty passenger vehicles along I-25.

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.

# 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).[3]

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 February 1, 2024,[4] 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 graphs and table demonstrate the trajectory the Company expects programs to follow based on the rate of growth in Residential programs to date. Additionally, the Company has transitioned income verification partners from GRID Alternatives to CLEAResult, beginning January 2024. CLEAResult is developing and implementing an instant income verification process, allowing for a more streamlined customer experience and rapid verification of program eligibilbity for our IQ customers.

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

[4] 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**

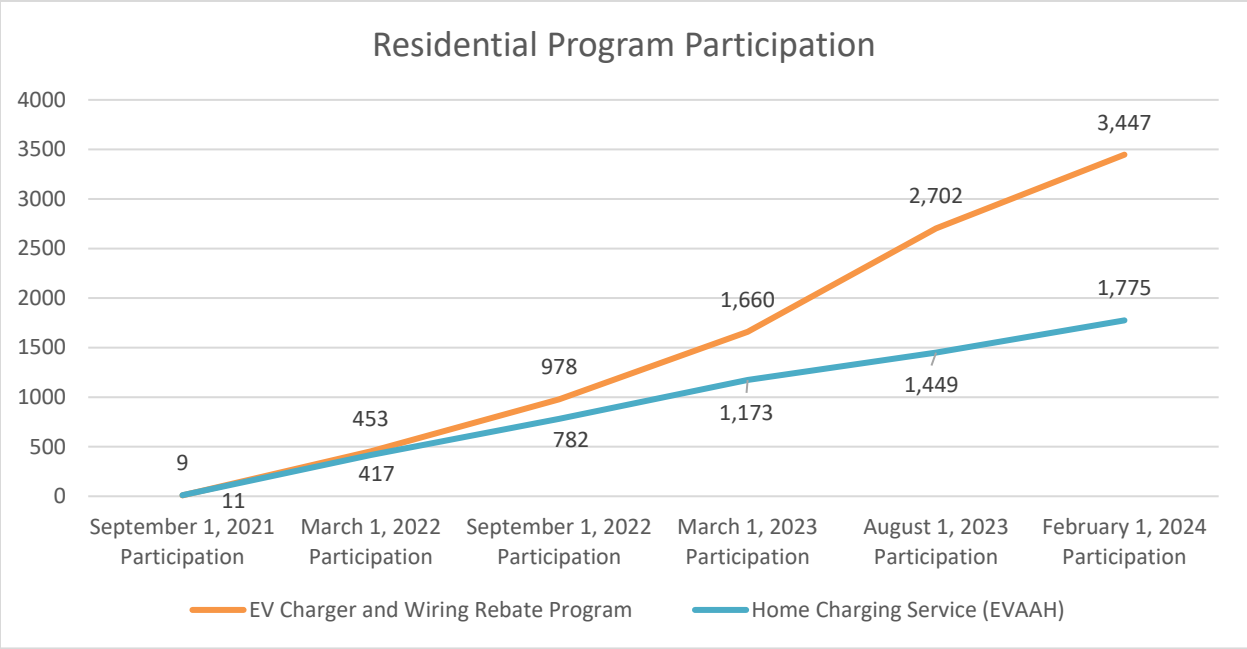



**Figure 2: Residential IQ Program Participation Growth Over Time**

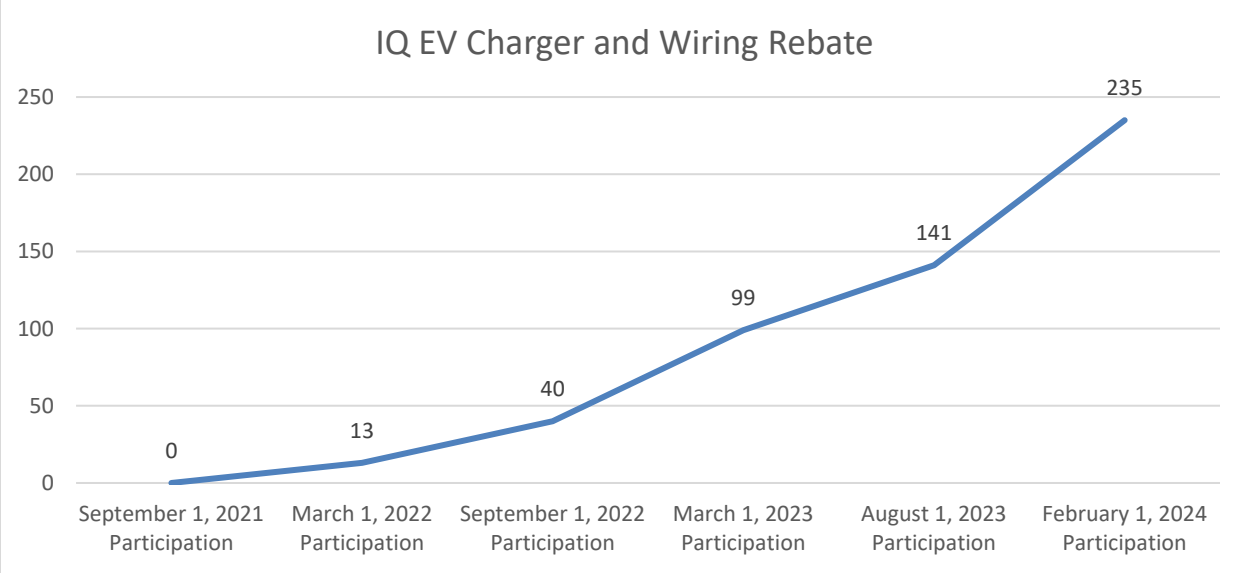


**Table 2: Residential Program Participation for Reporting Period**

| Program | Participants (as of 8/1/2023) | Participants (as of 2/1/2024) | Original TEP Initial Forecast Program Participants (through 12/31/2023)[5] | Percent of Forecast | Five Month Growth (as of 2/1/2024)[6] |
|---|---|---|---|---|---|
| Home Charging Service (EVAAH) | 1,449 | 1,775 | 10,100 | 18% | 22% |
| Standard EV Charger and Wiring Rebate | 2,702 | 3,447 | 15,100 | 23% | 28% |
| IQ EV Charger and Wiring Rebate | 141 | 235 | 300 | 78% | 67% |

## 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. 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. During the charger installation, customers are informed of their eligibility for the EV Charger and Wiring Rebate program. The contracted electricians can provide the EV Charger and Wiring Rebate up front by subtracting the rebate amount from the final invoice for any qualifying home wiring work. EVAAH launched in August 2021. Total revenue collected for the program in 2023 is $200,460.50.

[5] 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.

[6] 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., August 1 – February 1).

There are 1,775 active participants in the program and 261 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 participants, 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.

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 3,447 participants (1,157 instant rebates and 2,290 check rebates) in the standard EV Charger and Wiring Rebate program and 235 participants (22 instant rebates and 213 check rebates) in the IQ EV Charger and Wiring Rebate program.

The Company has worked closely with dealerships in its EV 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, 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 either Optimize Your Charge or the Charging Perks pilot for at least one year. IQ customers receiving the enhanced $1,300 EV Charger and Wiring Rebate can opt-out of the managed charging requirement. 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 4,082 participants in the Optimize Your Charge program. Of the current participants, over 73 percent are complying with the program requirements by charging at least 25 percent of the time within their selected charging schedule. 14 percent of customers were non-compliant and 13 percent were missing data and require follow-up. 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 February 1, 2024. 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. 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 not only help the energy grid operate more efficiently but

also for periods when more renewable energy is available. Unlike static optimization, Charging Perks is not based on a static schedule because the program uses a dynamic price signal to encourage charging at specific times each day. 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 collaborate to automatically establish the car's dynamic charging schedule. The customer's EV will then charge at the best time when renewables are abundant, when demand on the grid is low, and in time to serve the customer's needs.

Customers receive a $100 incentive upon enrollment and can earn an annual incentive of $50 for Level 1 charging or $100 for Level 2 charging. The Company notes that recent Measurement & Verification analytics have shown the benefit of dynamic charging is higher from customers with Level 2 charging and BEVs relative to those from Level 1 charging or PHEVs.

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 2024, through collaboration with the OEMs, to expand the dynamic optimization program. The Company also plans to add EV Supply Equipment ("EVSE") options such as Wallbox in order to recruit more customers with an EV agnostic option.

There were previous caps on the pilot program set at 600 and then subsequently 1,000 that have since been removed. There are now over 1,200 customers participating in the Charging Perks Pilot program. The Company, as a part of its DSM programming, removed the 1,000 EV cap through a 60-day notice .[7]

**Advisory Services and Outreach**

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

*1. Public Events*

**EV Showcases and Community Events.** The Company participated in four events 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*

- Schomp Automotive Ride & Drive. September 9, 2023, Commerce City, CO

[7] 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

- Edgewater EV. September 23, 2023, Edgewater, CO
- CLEER's EV R&D. October 2, 2023, Frisco, CO
- E-bike and Energy Fair. October 21, 2023, Lakewood, CO

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 four of these EV Showcases and two Test Drive events (not included in the Company's *List of EV Showcases above*).

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

List of Commercial Tradeshows/Events:

- Denver-South Suburban Mobility Summit, August 3, 2023, Lone Tree, CO
- FleetCon 2023, August 21-23, Loveland, CO
- Colorado Association of Transit Agencies Fall Conf & Expo, September 12-15, Crested Butte, CO
- Edison Electric Institute National Key Accounts Workshop, October 8-11, Columbus, OH

*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, 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.[8] Multiple email campaigns, including collaborative campaigns with ChargePoint, were conducted to build awareness of EV

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

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 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 Network*

To help the Company's customers wherever they are on their EV journey, the Company launched the "Xcel Energy EV Dealer Network" (now known as the EV Network) in March 2021. There are now 55 members in the EV Network across Colorado. The Company is working to expand its network outside of the metropolitan areas and has added a direct-to-consumer OEM agreement. In January 2024, the Company finalized the first utility agreement with Tesla in Colorado to join the EV Network and began offering our rebates and programs to our shared customers. Traditional dealerships in the network are members in good standing with the Colorado Auto Dealers Association. Of those members, 53 offer new and used EVs, with at least two dealership members focused only on preowned EV sales. Conversations continue with the Colorado Independent Auto Dealers Association to explore adding dealerships that are independent and vetted for best practices to the Company's EV Network.

Through the network, the Company is offering services that directly address barriers that dealers and direct to consumer OEMs can face regarding EVs, including:

- Staff training – the Company conducts ongoing staff and management training with our Colorado network members, educating them on how to engage with shared customers and promote Company programs at the point of purchase. 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.

In March 2023, a new instant income verification process was debuted in the Company's EV Network to help more customers take advantage of the IQ EV Purchase/Lease Rebate. In the past, a customer had to be prequalified to receive the Company's EV Rebate instantly when purchasing an EV within our EV Network. Now, a determination on income eligibility can be confirmed at the member'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 network members has led to an increase in EV Network promotion of the rebate and has increased interest in joining the network. This process has gained considerable traction in Q4 2023 and Q1 2024, showing robust growth in instant rebates provided by network members year over year. The Company's EV Purchase/Lease Rebate is also stackable with the CEO Vehicle Exchange Rebates for IQ customers. The Company has collaborated closely with CEO to drive awareness of the customer value of the combined rebates among members of our EV 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 submit a short intake form linked on commercial webpages. An advisor 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 installing infrastructure from the meter to each parking space can be prohibitively expensive for an individual to bear. Participation in the Company's MFH program alleviates those costs and provides a turn key solution to the customer. The tables below show MFH participation, including ports awarded (i.e., in the process of being installed), ports installed, and rebates delivered.

**Table 3: MFH EVSI Program Participation for Reporting Period**

| Program | Ports Awarded (as of 2/1/2024) | Ports Active (as of 8/1/2023) | Ports Active (as of 2/1/2024) | 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 | 56 | 30 | 66 | 460 | 14% | 120% |
| MFH – Assigned Parking EVSI | 354 | 61 | 91 | 250 | 36% | 49% |

**Table 4: MFH Rebate Participation for Reporting Period**

| Program | Rebates and Ports Delivered (as of 8/1/2023) | Rebates and Ports Delivered (as of 2/1/2024) | Original TEP Initial Forecast Ports 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 | 1 rebate/8 ports | 1 rebate/8 ports | 475 | 11% | 0% |
| MFH IQ/HEC L2 Charger Rebate | 2 rebates/8 ports | 10 rebates/53 ports | 96 | 55% | 563% |

The Company has installed 91 ports as part of the MFH – Assigned Parking EVSI program, and an additional 354 ports have been awarded. As part of the MFH – Shared Parking EVSI program, the Company has installed 66 ports, with an additional 56 ports

in the pipeline. As discussed in sections above, EVSI program demand is high and the Company utilized nearly all of the MFH EVSI capital budget for the current year.[9]

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. With 157 MFH assigned and MFH shared parking spaces now active, the Company is providing real solutions for MFH residents who want to charge their EVs at home.

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 streamlining designs, accelerating 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. Eleven customers have declined to move forward with the company's MFH or Commercial EVSI program specifically due to the four-port minimum requirement.

**Table 5: Rate Schedules by Participating Customers, by MFH Portfolio Program[10]**

| Program | Residential General | Residential TOU | Schedule C | S-EV | SG | S-EV-CPP | Total Customers/ Ports[11] |
|---|---|---|---|---|---|---|---|
| MFH Assigned EVSI | 1 customer, 5 ports | 7customers, 73 ports | 1 customer, 13 ports | - | - | - | 9 customers, 91 ports |
| MFH Shared EVSI | 6 customers, 26 ports | - | 4 customers, 18 ports | 5 customers, 22 ports | - | 1 customer, 4 ports | 15 customers, 66 ports |
| MFH Market Rate New Construction Wiring Rebate | - | - | 1 customer, 8 ports | - | - | - | 1 customer, 8 ports |
| MFH IQ/HEC L2 Charger Rebate | - | - | - | 1 customer, 4 ports | 6 customers, 37 ports | - | 7 customers, 41 ports[12] |

# 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

[9] See Attachment A for breakdown of actual spend and budget.
[10] 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 rather than a commercial rate. The Company has taken steps to correct the rates, and are implementing process improvements to verify rate code assignments upon meter activation.
[11] 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
[12] Three MFH IQ/HEC Charger Rebate recipients are newly constructed sites without a premise number and rate schedule.

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 utilizing the programs best suited for their needs.

Fleet, Workplace, and Public EVSI have completed installations accounting for 227 active ports with 1,207 additional ports in the pipeline of projects. These roughly 1,200 ports are currently in various stages of design and construction.

For completed projects, average costs for charging installations, including EVSI and charging equipment, is $25,286 per port.

The table below summarizes commercial EVSI participation and growth.

**Table 6: Commercial EVSI Participation for Reporting Period**

| Program | Ports Active (as of 8/1/2023) | Ports Active (as of 2/1/2024) | Ports Awarded (as of 2/1/2024) | Original TEP Initial Forecast Ports Supported by Program (through 12/31/2023) | Percent of Forecast Installed | Five Month Growth Since Last Report |
|---|---|---|---|---|---|---|
| Fleet EVSI | 13 | 29 | 455 | 1032 | 3% | 123% |
| Workplace EVSI | 34 | 138 | 467 | 1033 | 13% | 306% |
| Primary General EV Pilot | 4 | 4 | 10 | 180 | 2% | 0% |
| Community Charging Hubs | 0 | 0 | 20 | 314 | 0% | N/A |
| Public EVSI | 20 | 56 | 235 | 186 | 30% | 180% |
| Xcel Energy Public DCFC[13] | 0 | 0 | 20 | 24 | 0% | N/A |

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

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

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. The Company continues to review survey results on a regular basis to make process improvements and provide a better product for our customers. From recent survey results, the Company recognizes there is room to improve with additional communication. The Company is taking corrective actions to ensure customers receive additional communications even during periods of slow activity such as equipment procurement.

**Table 7: Key Results of EVSI Customer Satisfaction Survey**

| Survey Indicator | Results* |
|---|---|
| Overall satisfaction? | 70% |
| 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? | 70% |
| How easy or difficult was the transition from the Advisory phase to the Installation phase? | 60% |
| 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)? | 60% |
| How likely are you to recommend Xcel Energy's Commercial EV Installation Service program to someone else? | 55 NPS** |

**Results are the percent of customers that selected top 3 box (8, 9, or 10) on a 1-10 scale*
***NPS = Net Promoter Score (a measurement of customer satisfaction and loyalty with a possible score from –100 to 100)*
*Source: Commercial EVSI Installation Survey | Dec. 2022 – Feb. 2024 | n=20*

The Fleet & Workplace IQ/HEC Charger Rebate program has delivered 18 rebates with another 27 rebates pending.

The Company has issued six small Business Market Rebates and five Small Business IQ rebates.

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 8 below shows Commercial rebates delivered. Table 9 shows current rate schedules of customers in both the Commercial EVSI and Commercial rebate programs.

**Table 8: Commercial Rebate Participation for Reporting Period**

| Program | Rebates and Ports Delivered (as of 8/1/2023) | Rebates and Ports Delivered (as of 2/1/2024) | Original TEP Initial Forecast 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 | 17 rebates, 46 ports | 18 rebates, 96 ports | 160 ports | 60% | 109% |
| Small Business IQ/HEC Charger Rebate | 3 rebates, 5 ports | 5 rebates, 9 ports | 4 ports | 113% | 80% |
| Small Business Market Rate Wiring Rebate | 4 rebates, 10 ports | 6 rebates, 14 ports | 4 ports | 175% | 40% |
| Community Charging Hub IQ/HEC Charger Rebate | 1 rebate, 4 ports | 1 rebate, 4 ports | 216 ports | 2% | 0% |

**Table 9: Rate Schedules by Participating Customers, by Commercial Portfolio Program**

| Program | RE TOU | PG | C | SG | SGL | S-EV | S-EV CPP | Total Customers/ Ports[14] |
|---|---|---|---|---|---|---|---|---|
| Fleet EVSI | - | - | 4 customer, 14 ports | 2 customers, 8 ports | - | 1 customer, 5 ports | 1 customer, 2 ports | 8 customers, 29 ports |
| Workplace EVSI | - | - | 14 customers, 94 ports | 4 customers, 44 ports | - | - | - | 18 customers, 138 ports |
| Public EVSI | - | - | 5 customers, 24 ports | 6 customers, 24 ports | - | 1 customer, 8 ports | - | 12 customers, 56 ports |
| Community Charging Hubs IQ/HEC Charger Rebate | - | - | - | - | 1 customer, 4 ports | - | - | 1 customer, 4 ports |
| Fleet and Workplace IQ/HEC Charger Rebate | 1 customer,[15] 2 ports | 2 customer, 52 ports | 1 customer, 2 ports | 14 customers, 40 ports | - | - | - | 18 customers, 96 ports |
| Small Business Market Rate Wiring Rebate | - | - | 5 customers, 9 ports | 1 customer, 5 ports | - | - | - | 6 customers, 14 ports |
| Small Business IQ/HEC Charger Rebate | - | - | 5 customers, 9 ports | - | - | - | - | 5 customers, 9 ports |

## 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. The Company has partnered with a third-party vendor who offers a suitability assessment plan for fleets. This includes a minimum observation period of 90 days to evaluate potential EV replacement vehicles, charging infrastructure needed, estimated costs to charge, estimated annual and lifetime savings, and estimated greenhouse gas emissions reductions. In July 2023, the Company changed the program to an instant rebate, similar to our EV Rebate program. As a result, the Company has seen an increased amount of participation from many municipalities and school districts that were unable to pay upfront. Currently, 29

[14] 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.

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

projects have been completed with 2,589 vehicles, and an additional 23 projects in progress with 6,372 vehicles being assessed.[16]

*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 19 community EV plans and has three more in development, with expected completion in early 2024.

*Electric School Bus Rebate*

This program has $2.2 million in rebates available, up to a maximum of $275,000 per bus, to assist with the costs incurred to procure an electric school bus and the necessary charging equipment. 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 six more school bus rebates to be delivered 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.[17] The Company has been focused on progressing these six sites through the various stages of site host agreement 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 has been completed and commissioning and testing is underway. Site opening to follow.
- Monte Vista: construction has been completed and the site has been commissioned. Testing is underway at this time. Site opening to follow.
- Breckenridge: Construction has been completed and the site has been commissioned. Testing is underway at this time. Site opening to follow.
- Lakewood: design is complete and the host has recently signed the site host agreement. Site is currently being permitted and easements obtained.

[16] FEAP projects in process include projects in the scoping phase and the number of vehicles are subject to change.
[17] The Company is focusing its efforts on the identified six sites totaling 20 ports due to budget capacity, material availability, and deployment schedules.

Construction is expected to start in Q2 due to extended city requirements to convey easement rights.

- Central City: The Company is currently negotiating the site host agreement with the site host. Design and construction is pending a signed agreement.

The Company is committed to building out the above-described 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 previous semi-annual reports, 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 stations 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 been able to open the completed sites to the public. The Company is currently negotiating a contract with a new network provider as a result of the ongoing issues with the previous provider.

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 stations and attempting to charge. The Company continues to test the chargers for reliability of the hardware, however full testing will ramp up as soon as the new network provider contract is secured and the units are commissioned on the new network.

The Company is determined to deliver a strong customer experience as we prepare our 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 has led 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.

## 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.

**PRI Project Implementation Updates**

As implementation continues, PRI programs have delivered valuable takeaways 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 CarShare's possession, and actively being placed with site hosts.<br>• Site hosts' EVSE and EVSI builds continue for some participants who have experienced delays getting charger and other infrastructure equipment. These are expected to conclude early in 2024.<br>• Community outreach and project communication programs are active with site hosts who have launched in Breckenridge, Nederland, at various Boulder and Denver locations, universities, and affordable housing locations.<br>• Data and insights are now actively being collected with the insights to be provided in a future Summary Report. |
| Electrify Paratransit Mobility Pilot | • Site host dwelling locations EVSE and EVSI development underway. Two of the three fleet operators are experiencing longer than anticipated delays with their infrastructure due to sourcing equipment such as transformers and and finding engineering, procurement, and construction providers who can install that equipment in a timely manner. One such participant has indicated that it will not be until the end of 2024 that they can get an updated transformer in place to support their EVs.<br>• All program vehicles have been delivered and are wrapped with logos and identifying as EVs. They are all outfitted for use and being put into varying levels of operation as the infrastructure to support becomes available.. |

| Project Name | Implementation Milestones |
|---|---|
| | • Community outreach and communication programs are starting and being led by the participant operators with the communities and riders they serve.<br>• Three additional paratransit buses were funded at the full $350,000 per rebate level and one at a 70 percent funding level across two of the existing paratransit operators for a total of four additional buses and routes being added to the program.<br>• Data and insights are now actively being collected with the insights to be provided in a future Summary Report. |
| Municipal Refuse Fleet Electrification Pilot | • All participants have received their trucks. The trucks are wrapped and being put into regular operation pending infrastructure finalization.<br>• Site host dwelling locations are in still in active EVSE/EVSI development and build out for two of the participants with completion expected by mid 2024. Delays in infrastructure build out are similar to those being experienced by the CarShare and Paratransit projects.<br>• Community outreach and communication programs are already being developed to be shared with participants and impacted communities to include website updates and communications through the participant's channels with their customers and served communities.<br>• Data and insights are now actively being collected with the insights to be provided in a future Summary Report. |
| Residential Resiliency and Managed Charging Project | • Development with the National Renewable Energy Laboratory ("NREL") for the Residential Resiliency grid planning tool continues.<br>• The beta version of the tool will be launched in mid-2024, and the final version in-serviced in late 2024 for regular use and operation.<br>• Sub-workstream updates as follow:<br>o *Mobility Te*am:<br>- 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.<br>- Simulations reviewed EV plug-in vs. plug-out time distribution models.<br>o *Grid Team:*<br>- Confidential feeder and secondary circuit data has been modelled concerning EV impacts among individual households, service transformers, and feeder load profiles, including charging load shapes.<br>- EV charging control algorithms are done being benchmarked.<br>- LoadSeer integration of EV charging load curves is concluding. |

| Project Name | Implementation Milestones |
|---|---|
| | ○ *Modeling and Analysis Team:*<br>- Verification and power flow analysis for primary grid models; realistic secondary grid model generations; and comprehensive simulation of primary and secondary grid models are underway.<br>○ *Electric Vehicle Grid Infrastructure (EVGI) Team: EV charging hardware testbed*<br>- EVSE and data collection equipment has been installed for Hyundai Ioniq5 & Ford F-150 with networking configuration allowing insights to be collected to feed models.<br>- 15-minute building load models are being used to assess impacts.<br>- EV charging test data is integrated into the assessments.<br>- A framework to connect the modeling tool to OpenDSS is now fully established. OpenDSS is an electric power distribution system simulator designed to support distributed energy resource grid integration and grid modernization |
| 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.<br>• For the Vehicle to Home ("V2H") project, the Company deployed at two customer homes, and surveys and studies are being conducted to provide the Company with general insights into system functionality, installation costs, performance, and customer perception and experience. The third installation, at the SolarTAC facility is conducting more in-depth testing in a more controlled environment. The Company has developed, with a major OEM and installer, a full test plan for this site. Data and insights will be provided in a future Summary Report.<br>• For the Vehicle to Building ("V2B") project, electrical work has concluded at one small business site and is concluding at a second small business site for the installation of bi-directional chargers. The charger manufacturer received their UL certification for their bi-directional charger, which had caused project delays. The two sites are moving forward and will be fully operational in early 2024.<br>• For the Vehicle to Grid ("V2G") project, electrical work has concluded for the bi-directional charger at the Company's partner schools (V2G Partner A). The installation supports a new V2G enabled electric school bus that was acquired in November 2023 by the school district. A second proposed V2G demonstration at a second school (V2G Partner B) is on indefinite hold. The V2G bus and software provider for this projects filed for Chapter 11 |

| Project Name | Implementation Milestones |
|---|---|
| | reorganization in 2023 and the Company does not see a viable path forward. |
| DCFC Charging + Storage Demonstration Project | • A Request for Information and associated Request for Proposal to assess technological availability and feasibility concluded in October 2022 and final awards were communicated in Q3 of 2023. However, the awardee contract execution is still pending until a suitable site is selected and finalized.<br>• 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.<br>• 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-to-be, capacity-constrained sites resulting from the addition of DCFC to the system.<br>• Our initially proposed project location encountered site easement and land acquisition agreement challenges in August. This is a setback for the project, delaying procurement of a physical site to build the battery system. The Company continues to evaluate other sites for the project.<br>• The biggest obstacle facing the project is acquiring the land or the necessary easement, and gaining the permitting and approvals to build the battery. Challenges include site development aesthetics, safety concerns, high real estate values, and new housing developments.<br>• The project is currently planned to continue during the 2024-2026 TEP. |
| EV Load Disaggregation Project | • The Company has cancelled this project as an alternative solution was identified using existing functionality already available to the Company. |

## 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<br>241% of goal | 21 Sites<br>124% of goal | • 25 light duty EVs purchased for placement across 21 sites<br>• 21 of 21 site host sites have rebates paid out, with others in process |
| Electrify Paratransit Mobility Pilot | *Three sites (distribution depots) | Five sites (routes)<br>167% of goal | Nine Buses (and routes)<br>300% of goal | • Nine paratransit vehicle rebates paid out.<br>• All associated charger and infrastructure rebates paid to participants. |
| Municipal Refuse Fleet Electrification Pilot | *Four sites (routes) | Seven sites (routes)<br>175% of goal | *Five sites (routes)<br>125% of goal | • Five refuse vehicle rebates paid out.<br>• All 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<br>• Prepare for software tool launch<br>• Collect data and insights |
| V2X and Resilience Project** | • V2H-Two residential beta participants concludedand one test facility install concluded at SolarTac.<br>• V2B-Two small business participants installed.<br>• V2G-One school district participant finalized. | | | |
| DCFC Charging + Storage Demonstration Project** | The project is currently planned to continue during the 2024-2026 TEP. | | | |
| EV Load Disaggregation Project | This project has been cancelled due to an alternative solution being identified. | | | |

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

*** Not designed as an application program.*

# 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 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 Network. This process provides a way for network members 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, 23 dealers have distributed 122 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. This enhancement allows for a quicker application process and turnaround time. Since the launch of the digital application form, the program has received 540 qualified applications. The table below shows EV rebates that have been issued to IQ customers who purchased or leased an EV.

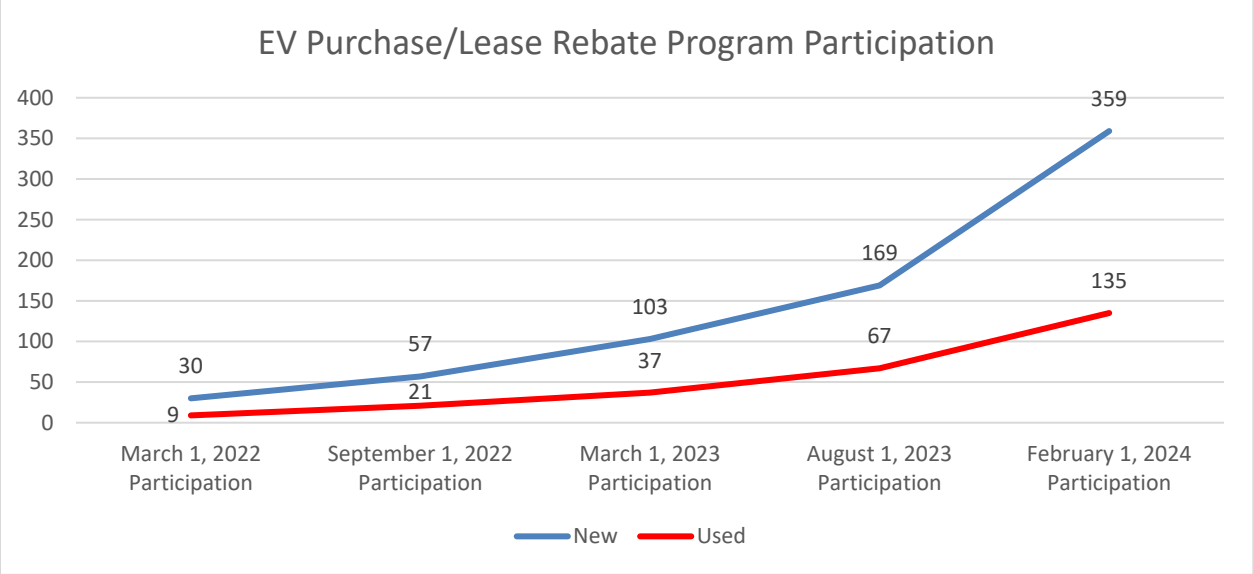
**Table 12: EV Purchase/Lease Rebate Participation for Reporting Period**

| Program | Rebates Delivered (as of 8/1/2023) | Rebates Delivered (as of 2/1/2024) | Original TEP Initial Forecast Rebates (through 12/31/2023) | Percent of Forecast | Five Month Growth |
|---|---|---|---|---|---|
| New EV Purchase/ Lease Rebates | 169 | 359 | 375 | 96% | 112% |
| Used EV Purchase/ Lease Rebates | 67 | 135 | 700 | 19% | 101% |

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 with our EV Network and scaling that program, a new third-party vendor has

been successfully onboarded and will handle the eligibility process for the program's applicants. The Company anticipates having an instant income verification process through this new vendor operational in 2024 as part of the digital enrollment flow. This will streamline the process in which applicants are receiving their EV rebates and increase customer satisfaction. Since launch, the program has seen steady growth and recently has experienced an impressive uptick as shown in the graph below. To date, 494 EV Rebates have been delivered with another 187 qualified applications in progress.

**Figure 3: EV Purchase and Lease Rebates Delivered**




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. The Company's initial third-party income qualification vendor, GRID Alternatives, also delivered results in October 2023 that surveyed 201 EV rebate participants. Results are provided in Attachment D.

# 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 ("SB19-077"). The Company committed to 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 HECs. To date the Company has spent 23 percent of total TEP spend, 27 percent of total Advisory Services spend, and 76 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 8/1/2023) | Rebates Delivered (as of 2/1/2024) | Original TEP Initial Forecast Rebates Supported by Program (through 12/31/2023) | Percent of Forecast | Five Month Growth Since Last Report |
|---|---|---|---|---|---|
| EV Charger and Wiring Rebate Program – IQ Rebate | 141 | 235 | 300 | 78% | 67% |
| EV Purchase/Lease Rebates IQ Rebate | 236 | 494 | 1075 | 46% | 109% |
| MFH – IQ/HEC Rebate | 2 | 10 | 96 | 10% | 400% |
| Fleet & Workplace – IQ/HEC Charger Rebate | 18 | 23 | 160 | 14% | 28% |

| Program | Rebates Delivered (as of 8/1/2023) | Rebates Delivered (as of 2/1/2024) | Original TEP Initial Forecast Rebates Supported by Program (through 12/31/2023) | Percent of Forecast | Five Month Growth Since Last Report |
|---|---|---|---|---|---|
| Small Business IQ/HEC Charger Rebate | 3 | 9 | 4 | 225% | 200% |
| Community Charging Hubs – IQ/HEC Rebate | 1 | 1 | 216 | 0% | 0% |

## 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 also 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<br>Enrolled in LEAP, CO WAP, DSM IQ participation, CARE<br>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<br>Used EV: $3,000 | Enrolled in SNAP or TANF<br>Enrolled in LEAP, CO WAP, DSM IQ participation, CARE<br>Income below 60 percent of state median or below 200 percent of federal poverty or below 80 percent of area median |

| Program | Rebate | Criteria for Participation |
|---|---|---|
| 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<br>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<br>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.<br>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.<br>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.[18] The PIM evolved with input from multiple stakeholders and allows the Company to earn a per-port or rebate incentive for projects where

[18] 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.

customers install chargers in HEC or IQ communities. The Company will update PIM awards for 2023 equity program participation in the October 2024 semi-annual report.

The table below provides the number of ports and rebates on a port-type basis and total costs that include staff time and financial resources to support rebate delivery. The Company contracts with a third party to conduct income verification and determine rebate eligibility.

**Table 15: Cost to Deliver Equity Rebates for Reporting Period**

| Program | Rebates Delivered (as of 2/1/2024) | Ports Supported (as of 2/1/2024) | Total Costs (as of 2/1/2024)[19] |
|---|---|---|---|
| EV Charger and Wiring Rebate Program – IQ Rebate | 235 | L2: 235 | $286,674 |
| EV Purchase/Lease Rebates IQ Rebate | 494 | N/A | $3,994,287 |
| MFH – IQ/HEC Rebate | 10 | L2: 53 | $17,600 |
| Fleet & Workplace –IQ/HEC Charger Rebate | 18 | L2: 92<br>DCFC: 4 | $359,753 |
| Small Business IQ/HEC Charger Rebate | 5 | L2: 9 | $18,000 |
| Community Charging Hubs – IQ/HEC Rebate | 1 | L2: 4<br>DCFC: 0 | $8,800 |

The Company has not conducted any Community EV Assessments in HECs. The Company is currently engaged with twelve customers located in HECs and conducting fleet assessments. Attachment E provides a summary of communities the Company engaged with for Community EV Assessments in HECs and details about the type of outreach and engagement. After completing a FEAP project with HEC participants, the Company will provide necessary details in a subsequent TEP report.

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

# SECTION 4. REVENUE REQUIREMENT AND COST RECOVERY

Public Service reports on the prior program year's actual revenue requirement. However, final prior year revenues are not known yet, and the Company therefore provides final revenues with its October 1 filings. The TEPA Revenue Requirement for 2023 was $6,868,939, resulting in an over-collection of $875,349, which will be refunded to customers. Further details are provided in Attachment F to this report.

As discussed in previous sections, the Company's program participation levels have been below the original forecasts included in the TEP due to several factors and, correspondingly, this has led to program spending that is below the originally forecasted budget. It is not atypical, in the Company's experience, to see actual program spend after the initial launch of programs to lag budget projections and to increase in line with forecasts as program maturity, customer engagement, and market awareness take hold.

# 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 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 | ($42,016,201) |
| + | Cost to Serve EV Charging | $12,971,597 |
| = | Net Revenue from EV Charging | ($29,044,604) |
| + | TEP Revenue Requirement | $7,827,974 |
| = | Retail Rate Impact | $21,216,630 |
| ÷ | Approximate Total Retail Revenues | $3,329,828,438 |
| = | Retail Rate Impact - Percentage | -0.64% |

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 $3.71 of benefits.

The Company uses historical EV sales data from Markit-IHS data and forecasts sales going forward using two different methodologies.[20] The total sales associated with EV charging are based on average annual miles driven and average kWh per mile. The following table summarizes the Company's estimate of EVs in our service territory and their incremental growth from 2020. Approximately 71 percent of the Company's sales to EVs are for light-duty vehicle charging.

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

**Table 17: EVs in the Company's Service Territory[21]**

| # of Vehicles | 2020 | 2023 | Incremental Growth 2020 to 2023 |
|---|---|---|---|
| Light Duty Vehicles | 29,361 | 94,445 | 65,084 |
| Medium Duty Vehicles | 0 | 310 | 310 |
| Heavy Duty Vehicles | 36 | 614 | 578 |
| **Sales Volumes** | | | **Incremental Growth 2020 to 2023** |
| Light Duty Vehicles | 102,926 MWh | 341,078 MWh | 238,152 MWh |
| Medium Duty Vehicles | 0 MWh | 9,661 MWh | 9,661 MWh |
| Heavy Duty Vehicles | 6,481 MWh | 93,179 MWh | 86,698 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 2.2 tons of $CO_2$ per vehicle, or 52 percent, based on an emissions rate of 4.2 tons for each internal combustion engine light-duty vehicle and a rate of 2.0 tons for a light-duty EV charged on the Company's system, using 2023 average emissions intensity data.

The Company estimates that each light-duty vehicle charging in its service territory results in a savings of 2.9 pounds per vehicle, or about 61 percent NOx reduction per vehicle, based on an emissions rate of 4.8 pounds per year[22] for each internal combustion engine light-duty vehicle and a rate of 1.9 pounds per year for a light-duty EV charged on the Company's system, using 2023 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 500 MW of demand potential from EVs.

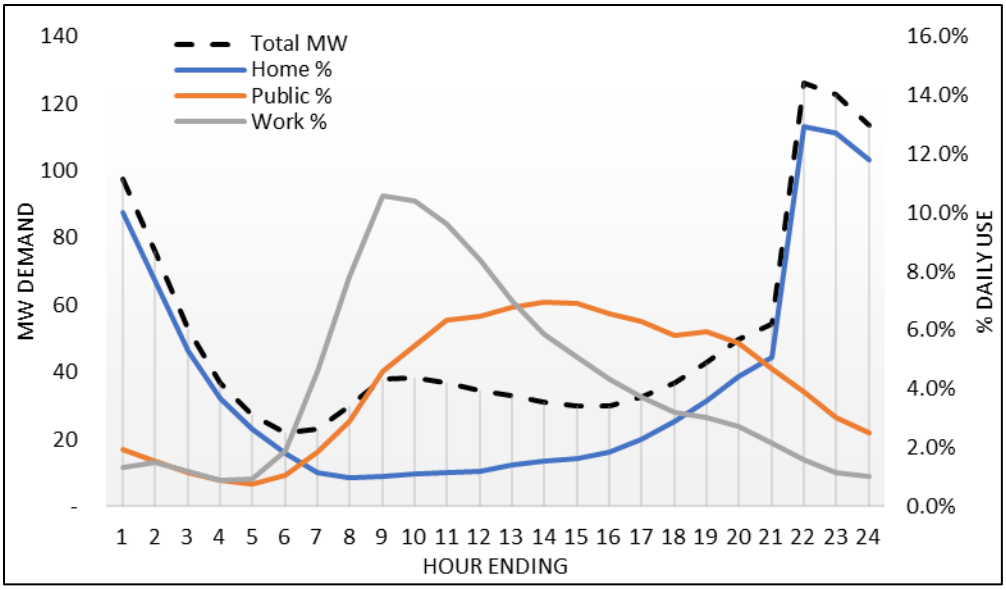
[21] EPRI, I.H.S Data (includes BEV and PHEV, excludes vehicles registered with the U.S. Department of Transportation).
[22] https://www.bts.gov/content/estimated-national-average-vehicle-emissions-rates-vehicle-vehicle-type-using-gasoline-and

**Table 18: Total Charger Capacity**

| | Count | Avg. Capacity | Total |
|---|---|---|---|
| Home L1 | 43,917 | 1.8 kW | 79,050 kW |
| Home L2 | 50,528 | 7.0 kW | 353,696 kW |
| Fleet DCFC | 310 | 50.0 kW | 15,524 kW |
| Fleet DCFC | 614 | 75.0 kW | 46,022 kW |
| Public L1 | 34 | 1.8 kW | 61 kW |
| Public L2 | 2,919 | 7.0 kW | 20,433 kW |
| Public DCFC | 644 | ~75 kW | 48,300 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 126 MW (non-coincident peak) occurring at 9 p.m. to 10 p.m.

**Figure 4: 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 p.m. to 7 p.m.), when the Company's system typically reaches its maximum peak load, the EV load is even smaller still.

**Table 19: EV Demand Summary**

| | |
|---|---|
| Total Charger Capacity | 563,086 kW |
| Maximum Non-Coincident Demand | 126,038 kW |
| Average Demand On-Peak | 35,572 kW |
| Average Load | 50,676 kW |

The Company's peak demand in 2023 is approximately 6,800 MW, and the Company tended to peak around 5 p.m. to 7 p.m. in the summer months in 2023. During this time, the EV charging has a contribution of approximately 43 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 Schedules CTOU and S-EV-CPP which are TOU rates. Public charging occurs from customers on Schedule S-EV which is a public charging-specific TOU rate schedule. There were approximately 1,051 public charging stations at the time of this reporting.

By the end of 2023, approximately three quarters 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 Schedule 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.

December 1, 2023: The Company presented program updates, spend to date, and participation in TEP programs. The Company also presented the regulatory timeline for the 2024-2026 TEP currently before the Commission and shared a summary of 2021-2023 TEP evaluation tasks and upcoming milestones.

March 28, 2024: The Company presented program updates, spend to date, and participation in TEP programs.

# 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 20: 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 Plans | E999/CI-17-879<br>E002/M-23-452 | - Transportation Electrification Plan (Summarizes the Company's existing and potential future EV initiatives) | Most recent TEP filed on November 1, 2023 |
| Electric Vehicle Pilot Programs | E002/M-18-643 | - Fleet EV Service Pilot<br>- 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<br>- 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<br>- Public Fast Charging Stations – approved<br>- Xcel Energy Fleet Electrification – recovery will be considered in a future rate proceeding<br>- 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)<br>- Electric School Bus V2G Demonstrations | Optimize Your Charge – In Market |

## WISCONSIN

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

**Table 21: 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<br>- EV Accelerate At Home (Standard and Voluntary)<br>- Commercial EV Service Program Pilot (Infrastructure and Optional charger services)<br>- Commercial EV Service Program Tariff | In market |
| Electric Rate Case | 4220-UR-125 | - Residential Advisory Services<br>- Commercial Advisory Services<br>- Fleet Electrification Advisory Program | In market |
| August 2022 EV Filing | 4220-TE-113 | - Multi-Family Housing Program - Approved<br>- EV Accelerate At Home (Bring Your Own Charger) | In market |
| Electric Rate Case | 4220-UR-126 | - Public Fast Charging Hubs<br>- Advisory Services Expansion | Approved |

## NEW MEXICO

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

**Table 22: 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 Charger and Wiring Rebate<br>- Home Charging Service<br>- EV Optimization<br>- EVSI for Public Charging Stations<br>- Public Fast Charging Service<br>- Advisory Services (Residential, Commercial, 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 three-year cycle, with SPS filing their 2025-2027 TEP on April 1, 2024.

# SECTION 8. THIRD-PARTY CONSULTANT UPDATE

The 2021-2023 TEP evaluator, Opinion Dynamics, completed several TEP Evaluation and KPI Reporting tasks since the October 2023 TEP Report. Memos summarizing evaluation work will be included in future TEP reporting once finalized.

As part of the evaluation, Opinion Dynamics completed 25 in-depth interviews with participants in TEP EVSI Programs, FEAP, and the Partners in Energy ("PiE") Community EV Advisory Program between August and October 2023. The team recruited interviewees via email from a list of customers provided by Xcel Energy. All interviewees were offered a $50 incentive for completing an interview. The team also completed interviews with two Company staff members and implementers involved with the FEAP and PiE Community EV Advisory Programs in June 2023. The overarching objective of the interviews was to gather information about the participants' experiences with these programs, barriers to transportation electrification, and future transportation electrification goals, as well opportunities for the Company to provide additional support and make program improvements. Detailed results of these research efforts are summarized in a memo included as Attachment G to this report.

**Residential Charging Pattern Analysis**

Opinion Dynamics is collecting 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 continued to leverage these data to update average aggregated load curves for participants in the Optimize Your Charge Program. This analysis produces estimates of average electricity (kW) and total kWh consumed per 24-hour period by vendor. In addition, this analysis supports the Company's TEP reporting requirements and helps it understand how Optimize Your Charge participants are impacting the grid as shown in Attachment B.

**Projects in progress that will be included in future reports:**

- Carbon Emissions Analysis
- EVSI Program Charging Pattern Analysis
- Partnerships, Research, Innovation Portfolio Evaluation

# 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 62 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.
- *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. Only one charging network service provider has sent data to the third-party aggregator and the Company continues to work with two additional charging network service providers in order to aggregate charging session data for the majority of EVSI program site hosts. Once this data is received, the aggregator can anonymize and report on these metrics for the Company.
- For Company-owned DCFC Stations, Public Service will provide the details below when available. The Company has completed construction on four of the six approved DCFC stations but they are not yet open to the public pending the resolution of final items at the sites and final testing.
    - *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 pleased to support its customers with the suite of EV programs described in this report. 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 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.[23]

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;

[23] 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.[24]

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[25] 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.[26] On January 11,

[24] C.R.S. § 40-5-107(2).
[25] Based upon feedback received from stakeholders, the Company agreed to change references of "low-income" to "income qualified."
[26] Intervening parties to the Company's 2021-2023 TEP (Proceeding No. 20A-0204E) were: Staff of the Colorado Public Utilities Commission; the Colorado Office of Consumer Counsel, which became the Office of the Utility Consumer Advocate on September 1, 2021; the Colorado Energy Office; the Regional

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.

Transportation District; ChargePoint, Inc.; Tesla, Inc.; Electrify America, LLC; EVgo Services, LLC; 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; the Environmental Organizations, consisting of Natural Resources Defense Council, Sierra Club, and Western Resource Advocates; the Southwest Energy Efficiency Project; the Environmental Justice Coalition, consisting of the Colorado Latino Forum, GreenLatinos, GRID Alternatives, and Vote Solar; Energy Outreach Colorado; and Walmart, Inc. Black Hills Colorado Electric, LLC, d/b/a Black Hills Energy participated as amicus curiae.

# APPENDIX B

## S-EV AND S-EV-CPP REPORTING

The Company notes that additional reporting requirements have been established through Proceeding No. 21AL-0494E.[27] This section outlines these requirements and provides updates between the time period August 1, 2022 – December 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 $5,456,099 compared to if they were on the SG rate or $7,562,937 if they were on SGL rate.
    - S-EV Revenue: $4,836,191
    - S-EV-CPP Revenues: $424,057
    - Total Actual Revenues S-EV/S-EV-CPP: $5,260,249
    - Hypothetical SG Revenues: $10,716,348
    - Hypothetical SGL Revenue: $12,823,185
- *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: 53,627,239 kWh
        - Average Load Factors: 16 percent
        - S-EV On-Peak: 18,268,286 kWh
        - S-EV Off-Peak: 35,290,822 kWh
        - S-EV Critical Peak Energy (pre S-EV-CPP): 68,131 kWh
    - S-EV-CPP
        - Billing Determinants: 3,597,519 kWh
        - Average Load Factors: 8 percent
        - S-EV-CPP On-Peak: 941,814 kWh

[27] 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 PIM.

        - S-EV-CPP Off-Peak: 2,571,730 kWh
        - S-EV-CPP: 83,975 kWh

- *An evaluation of whether the removal of the demand ratchet in this limited instance has material impacts on customers and/or the Company.*
    - Based on the 17-month period since the removal of the demand ratchet applicable to rate schedules S-EV / S-EV-CPP (beginning in August 2022), the Company has determined that several customers have benefited from lower billable demands in absence of a demand ratchet provision. The lower billable demand results in lower Distribution Demand charges for customers and lower base rate revenues for the Company. Below is a summary of the impacts to customer billable demands and Company base rate revenues.
    - S-EV:
        - 60 customers benefited from reduced billable demands (out of 108 total S-EV customers)
        - 25,354 kW in reduced billable demand (average of 423 kW per benefitting customer)
        - $93,354 in reduced base rate revenues to the Company
    - S-EV-CPP:
        - 14 customers benefited from reduced billable demands (out of 48 total S-EV-CPP customers)
        - 606 kW in reduced billable demand (average of 43 kW per benefitting customer)
        - $1,825 in reduced base rate revenues to the Company