



TRANSPORTATION ELECTRIFICATION DETAILED REPORT

September 2024

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EXECUTIVE SUMMARY

As committed in the July 14, 2021 Addendum to Puget Sound Energy's (PSE) 2021 Transportation Electrification Plan (TEP), filed in connection with Docket UE-210191, PSE has prepared this detailed mid-year 2024 Transportation Electrification Plan report to outline progress on PSE's transportation electrification (TE) products and services. Included in this report are updates on electric vehicle (EV) adoption and forecasts by vehicle type, product activities and progress, lessons learned, expenses to date, and relevant cost benefit analysis results.

This report represents activities performed from January 1, 2023, through June 30, 2024. Since the Transportation Electrification Plan Summary Report dated December 30, 2022, PSE and its partners focused on developing, launching, and operating the TE products and services noted below:

- Schedule 551 (workplace and public charging products and services),
- Schedule 552 (single and multi-family residential charging products and services),
- Schedule 553 (education and outreach),
- Schedule 555 (fleet charging product and services),
- Schedule 556 (load management services), and
- Schedule 557 (technology demonstrations).

Throughout the reporting period, PSE worked closely with charging hardware and network providers, installation partners, and customers to evaluate and install EV chargers at selected project sites. While PSE has witnessed significant growth in the transportation electrification sector, PSE has also encountered an industry that is still experiencing some growing pains. Specifically, PSE has experienced longer project timelines due to EV charging hardware delays, as well as challenges to overall program implementation due to changing business priorities for implementation partners.

PSE has also learned that customers, especially those serving historically underrepresented communities, still need guidance, resources, and time to commit to projects. For many organizations, electric vehicles are still not well understood. For smaller organizations that is compounded by a lack of time and resources available to dedicate to exploring the options that exist. PSE continues to work with those organizations to break down barriers, but PSE has found that these organizations need the time and space to contemplate their options and cannot be expected to operate on PSE's timelines.

1. TRANSPORTATION ELECTRIFICATION PORTFOLIO

1.1. PROGRESS AND LESSONS LEARNED

All progress and data related to TE products and services discussed within this report occurred between January 1, 2023, and June 30, 2024.

In order to advance energy equity and inclusion, and in response to feedback from the community engagement PSE conducted in 2021 and 2022 on transportation electrification needs, each TE product and service includes enhanced incentives and services that reduce financial and operational barriers for highly impacted communities, vulnerable populations, and the community-based organizations, government agencies, and tribal entities that serve them. In January 2023, PSE established new branding for the enhanced incentives and services, known as “Empower Mobility”. Customers eligible for Empower Mobility have access to their own dedicated PSE EVSE account manager to help guide them through the application and subsequent installation processes. PSE developed a comprehensive webpage¹ that aggregates all Empower Mobility incentives in one, easy to find location and has developed similar collateral to be used for outreach at in-person events. To increase awareness of Empower Mobility incentives among eligible customers, PSE has worked to identify opportunities for cross-promotion with other clean energy products like PSE’s Solar Grants. There is direct overlap with commercial customers who are eligible for Empower Mobility and the Solar Grants. In this specific example, Solar Grant applicants received a link prompting them to explore the information at [pse.com/empowermobility](https://www.pse.com/empowermobility) while they wait for PSE’s review of their Solar Grant application.

Contracting activities for EV charging hardware, software, and installation services concluded in May 2023 and PSE staff worked closely with the successful vendor to establish operational processes. Site evaluations of approved project locations began shortly after the operational processes were developed. The EVSE industry at large is still young, and PSE has found that these growing pains constantly affect product and partner availability. In June 2024, PSE was notified by one of its charging hardware and installation vendors that they were halting work as the vendor’s headquarters considered selling the electric mobility arm of the business. Several projects across all of the transportation electrification products and services were impacted by this vendor’s stoppage of work. PSE is finalizing contracting with another vendor to expand available EVSE technologies to TE products and services participants and is currently working on a strategy to broaden the pool of eligible charging hardware and installation partners.

¹ <https://www.pse.com/en/pages/electric-cars/empower-mobility>

As this is still a nascent industry with new technology, PSE has also learned that some customers need additional time to obtain their own internal stakeholder buy-in before fully committing to TE products and services. This process can occur at any stage of the journey depending on the customer type and their available resources and can slow down progress toward EVSE installation.

1.2. METRICS

The Level 2 EV charging ports installed through the Washington Utilities and Transportation Commission (UTC) approved multi-family, workplace, and fleet charging products and services discussed in this report have utilized 40.34 Megawatt-hours (MWh) over 6,685 hours of charging. This represents an estimated \$21,803 of fuel savings for these customers compared to if they had purchased gasoline². Furthermore, this electric charging load resulted an estimated 47.27 tons of carbon abatement³.

Table 1: TE products and services portfolio Level 2 EV charging metrics

METRICS	RESULT
ENERGY UTILIZED (MWH)	40.34
CHARGER UTILIZATION TIME (HOURS)	6,685
FUEL SAVINGS	\$21,803
CARBON ABATEMENT (TONS)	47.27

Table 2 presents the distribution of Electric Vehicle Supply Equipment (EVSE) installations for all categories provided for in tariff Schedules 551, 552, and 555 as of June 30, 2024, by Named Community designation, which includes both highly impacted communities and vulnerable populations. PSE’s Clean Energy Implementation Plan (CEIP)⁴ provides the following definitions:

- **Highly Impacted Communities (HIC):** A community designated by the Washington State Department of Health based on the cumulative impact analysis required by RCW 19.405.140 or a community located in census tracts that are fully or partially on “Indian country,” as defined in 18 U.S.C. Sec. 1151.
- **Vulnerable Populations (VP):** Communities that experience a disproportionate cumulative risk from environmental burdens due to: Adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, access to food and health care, linguistic isolation, and sensitivity factors, such as low birth weight and higher rates of hospitalization.

These designations are at the census tract level, so an EVSE installation is considered to be within a Named Community if the EVSE is within that same census tract. As of June 30, 2024, 52 percent of sites where PSE has installed EVSE are located in named communities (HIC or highly VP

² Assumes gasoline price of \$4.24 per gallon, <https://gasprices.aaa.com/?state=WA>.

³ Calculated using Washington State methodology for CFS credit generation

⁴ PSE CEIP, Chapter 3, [PSE | CEIP Process](#)

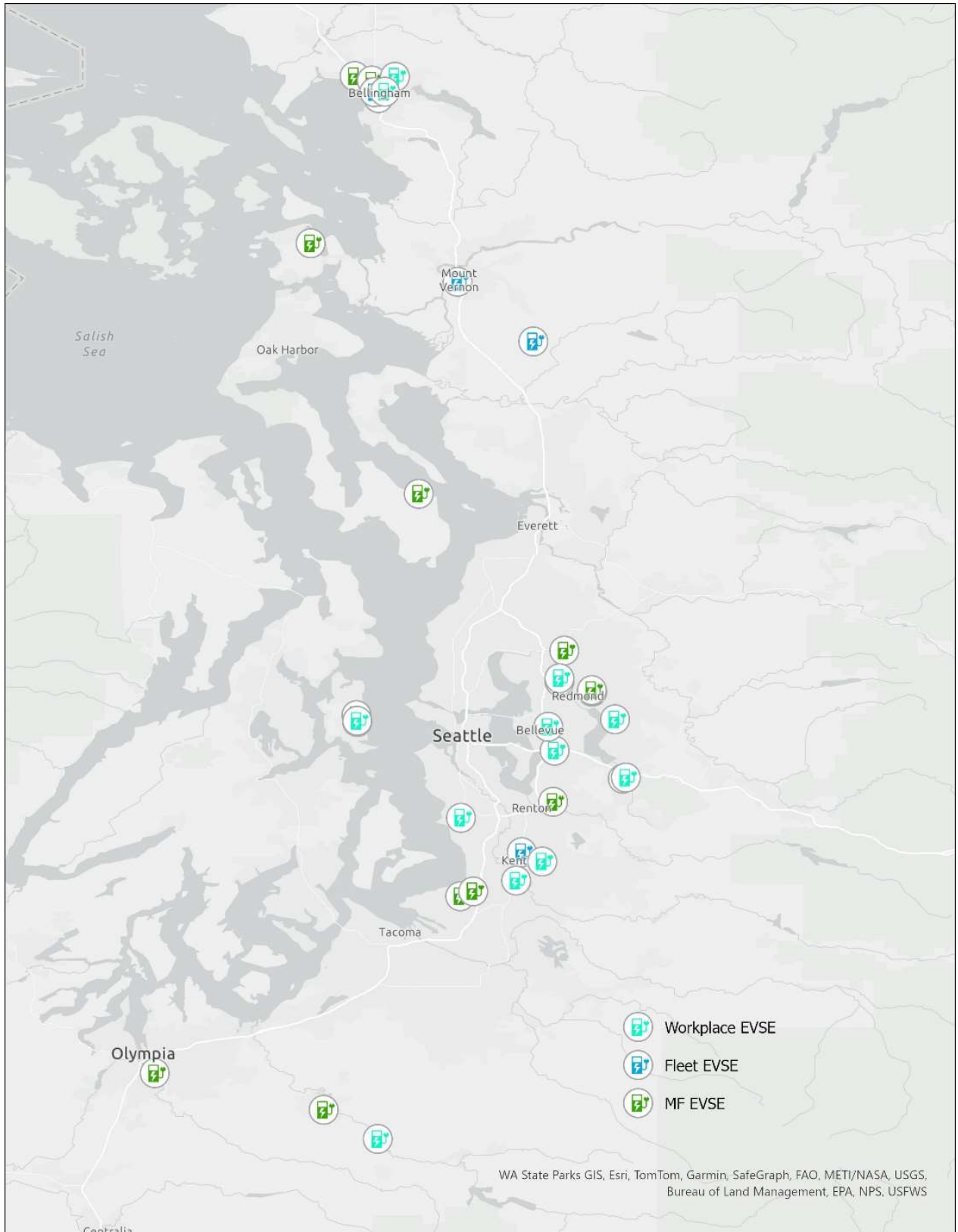
census tracts, 27 percent and 24 percent respectively) and 51 percent of total charging ports are located in named communities.

Table 2: TE products and services portfolio distribution of installations by Named Community designation

HIC DESIGNATION VULNERABILITY LABEL	YES				NO			
	HIGH	MEDIUM	LOW	TOTAL	HIGH	MEDIUM	LOW	TOTAL
SITES (NOMINAL)	7	1	1	9	8	12	4	24
SITES (PERCENTAGE)	21%	3%	3%	27%	24%	36%	12%	73%
PORTS (NOMINAL)	30	4	2	36	30	43	21	94
PORTS (PERCENTAGE)	23%	3%	2%	28%	23%	33%	16%	72%

The map below provides an overview of the locations of all the above detailed EVSE installations through PSE’s TE products and services since January 2023.

Figure 1: Map of EVSE installed through PSE's TE products and services



1.3. ELECTRIC VEHICLE FORECAST

PSE utilizes a forecast of electric vehicle adoption, EV charging infrastructure, and usage (kW/kWh) developed by Guidehouse Consulting for existing and new EVs in PSE's service area. Guidehouse gathers and benchmarks against industry standard data sources for EV forecasting. Sources cited in Guidehouse Consulting's work include: IHS-Markit (registration data), MarkLines, Federal Highway Administration Highway statistics series, U.S. Department of Energy Fuel Economy Guide, GHI Fuel Institute, Environmental Defense Fund/M.J. Bradley & Associates Medium & Heavy-Duty Vehicle Report, California Air Resources Board (ARB)/ Eastern Research Group, Inc. Heavy Duty Vehicle Accrual Rates.

The most recently produced electric vehicle forecast was covered in the 2025 IRP Process, specifically on April 17 2024's RPAG meeting (available at <https://www.pse.com/en/IRP/Get-involved>).

1.4. COST BENEFIT ANALYSIS

If supported by adequate investment, transportation electrification can provide benefit to PSE retail electric customers through direct benefits (such as fuel and maintenance savings) and indirect benefits such as emissions reductions, improved grid load factor, and rate relief from increased energy sales. PSE has previously demonstrated in Docket UE-220066 et. Al., Exh. WTE-1CT, pages 49-59) that if EV charging makes efficient use of the electric system (e.g., through load management), it can provide rate relief to retail electric customers as the increase in energy demand enables PSE to spread fixed costs across a greater number of kilowatt-hour (kWh) sales. PSE previously estimated that to provide the necessary system upgrades to meet the forecasted demand for EV charging for the period of 2023-2025, the costs would be less than the forecasted revenue generated through sales of electricity at existing rate schedules for the purpose of that same EV charging⁵. To this extent, TE could serve as a counterbalance to other forces driving rate increases. This should remain true as long as PSE's investment in EV-supportive system upgrades and EVSE is less than the benefit resulting from transportation electrification.

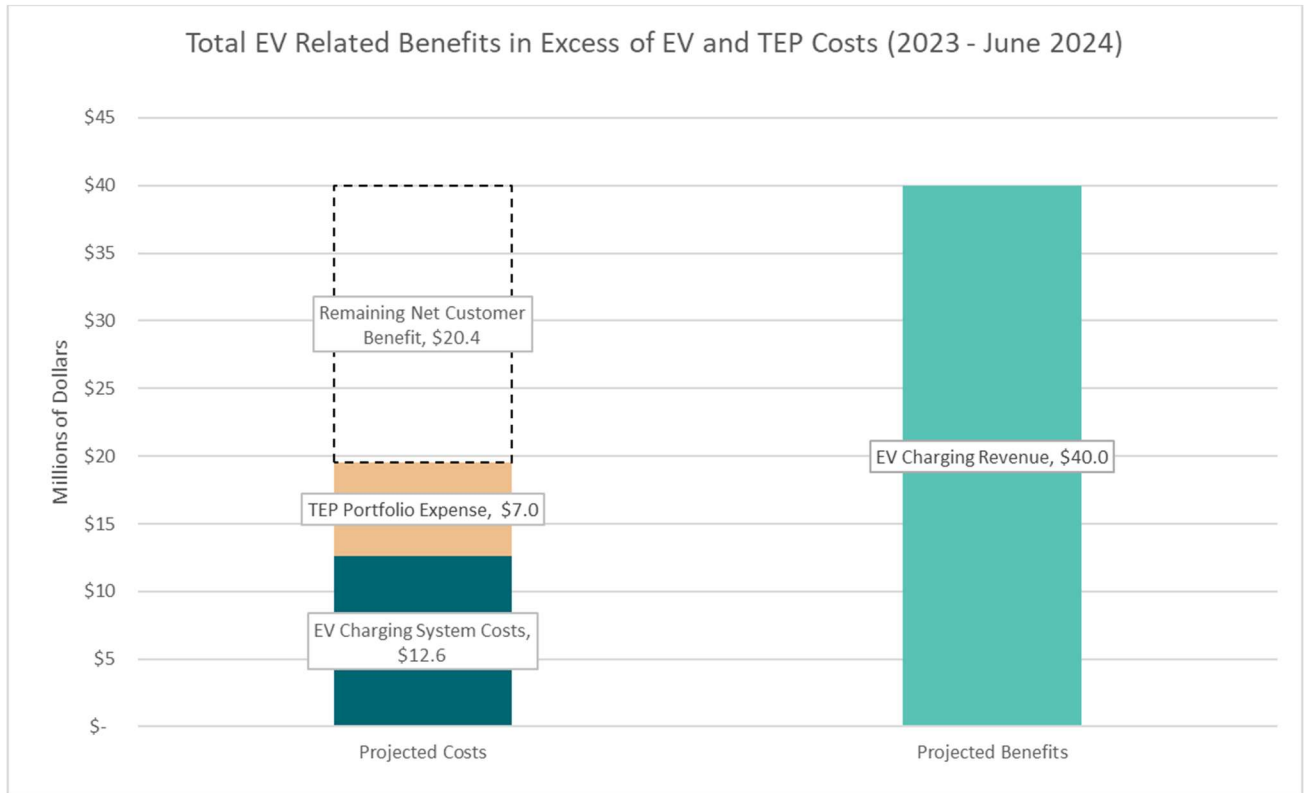
In keeping with this methodology, PSE has updated its Benefit Cost Analysis detailed in the referenced testimony to include actual expenditures on TEP products and services. Utilizing the same assumptions from that filing⁶, PSE estimates that electric-service customers have paid roughly \$39.95 million for electricity used for the purposes of charging electric vehicles. Meanwhile, PSE has incurred an estimated \$12.59 million in energy and demand-related costs to serve this load. The difference between revenue generated and the cost of serving the load is excess benefit (\$27.36 million) that all retail electric customers may experience in the form of rate relief. PSE's TEP product and services capture some of that benefit and reinvest it directly into further

⁵ [Docket UE-220066 et. Al., Exh. WTE-1CT, pages 49-59](#)

⁶ The underlying assumptions including EV population, ev energy requirement, rates, and costs such as capacity, T&D, power cost have not been updated within this modeling as PSE is currently involved in a filing that will adjudicate these values.

transportation electrification. Through June of 2024, PSE's TEP products and services have a combined cost of \$6.7 million, representing 25.5% of the total net benefit that customers may gain from TE in that same period of time. The remaining net benefit of \$20.4 million is benefit that all electric retail customers may experience.

Figure 2: Benefit-Cost Analysis Results



2. PHASE I PRODUCTS AND SERVICES

The UTC approved the TE products and services outlined in this section in the spring of 2022 under Docket UE-220294.

PSE finalized the TE project prioritization process discussed in the 2022 Q4 Transportation Electrification Summary Report dated December 30, 2022.

The TE project prioritization process established four criteria by which PSE evaluates applications:

- the overall community impact of the project,
- the degree to which the project contributes to geographic diversity,
- the degree to which the project contributes to use case diversity, and
- the overall utilization potential of the project.

Each criteria carries a different weight depending on the project's Empower Mobility qualification; for example, the utilization potential of an Empower Mobility property is weighted less heavily than a standard project, while the community impact is weighted more heavily. Projects are prioritized on a monthly basis and either approved for a site evaluation or placed on a waitlist. Projects placed on the waitlist are reviewed again the following month.

2.1. MULTI-FAMILY CHARGING (SCHEDULE 552)

2.1.1. PROGRESS AND LESSONS LEARNED

The Up & Go Electric for Multi-family program began accepting and reviewing applications on January 31, 2023. As part of the launch, PSE reached out directly to property managers and owners who signed up for notifications when the program started accepting applications.

Many operational processes were already in place from the successful completion of PSE's multi-family charging pilot, which operated between 2019 and 2021. However, new learnings emerged during 2023. For example, PSE always reviewed the existing transformer to assess feasibility and to help inform the final EVSE project design and cost proposal, but this information was usually shared with customers after the final proposal was completed. During the reporting period, eight customers elected to decline participation in PSE's TE products and services due to the costs of infrastructure upgrades raising the cost per port above PSE's caps of \$10,000 per Level 2 port. PSE addressed the concerns about the costs of infrastructure upgrades in two ways:

- First, PSE filed and received UTC-approval on a Schedule 552 tariff revision under Docket UE-231029 allowing the Up & Go Electric for Multi-family program to fully cover the costs of utility-side infrastructure upgrades for properties primarily housing low-income populations

and tribal members, allowing additional funding within the established caps for upgrades needed on the customer’s side of the meter.

- Second, PSE staff also began calling customers after the initial transformer assessment to notify them of any utility-side infrastructure upgrades needed to support their EVSE project and the likelihood the caps per EV charging port would be exceeded. This provided a better customer experience as it allowed the customer to decide if they would still like to proceed with a site evaluation or if they wanted to decline moving forward before spending additional time meeting with the installer.

2.1.2.METRICS

Since the end of January 2023, PSE received 215 multi-family EVSE applications. Of those applications, 158 met eligibility requirements, and 80 sites proceeded to evaluation based on available space within the program and the projects’ prioritization, with 14 total projects completed by June 30, 2024. EVSE installations at multi-family sites averaged 20 days of actual construction time, with the longest project taking 3 months and the shortest only 2 days.

The total average cost per EV charging port across the Up & Go Electric for Multi-family program was \$10,600, with the cost per port for Empower Mobility customers at \$9,412 and non-Empower Mobility at \$10,871. PSE expects that the cost per port for Empower Mobility customers will increase as additional eligible customers apply for incentives and enroll in the program. The maximum cost per port was \$20,390 for a project that required significant infrastructure upgrades. On average, customers requested 3.4 ports per site.

Table 3: Multi-family charging products and services project metrics

METRIC	RESULT
APPLICATIONS SUBMITTED	215
QUALIFIED APPLICATIONS	158
APPROVED FOR SITE EVALUATION	80
PROJECTS COMPLETED	14
AVERAGE CONSTRUCTION TIME IN DAYS	20
LONGEST CONSTRUCTION TIME IN DAYS	90
SHORTEST CONSTRUCTION TIME IN DAYS	2
AVERAGE LEVEL 2 CHARGING PORTS REQUESTED	3.4
AVERAGE COST PER LEVEL 2 CHARGING PORT	\$10,600
EMPOWER MOBILITY AVERAGE COST PER PORT	\$9,412
NON-EMPOWER MOBILITY AVERAGE COST PER PORT	\$10,871
MAXIMUM COST PER PORT	\$20,390

Table 7 presents the distribution of EVSE installations by Named Communities designation. PSE has placed 50 percent (25 percent in HIC and 25 percent in high VP census tracts) of its multi-family EVSE installations within named communities, which accounts for 54 percent of the multi-family EV chargers that PSE has installed through the program.

Table 4: Multi-family charging products and services distribution of installations by Named Community designation

HIC DESIGNATION	YES				NO			
	VULNERABILITY LABEL	HIGH	MEDIUM	LOW	TOTAL	HIGH	MEDIUM	LOW
SITES (NOMINAL)	3	0	1	4	4	7	1	12
SITES (PERCENTAGE)	19%	0%	6%	25%	25%	44%	6%	75%
PORTS (NOMINAL)	12	0	2	14	14	20	4	38
PORTS (PERCENTAGE)	23%	0%	4%	27%	27%	38%	8%	73%

At this time, there is insufficient electric usage and charging data to provide meaningful load profiles for customers who have EVSE installations under Schedule 552 multi-family EV charging products and services. As more customers participate for longer periods, PSE will develop load profiles to reflect charging patterns in customer charger(s) and site level electric usage. This future analysis will also include data on peak load of EV chargers.

During the reporting period of January 2023 through June 2024, the EV chargers participating in multi-family EV charging products and services used 12.64 MWh of electricity for charging vehicles over the course of 2,033 hours of EV charging. This represents an estimated \$6,832 of fuel savings for these customers compared to if they had purchased gasoline⁷. Furthermore, this EV charging load resulted in an estimated 14.81 tons of carbon abatement.⁸

Table 5: Multi-family charging products and services utilization metrics

METRIC	RESULT
ENERGY UTILIZED (MWH)	12.64
CHARGER UTILIZATION TIME (HOURS)	2,033
FUEL SAVINGS	\$6,832
CARBON ABATEMENT (TONS)	14.81

2.2. FLEET CHARGING (SCHEDULE 555)

2.2.1. PROGRESS AND LESSONS LEARNED

Prior to opening the Schedule 555 Up & Go Electric for Fleet program to applications, PSE sent out a survey on January 31, 2023, to fleet customers who had signed up for an interest list to gauge the number of customers who were ready to begin EVSE installation in 2023. The survey was open for two weeks and respondents answered questions about their role and interest in fleet electrification, plus when they planned to begin electrification. Following the closure of the survey, PSE provided a

⁷ Assumes gasoline price of \$4.24 per gallon, <https://gasprices.aaa.com/?state=WA>

⁸ Calculated using methodology for Clean Fuel Standard credit generation

link to the program application to customers who indicated they were ready to install in 2023. A different message asking potential applicants to keep PSE staff informed on their fleet electrification plans was sent to respondents who indicated they would not be ready to install chargers in 2023. These potential applicants also received notification when the Up & Go Electric for Fleet program was available for enrollment to any eligible fleet customers on May 6, 2023.

As part of the Up & Go Electric for Fleet program, PSE also launched an enhanced advisory service to provide fleets serving and benefiting historically underrepresented communities with a more comprehensive fleet conversion assessment. Beginning in August 2023, PSE piloted the service with one customer, who received a written plan with recommendations for prioritizing vehicle conversions, charging requirements, and infrastructure or electrical upgrades. Although there was only one participant for 2023, additional participants are slated for fleet electrification assessments in 2024.

Early in the Up & Go Electric for Fleet program, PSE determined that the established Level 2 cap of \$10,000 per port was not sufficient for covering costs in fleet EVSE projects, primarily due to increased equipment and labor costs. The incentive amounts were originally determined based on electric vehicle chargers installed during the workplace and fleet pilot from 2019 to 2021. In 2024, PSE filed and received UTC approval on a Schedule 555 tariff revision under Docket UE-231029 to increase the Level 2 cap to \$12,000 per port for PSE-owned EVSE. This change also matched the Schedule 551 per port cap for Level 2 EVSE.

The first fleet EVSE project completed through the Up & Go Electric for Fleet program was with an organization called Lighthouse Mission, a non-profit rescue mission based in Bellingham providing resources for shelter and recovery support for adults and children who are experiencing homelessness. Lighthouse Mission's goal with the initial project was to replace the internal combustion engine (ICE) vehicle used to transport meals from their satellite kitchen to their emergency shelter with an electric vehicle. PSE installed two Level 2 EV chargers at their facility

Figure 3: Lighthouse Mission's electric vehicle and EV charger



and provided \$7,500 toward the purchase of a used electric vehicle for their fleet. Since Lighthouse Mission’s purchase of the electric vehicle in spring 2024, the vehicle has traveled 1,951 miles for deliveries and other related trips in and around Bellingham.

2.2.2.METRICS

As of June 30, 2024, PSE account managers have conducted consultations with 75 interested fleet customers. This has resulted in 63 Schedule 555 applications, with some customers submitting applications for multiple fleet locations. Of those applications, 46 locations have proceeded to the utility-side infrastructure review and 21 locations have moved to the site evaluation process. The infrastructure review and site evaluation process can take longer with fleet EVSE projects due to higher load demands and additional stakeholders that need to be involved throughout the project lifecycle. During this reporting period, four fleet EVSE projects have been completed.

As of June 30, 2024, the four EVSE projects completed through the Up & Go Electric for Fleet program have solely installed Level 2 chargers. PSE expects that EVSE installation timelines will increase as planned DC Fast Charging projects begin construction. Currently, projects average 15 days of construction time, with the longest project taking 23 days.

The total average cost per EVSE installation, regardless of installation status, across the program was \$197,511, with the average for Empower Mobility customers at \$84,789 and non-Empower Mobility at \$242,600. These large differences are attributable to non-Empower Mobility customers requesting more chargers; on average, they requested 1.9 DC Fast Charging ports and 5.5 Level 2 Charging ports as opposed to Empower Mobility customers requesting one DC Fast Charging port and two Level 2 Charging ports. PSE expects these estimates to be refined as additional fleet EVSE projects are completed.

Table 6: Fleet charging products and services project metrics

METRIC	RESULT
CONSULTATIONS COMPLETED	75
APPLICATIONS SUBMITTED	63
APPROVED FOR SITE EVALUATION	21
PROJECTS COMPLETED	4
AVERAGE CONSTRUCTION TIME IN DAYS	15
LONGEST CONSTRUCTION TIME IN DAYS	23
SHORTEST CONSTRUCTION TIME IN DAYS	7
AVERAGE DC CHARGING PORTS REQUESTED	1.9
AVERAGE LEVEL 2 CHARGING PORTS REQUESTED	5.5
AVERAGE COST PER INSTALLATION	\$197,511
EMPOWER MOBILITY AVERAGE COST PER INSTALLATION	\$84,789
NON-EMPOWER MOBILITY AVERAGE COST PER INSTALLATION	\$242,600

Table 10 presents the distribution of fleet EVSE installations by Named Communities designation. The distribution of chargers by Named Community indicates that PSE has placed 50 percent of its

fleet EVSE installations in named communities (25 percent in HIC and 23 percent in high VP census tracts) and 33 percent of the total number of the fleet EV chargers PSE has installed.

Table 7: Fleet charging products and services distribution of installations by Named Community designation

HIC DESIGNATION VULNERABILITY LABEL	YES				NO			
	HIGH	MEDIUM	LOW	TOTAL	HIGH	MEDIUM	LOW	TOTAL
SITES (NOMINAL)	1	0	0	1	1	1	1	3
SITES (PERCENTAGE)	25%	0%	0%	25%	25%	25%	25%	75%
PORTS (NOMINAL)	2	0	0	2	2	2	6	10
PORTS (PERCENTAGE)	17%	0%	0%	17%	17%	17%	50%	83%

At this time, there is insufficient electricity usage and fleet EV charging data to provide meaningful load profiles for customers with Schedule 555 fleet charging products and services. As more customers participate in Schedule 555 for longer periods, PSE will develop load profiles to reflect patterns in customer charger and site level usage. This future analysis will include data on peak charging load of EV chargers as well.

As of June 30, 2024, the fleet EV chargers installed through Schedule 555's Up & Go Electric for Fleet program have used 6.51 MWh of electricity for charging fleet vehicles over the course of 1,219 hours of charging for the 18-month reporting period. This represents an estimated \$3,520 of fuel savings for these EV fleet customers compared to if they had purchased gasoline. Furthermore, fleet EV charging resulted in an estimated 7.63 tons of carbon abatement.

Table 8: Fleet charging products and services utilization metrics

METRIC	RESULT
ENERGY UTILIZED (MWH)	6.51
CHARGER UTILIZATION TIME (HOURS)	1,219
FUEL SAVINGS	\$3,520
CARBON ABATEMENT (TONS)	7.63

2.3. EDUCATION & OUTREACH (SCHEDULE 553)

2.3.1. VIRTUAL ENGAGEMENT TACTICS

PSE continued the digitally-focused customer engagement tactics, such as webinars and virtual events, that found success through 2020-2022 while also expanding in-person engagement efforts.

PSE continued publishing the Up & Go Electric Newsletter, which has been available since 2019. Since the expansion of the education and outreach pilot into a program, the newsletter sign-up list has grown by over 3,000 recipients, bringing the total to 20,000 recipients at the end of this reporting period. Since 2023, recipients have clicked on a link within the newsletter email 31,251

times. PSE also continued offering the “Electric Vehicle Guide” on its website to allow those considering an EV to determine the vehicle that would work best for them and their living situation. The “Electric Vehicle Guide” website was visited 230,576 times during the 18 month reporting period.

PSE began expanding its efforts of the education and outreach service to commercial customers as well, beginning with the launch of the “Electric Fleet Planner”. Like the residential-focused “EV Guide”, the “Electric Fleet Planner” offers fleet managers and operators an interactive way to see the cost savings and other benefits associated with transitioning to an electrified fleet. Users of the “Electric Fleet Planner” can fully customize their fleet design to refine cost savings estimates, evaluate an estimated impact of charging on their location’s load profile, and assess other benefits. The “Electric Fleet Planner” was launched in April 2023 and has had 2,601 users as of June 30, 2024. In March 2024, PSE also launched a quarterly newsletter focused on commercial customers to provide information on current programs and incentives available. The first newsletter included information on multiple Up & Go Electric programs for commercial customers and went out to 66 recipients.

In an effort to expand outreach to more Empower Mobility-eligible customers, PSE contracted with an agency specialized in working with historically underrepresented audiences. PSE is currently working with this agency on tactics development, and PSE expects to start implementing the outreach tactics later this year.

Finally, PSE expanded its social media strategy to include an always-on Facebook advertising campaign, plus new infographics and increased use of GIF images to drive engagement. The expanded strategy also increased the use of Instagram and utilized message-dependent targeting to determine who would view the ads. These new tactics resulted in 87,440 engagements and 837 conversations across social media platforms during the reporting period.

2.3.2. EVENTS

During the reporting period, PSE hosted four “EV 101” webinars for residential customers, where attendees could learn more about environmental benefits, cost savings, and everyday experience of driving an EV. These four events took place on February 22, 2023, June 7, 2023, September 27, 2023, and December 6, 2023. The residential webinars averaged 180 attendees per session with a total of 720 attendees across all four sessions. PSE expanded upon these by also hosting two webinars focused on commercial customers and how they could participate in PSE’s transportation electrification programs. For the two webinars on July 13, 2023, and May 15, 2024, there were a total of 66 attendees.

Table 9: Total webinar attendees

EVENT	ATTENDEES
RESIDENTIAL WEBINARS	720
COMMERCIAL WEBINARS	66

PSE was a sponsor of the 2023 Green Transportation Summit & Expo in August 2023, a large conference focused on green transportation options. Attendees are primarily comprised of fleet managers, operators, and other companies focused on electric fleet services. In addition to sponsoring, PSE also hosted a booth and a conference session for customers to spread awareness of PSE’s Up & Go Electric programs. PSE staff interacted with over 600 attendees throughout the course of the event.

In September 2023, PSE hosted a booth at the Electrify Expo in Seattle, which allowed attendees to experience a variety of EV models in one location. PSE staff interacted with over 1,100 attendees during the event, answering questions about electric vehicle charging, residential rebates, and how to charge at apartments or other multi-family properties. PSE gained 380 Up & Go Electric newsletter subscribers throughout the weekend.

Table 10: Total engagements during sponsored events

EVENT	ENGAGEMENTS
AUGUST 2023 GREEN TRANSPORTATION SUMMIT & EXPO	600
SEPTEMBER 2023 ELECTRIFY EXPO	1,100

PSE also continued its “EV Test Drive” contest in 2023, a virtual engagement event that PSE started in 2022, where participants simply went to their local dealership and took a picture of themselves test driving an electric vehicle. There were 166 entries to the 2023 contest and feedback from attendees was positive. Many customers expressed enthusiasm for their first EV experience, especially from those trying an e-bike for the first time. Eleven percent of contest entrants bought an EV after their test drive. That number jumped to 18 percent during the next EV Test Drive contest, which ran in June 2024.

Table 11: EV Test Drive Results

EVENT	TOTAL ENTRIES	EV PURCHASED
2023 EV TEST DRIVE	166	11%
2024 EV TEST DRIVE	119	18%

2.4. LOAD MANAGEMENT (SCHEDULE 556)

PSE worked with internal information technology resources to develop the integrations and processes necessary to enable the Schedule 556 load management program. The process development and integration work concluded in May 2023. Following the conclusion of the information integration work, PSE developed a new type of device material identification within SAP, PSE’s financial, billing, work management, and customer information system, to ensure the creation of new equipment records did not impact other SAP processes. This work concluded in December 2023. The current load management system is not intended to be maintained long-term as it is limited to customers participating in the PSE-owned electric fleet charging products and services. PSE is currently working on two additional enablement projects to expand load management

opportunities to more customers.

First, PSE is researching depot charging rate options for large fleets. PSE met with select fleet customers in 2024 to identify key challenges and barriers to fleet electrification based on the current electric service rate design. PSE engaged with these fleet customers and other interested parties through a survey in July 2024 to understand how different rate design solutions might benefit fleet and public charging providers. PSE will then use the results of these engagements to develop a fleet EV focused electric service rate tariff schedule that PSE plans to submit with the UTC in the first quarter of 2025.

Second, PSE initiated a project to obtain EV charging data via existing integrations that support the Virtual Power Plant (VPP) platform. This new method will ensure charging data is directly imported into PSE's databases, which will streamline the use of this data and greatly expand the many learnings PSE can draw from the data. This project will also enable PSE to provide load management services to fleet charging participants who opted for the customer-owned EVSE incentive option.

3. PHASE II PRODUCTS AND SERVICES

In late 2022, PSE embarked on a community engagement process designed to garner feedback from Named Communities and their service providers on the design of PSE's Phase II tariffed TE products and services. This community engagement was modeled upon similar work completed in 2021 for PSE's Phase I tariffed TE products and services. PSE reached out to over 115 Community-Based Organizations (CBOs), municipalities, government agencies, and tribal entities serving Named Communities. PSE was able to connect with over 80 of these entities. In addition, PSE connected with over 250 residents with an emphasis on customers in rural communities, those for whom English is not their first language, limited income households, and Black, Indigenous and People of Color (BIPOC) communities.

Through interviews, focus groups, workshops, and surveys, PSE worked to understand the benefits and barriers that these entities and customers may face when it comes to transportation electrification and how future TE products and services can alleviate these barriers and maximize the desired benefits. As a direct result of the needs and barriers expressed by the engaged parties and the potential solutions they envisioned, PSE has implemented several design components in its Empower Mobility incentives to better support Named Communities and the CBOs, government agencies and tribal entities that serve them. These design details include enhanced incentives compared to other participants, flexibility in TE tariff product and service requirements, and new technology demonstrations to engage these underrepresented communities.

PSE filed Schedules 551 and 552 tariff revisions and a new tariff Schedule 557 to enable public, workplace, residential, and TE technology demonstration projects on April 20, 2023, under Docket UE-230287. These UTC-approved tariffs and tariff changes became effective on June 16, 2023.

3.5. WORKPLACE CHARGING (SCHEDULE 551)

3.5.1. PROGRESS AND LESSONS LEARNED

PSE set an ambitious goal to begin customer enrollment in the revised Up & Go Electric for Workplace program authorized under Schedule 551 in fall 2023. Immediately following approval of the Schedule 551 tariff revisions, PSE replicated processes utilized in other TE products and services to quickly launch the revised Schedule 551 workplace charging products and services. In preparation for launch, PSE developed collateral and messaging tailored to both decision-makers of an employer and their employees. This provides employees with an easy, straightforward way of sharing the program with their employer while also providing the employer with the information needed for the program application process.

As with prior launches of TE products and services, the revised Up & Go Electric for Workplace

program was first announced to a list of interested customers on July 25, 2023, followed by a larger email campaign to other commercial customers on September 5, 2023, and was promoted in the Up & Go Electric newsletter on September 10, 2023.

3.5.2. METRICS

As of June 30, 2024, customers have submitted 105 applications. Of those applications, 80 were eligible for the program, 48 were approved for site evaluation based on the individual project prioritization and available space, and 13 EVSE projects have been completed. EVSE Installations in the Up & Go Electric for Workplace program averaged 38 days of actual construction time, with the longest EVSE project taking 3 months and the shortest 12 days. The total average cost per EV charging port across the program was \$10,798, with the cost per port for Empower Mobility customers at \$7,349 and non-Empower Mobility at \$11,230. As PSE has only received three Empower Mobility applications, the cost per port for Empower Mobility customers is expected to increase as more applications are received and there is a higher level of project diversity. The maximum cost per port was \$15,620 for a project that required significant facility upgrades. On average, customers requested 5.7 ports per site.

Table 12: Workplace charging products and services project metrics

METRIC	RESULT
APPLICATIONS SUBMITTED	105
QUALIFIED APPLICATIONS	80
APPROVED FOR SITE EVALUATION	48
PROJECTS COMPLETED	13
AVERAGE CONSTRUCTION TIME IN DAYS	38
LONGEST CONSTRUCTION TIME IN DAYS	90
SHORTEST CONSTRUCTION TIME IN DAYS	12
AVERAGE LEVEL 2 CHARGING PORTS REQUESTED	5.7
AVERAGE COST PER LEVEL 2 CHARGING PORT	\$10,798
EMPOWER MOBILITY AVERAGE COST PER PORT	\$7,349
NON-EMPOWER MOBILITY AVERAGE COST PER PORT	\$11,230
MAXIMUM COST PER PORT	\$15,620

Table 13 presents the distribution of EVSE installations in the workplace EV charging program by Named Communities designation. PSE has placed 54 percent (31 percent in HIC and 23 percent in high VP census tracts) of its workplace EVSE installations in Named communities and 52 percent (30 percent in HIC and 21 percent in high VP census tracts) of the total EV chargers PSE has installed.

Table 13: Workplace charging products and services distribution of installations by Named Community designation

HIC DESIGNATION	YES				NO			
	VULNERABILITY LABEL	HIGH	MEDIUM	LOW	TOTAL	HIGH	MEDIUM	LOW
SITES (NOMINAL)	3	1	0	4	3	4	2	9
SITES (PERCENTAGE)	23%	8%	0%	31%	23%	31%	15%	69%
PORTS (NOMINAL)	16	4	0	20	14	21	11	46
PORTS (PERCENTAGE)	24%	6%	0%	30%	21%	32%	17%	70%

At this time, there is insufficient data to provide meaningful load profiles for customers participating in Schedule 551 workplace charging products and services. As more customers participate in this product for longer periods of time, PSE will develop load profiles to reflect patterns in customer charger and site level usage. This future analysis will also include data on peak load of EV chargers.

During the 18-month reporting period, the EV chargers participating in the Up & Go Electric for Workplace program have used 21.19 MWh of electricity for charging vehicles over 3,433 hours of charging. This represents an estimated \$11,451 of fuel savings for these customers compared to if they had purchased gasoline. Furthermore, this electric charging load resulted in an estimated 24.83 tons of carbon abatement.

Table 14: Workplace charging products and services utilization metrics

METRIC	RESULT
ENERGY UTILIZED (MWH)	21.19
CHARGER UTILIZATION TIME (HOURS)	3,433
FUEL SAVINGS	\$11,451
CARBON ABATEMENT (TONS)	24.83

3.6. SINGLE FAMILY RESIDENTIAL CHARGING (SCHEDULE 552)

3.6.1. PROGRESS AND LESSONS LEARNED

When designing the single-family residential EV charging program, PSE opted to pivot to incentive-based product for customer-owned Level 2 EV chargers. This change was decided based on customer feedback and experience gained from operating PSE’s residential EV charging pilot from 2019 to 2022, which had provided the customer with a PSE-owned charger. For this new single-family residential EV charging program, PSE included an enhanced rebate for the residential EV charger plus an additional incentive toward the EVSE installation for residential customers making 80% or less of the area median income for their county. As with other TE products and services, the

enhanced incentives available for income-eligible residential customers are called Empower Mobility incentives. PSE also renamed the Schedule 552 program “Home Charging” rather than “Single-Family Residential Charging” to make clear that customers in condominiums, townhomes, or other living scenarios where they could install their own EV charger in a garage or dedicated area could apply for the incentive. This product will be referred to as Home Charging throughout the remainder of this section.

PSE established multiple procurement options to help ensure Schedule 552 customers had flexibility over how they could receive their EVSE rebate. First, customers can access instant rebates on the EV charger when purchasing on the PSE’s digital marketplace at “<https://pse-marketplace.com/>”. During the development process, PSE identified that the desired Home Charging rebate launch date was several months before an updated version of the marketplace launched. The new marketplace would have the ability to offer incentives based on a customer’s income eligibility, whereas the previous version required a duplicate marketplace for income-eligible customers to access enhanced incentives. In order to ensure all residential customers could access the rebate for which they would be eligible when the Home Charging rebate launched, PSE developed an interim solution where income-eligible customers were able to receive an instant rebate on an EV charger from a single manufacturer. The updated PSE marketplace launched on June 13, 2024, allowing all eligible customers to purchase their preferred charger with an instant rebate.

In addition to the digital marketplace, PSE also provided residential customers with a post-purchase rebate option, where they may apply for their rebate online or mail a completed rebate form. Income-eligible customers may receive both the EV charger and installation incentive through the post-purchase rebate option, if they choose.

The final option for customers is to request a referral to a PSE recommended energy professional through its Trade Ally Network for EV charger installation. This option provides the customer with the option of getting an instant rebate on an EV charger purchased from the contractor and, for income-eligible customers, on the installation itself. Customers may utilize the referral service regardless of if they are receiving a rebate.

Per Schedule 552, recipients must also participate in PSE’s load management programs, demand response (DR) services, or a time-varying rate schedule as determined by PSE. With PSE’s Flex EV demand response service also launching in March 2024, PSE identified an opportunity to synchronize the launch of both the Flex EV demand response service and Home Charging so customers could purchase their EV charger and instantly enroll in PSE’s Flex EV demand response service. PSE provided interested customers with a qualified EV charger product list, as those chargers are also able to enroll in the Flex EV demand response service. Customers participating in the Flex EV demand response service can receive \$50 upfront and earn \$0.50 for every kilowatt-hour of electricity saved during a Flex event. Customers who did not purchase a PSE-qualified EV charger may still participate in the Flex EV demand response service through their electric vehicle telematics.

3.6.2.METRICS

As of June 30, 2024, PSE has provided 621 Home Charging Level 2 charger rebates across all rebate options. Of those rebates, 66 Empower Mobility customers also took advantage of the installation incentive to install the charger in their home. Since the launch of service in March 2024, 856 customers enrolled in the Flex EV demand response service.

Table 15: Single family residential charging products and services metrics

METRIC	RESULT
LEVEL 2 CHARGER REBATES PAID	621
EMPOWER MOBILITY INSTALLATION REBATES PAID	66
FLEX EV ENROLLMENTS	856

3.7. PUBLIC CHARGING (SCHEDULE 551)

There are two components to the Schedule 551 public EV charging products and services, also known as Up & Go Electric for Public:

- The public EV charging station option, which is similar to the ground-mounted locations PSE installed during the 2019 pilot EVSE program. Customers can apply to host a PSE-owned and operated EV charging station or apply for incentives to own and operate their own public EV charging station.
- A new pole mounted EV charging option, where PSE will install Level 2 chargers on PSE-owned distribution poles or streetlight poles throughout its service area.

3.7.1.PUBLIC CHARGING STATION

Expanding the public EV charging station program to applications was a major change from the pilot, where PSE sought out businesses and organizations to host public EV charging stations. This transition allows entities throughout PSE's service area the opportunity to participate in the Schedule 551 program, not just those in PSE's targeted locations. As part of this transition, PSE developed a new customer journey and operational flow.

Customers first complete an application through PSE's website and indicate their preferred charger ownership option. After a basic review of the application to ensure it meets program qualifications, a public charging project then would move to a feasibility review stage, where PSE staff reviews the existing infrastructure to assess estimated costs and when the project may be completed. PSE may contact the applicant of a customer-owned public charging EVSE project after this review stage if significant utility-side upgrades are identified to determine if they still plan to proceed with the project. If the customer indicates they will continue, the project then enters a prioritization stage. A PSE-owned public charging station project moves into a different review stage by PSE staff familiar with the location to assist with determining the community response and impact, and ease of installation.

Following the initial review stage, all public charging projects move to a prioritization stage where PSE assesses the projects on their community impact, geographic diversity, use case diversity, and feasibility. Empower Mobility public charging projects – those that primarily benefit historically underrepresented communities – that are assessed as high priority projects move to the development stage. Additional public charging projects, such as highly prioritized non-Empower Mobility projects, enter development as space and resources are available.

The Public Charging Station option was released in two phases. First, on February 1, 2024, PSE announced the customer-owned incentive to a list of customers who had indicated interest in hearing more about the public EV charging. PSE directed customers interested in this option to a webpage where they could learn about the Up & Go Electric for Public charging station program and apply for incentives to support the installation of customer-owned public EV charging stations. The second phase, in which customers could apply to host a PSE-owned and operated EV charging station, launched on March 26, 2024. Broad outreach and engagement began following the March 26th launch. As of June 30, 2024, PSE has received 47 total applications, of which 26 were customer-owned and 21 were PSE-owned projects, and selected six PSE-owned public EV charging projects to move to the development stage. Five customer-owned public EV charging projects have been approved for funding as of June 30, 2024.

3.7.2. POLE MOUNTED CHARGING

The development of the pole-mounted public EV charging option required collaborating with several internal PSE teams, including Electric Standards Engineering, Pole Services, and Municipal Relations teams as this represents a brand-new way of providing electric service for PSE. PSE developed a process, which includes the Transportation Electrification and Pole Services teams, to install the pole-mounted chargers, identifying how these projects would be managed and any new resources that would be required for the success of these projects. PSE also developed a standard for installing the pole-mounted EV chargers. During the development of the new standard, PSE connected with other utilities that have launched similar programs to gain lessons learned regarding pole-mounted EV charger installation.

PSE recognized early on that the pole-mounted EV charging program would require partnerships with local municipalities and tribal communities. To prepare, PSE worked closely with its community teams to ensure they were properly prepared for the engagement process. PSE's municipal relations team then contacted each municipality in PSE's service areas with an opportunity to partner with PSE on siting and installing public pole-mounted EV chargers in the right of way. 22 entities expressed interest, and PSE selected 15 municipalities and one tribal community to move forward. Selection criteria included permitting requirements, street parking availability, franchise agreement status, parking codes, and equity considerations. Following the municipality selection, PSE initiated kick-off meetings with each of these 16 potential partners to review the pole-mounted EV charging installation, any technical requirements, and next steps. Two of the entities withdrew themselves from further participation during this stage, including the tribal community, due to a lack

of eligible poles within their jurisdiction. They were provided information on PSE's public EV charging station option as an alternative.

Following the preliminary meetings, PSE then began engaging with each municipality on their local codes to gain a better understanding of the permitting process. Entities that did not identify any potential barriers then entered the community engagement phase. As PSE continues to expand procedural equity in its transportation electrification work, PSE is co-creating strategies with municipal partners to ensure community voices are able to weigh in on where they would like to see pole charging sited in their community. Community engagement planning has been structured to identify priority audiences, such as historically underrepresented community members and small businesses, and then create and execute on tactics that can reach those priority audiences. Tactics often include surveys on location preference, tabling at community events, presentations at community centers, among others. These community engagement efforts will greatly assist PSE and its municipal partners in identifying the final locations for the pole-mounted EV chargers. Following the selection of the pole-mounted EV charging locations, PSE will assess each location in preparation for construction and connection. PSE anticipates pole-mounted EV charger installations will begin in early 2025.

3.8. TECHNOLOGY DEMONSTRATIONS (SCHEDULE 557)

The objective of this EV technology demonstration tariff schedule is to test new and innovative TE technologies that help PSE better prepare for the significant increase in EV adoption in the coming years. PSE committed to focus on commercially available technologies not currently available under the Up & Go Electric portfolio in consultation with UTC Staff. Each of the technology demonstrations will be evaluated to help assess the viability for full-scale deployment.

3.8.1. VEHICLE TO EVERYTHING (V2X)

The first technology demonstration PSE plans to pursue is "Vehicle-to-Everything" (V2X). Similar to leveraging the distributed energy resource potential of stationary batteries, the increasing proliferation of bidirectional capable EVs will soon present an enormous capacity resource potential. Given that V2X is still a relatively new technology and not widely utilized across electric utilities, the desired outcome of the technology demonstration would be to identify the technical feasibility, operational requirements, and interconnection protocols to help overcome some of the technical barriers and make it easier for customers to adopt.

There is still a lot of work to be done as an industry to establish the appropriate standards and V2X communication protocols, but fortunately there has been significant progress to date. Increased bi-directional product availability and interoperability between electric vehicle original equipment manufacturers (OEMs) and EVSE providers will eventually help drive down costs and create more certainty for consumers. Similar to the eligibility requirements for PSE's recently launched Flex EV

demand response service, one of the goals of V2X will be to establish a qualified V2X EVSE product list that can be integrated into the VPP to help demystify EVSE purchasing decisions for customers.

PSE is planning to test three different use cases of V2X, detailed in the graphic below, all of which PSE will aim to establish the necessary technical requirements, qualified equipment lists, and integration with PSE’s VPP and grid. PSE also aims to ensure a seamless process for the customer experience and to bundle programs and stack benefits with PSE’s complementary programs such as DR, battery-energy-storage-system, and TOU. Discussions are underway to establish partnerships with OEMs and V2X EVSE providers as well as identify potential site hosts to demonstrate the technology.

Vehicle-to-Home (V2H)	Vehicle-to-Building (V2B)	Vehicle-to-Grid (V2G)
<ul style="list-style-type: none"> •Scope: Up to 10 installations with bi-directional capable EVs at single family residential homes •Outcomes: <ul style="list-style-type: none"> •Establish technical requirements and communication protocols •Identify qualified interoperable equipment lists compatible with the VPP •Assess demand/load reduction potential and customer preferences •Evaluate interaction w/ EV DR, Residential BESS, and TOU programs 	<ul style="list-style-type: none"> •Scope: Up to 4 installations with bi-directional capable fleet vehicles stationed at commercial facilities •Outcomes: <ul style="list-style-type: none"> •Establish technical requirements and communication protocols •Identify qualified interoperable equipment lists compatible with the VPP •Assess demand/load reduction potential and customer preferences •Evaluate interaction w/ demand charge rates, Business DR, and Commercial BESS programs 	<ul style="list-style-type: none"> •Scope: Up to 6 installations at 3 school districts with existing bi-directional capable electric school buses stationed at depot •Outcomes: <ul style="list-style-type: none"> •Establish technical requirements & communication protocols •Identify qualified interoperable equipment lists compatible with the VPP •Streamline interconnection process •Assess demand reduction potential, dispatchable capacity potential, and customer preferences •Evaluate future compensation models and interaction w/ demand charge rates, Business DR, and Commercial BESS programs

In addition to the technical demonstrations mentioned above, PSE has partnered with a developer of transportation electrification software, ten peer electric utilities, automotive and EVSE manufacturers, experienced nonprofits, and community partners on a grant proposal to the US Department of Energy to establish a Resilience Electrification Project (REP) to demonstrate smart grid technologies that ensure EVs support grid resilience and reliability. PSE anticipates receiving a decision from DOE by the end of 2024.

3.8.2. AGRICULTURAL ELECTRIFICATION

In parallel to V2X, PSE is also in the early development process and ideation stage for an agricultural electrification demonstration. PSE endeavors to apply the best practices and lessons learned from the [E-Farms](#) initiative⁹ in Oregon where they have been piloting agricultural electrification for several years. Based on the input from PSE’s community engagement work on developing new and innovative technology demonstrations, PSE’s initial plans include e-tractor ride and drive events and a potential rideshare model for electric tractors and other electric farm equipment such as utility terrain vehicles, lawn mowers, and excavators.

⁹ E-Farms America, www.efarmsamerica.org

The electric agriculture equipment market in general is still relatively nascent and there is a lot to learn with regard to testing operational requirements and identifying appropriate charging needs, which will also lend itself to better understanding the total cost of ownership (TCO). For example, an electric tractor pilot project operated by Forth¹⁰ in Oregon showed¹¹ the cost to power an electric tractor can be up to nine times cheaper than its diesel counterpart. The project also showed that electric tractors are more efficient than their ICE counterparts, which leads to TCO savings over the lifetime of the equipment. The incremental purchase price for an e-tractor is certainly higher than the ICE counterpart, but Washington State just adopted a new U.S. Department of Agriculture Conservation Practice Standard in 2023, which incentivizes farmers to replace their diesel tractors for more efficient electric tractors to further drive down the TCO.

¹⁰ Forth is a nonprofit organization dedicated to the equitable advancement of clean transportation. Forth's mission is to electrify transportation by bringing people together to create solutions that reduce pollution and barriers to access.

¹¹ Forth's Agricultural Electrification Program, presented at Forth and Bonneville Environmental Foundation's Pacific Northwest Utility Electric Vehicle Roundtable on January 12, 2023. <https://www.slideshare.net/slideshow/forths-agricultural-electrification-program-by-adrian-gomez/255302808>

4. PRODUCTS AND SERVICES COSTS

Total operating expenses and costs across all PSE's UTC-approved TE products and services during the reporting period were \$4,335,508. Expenses and costs included in this area included PSE labor, overhead costs, and outside services related to promotion, administration, and operation of these TE products and services. Expenses and costs also included work related to the education and outreach program, community engagement, and incentives for participants opting for the customer-owned option of various EV charging products and services.

Capital expenditures during the reporting period were \$2,066,111. These expenditures include EVSE installation and charger costs for the EV charging products, product development costs, and applicable PSE labor and labor overheads.

In the 2021 TEP Addendum, PSE indicated a target of spending approximately 30 percent of the overall budget toward specific DEI products, which became Empower Mobility. Currently, 22 percent of total costs are attributable to the Empower Mobility incentives and additional services offered through the TE products and services.

APPENDIX

DEFINITIONS AND ACRONYMS

Metric	Result
Charging Port	Also referred to as a Port. A socket outlet that provides the electricity to charge one vehicle at a time.
CEIP	PSE's Clean Energy Implementation Plan per Dockets UE-240433 and UE-240434, PSE CEIP Process
Demand Response	Flexible, price-responsive loads, which may be curtailed or interrupted during system emergencies or when wholesale market prices exceed the utility's supply cost.
EV	Electric Vehicle; any form of transportation propelled by electricity supplied in whole or part from electricity sources not generated on the vehicle itself.
Electric Vehicle Charger	A device used to supply electricity to an Electric Vehicle.
Empower Mobility	Enhanced incentives and services available through to customers participating in PSE's TE products and services to support transportation electrification among low-income customers, Black, Indigenous, and People of Color communities and the community-based organizations, government agencies and tribal entities that serve them.
EVSE	Electric Vehicle Supply Equipment; an equipment or system that delivers electrical energy from an electricity source to charge a plug-in electric vehicle, which may include Direct Current Fast Charger (DCFC), Level 2, or other such equipment.
HIC	Highly Impacted Communities; a community designated by the Washington State Department of Health based on the cumulative impact analysis required by RCW 19.405.140 or a community located in census tracts that are fully or partially on "Indian country" as defined in 18 U.S.C. Sec. 1151.
ICE	Internal Combustion Engine
kWh	Kilowatt hours
Level 2 Charger	Also called Level 2 EV Charger; a device used to supply electricity to an Electric Vehicle using 208 or 240 volt input power.
MWh	Megawatt hour
Named Communities	Includes both Highly Impacted Communities and Vulnerable Populations.

PSE	Puget Sound Energy
RCW	Revised Code of Washington
TCO	Total cost of ownership; an estimate of all the direct and indirect costs involved in acquiring and operating a product or system over its lifetime.
TE	Transportation Electrification
TEP	Transportation Electrification Plan; a five-year strategic framework for electric vehicle products that will allow PSE to drive the transition to a cleaner energy future by advancing electrified transportation in Washington State.
TOU	Time-of-use
Up & Go Electric	PSE's suite of TE products and services, which includes the Up & Go Electric for Multi-family program, Up & Go Electric for Public program, Up & Go Electric for Workplace program, and Up and Go Electric for Fleet program
UTC	Washington State Utilities and Transportation Commission
V2B	Vehicle-to-home
V2H	Vehicle-to-building
V2X	Vehicle-to-everything
VP	Vulnerable Populations; communities that experience a disproportionate cumulative risk from environmental burdens due to: Adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, access to food and health care, and linguistic isolation; and sensitivity factors, such as low birth weight and higher rates of hospitalization.
VPP	Virtual power plant

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PSE

