Appendix D. Stakeholder Comments

The following table provides a detailed summary of the feedback received from stakeholders and how PGE has considered the feedback. PGE also filed reply comments[322] to certain key areas that emerged across multiple sets of comments to the June 2023 draft of this TE Plan.

Table 85. Summary of Stakeholder Feedback

Topic	Summary of Comment	PGE Response
AdopDER	Identify what AdopDER now assumes the average federal EV subsidy will be.	In our April 2023 AdopDER model update, our reference case assumes availability of an average federal subsidy (based on the Federal Tax Credit or FTC) of $3,750. We assumed a 50 percent FTC due to the inherent uncertainty in the updated FTC regulation on car and battery components and their manufacturing. To reflect this uncertainty, we assume $0 of federal subsidy available in the low scenario, while the high scenario assumes the full $7,500 will be available
Alternative mobility options	Support policies to expand multi-modal and alternative transportation infrastructure.	PGE has supported e-bike projects through the Drive Change Fund and expects to continue to do so.
Budget	Clarify the magnitude of portfolio-wide changes and the total amount of prior years' TE expenditures.	PGE provided available data on TE expenditures for the period from 2018 to 2022, encompassing current activities, in its response to Staff's IR 38 in UM 2033. Please see UM 2033_OPUC IR 38_Attach A and UM 2033_OPUC IR 38_Attach B.
Business Programs	When there is significant utility investment, the site host should be limited from making charging only available to selected public employees, their customers.	PGE understands this perspective, but notes that the host must maintain control over property, and requirements that overly interfere with customer needs may reduce participation in utility programs. Instead of setting requirements for each participant, PGE has set customer segment minimums for multi-family and public charging

[322] PGE's Reply Comments were filed in Docket No. UM 2033 on August 11, 2023, retrieved from https://edocs.puc.state.or.us/efdocs/HAC/um2033hac135154.pdf.

Topic	Summary of Comment	PGE Response
		within the program design of the Business Make-Ready Solutions program.
Business Programs	The Business and Multi-family Make Ready Solutions Program is well-positioned to support the development of a competitive charging market and should be sized to align with growing customer demand: • PGE should prepare a strategy to support customers if demand for this program significantly exceeds the 200 ports budgeted for in this TEP, especially if specific segments (workplace, public, or multi-family) are oversubscribed quickly. Continued incentive support will accelerate private investment and ensure that Oregon has the number of chargers needed to support its EV adoption goals. • Though PGE intends to end this program offering after 2025, [we] encourage[] PGE to develop a successive effort to defray the costs of make-ready electrical infrastructure for site hosts in a similar manner beyond 2025. Some level of continued make-ready support will likely remain needed past 2025 across most, if not all, segments supported by the Business and Multi-family Make Ready Solutions Program. • [We] encourage PGE to increase the number of public and workplace ports supported by the Business and Multi-family Make Ready Solutions Program to	Thank you for your comments. PGE will be using the learnings from the Business and Multi-family Make-ready Solutions program to determine future rates and tariffs to support the on-going growth in business, workplace, multi-family, and public charging infrastructure. PGE proposes to further expand public infrastructure in the Public Charging - Municipal Charging Collaboration and Electric Avenue pilot, increasing the number of curbside charging make-ready ports to 160. Property owners who install L2 charging at their site are charged a cost of service electricity rate from PGE, which can be slightly lower than residential rates if multiple chargers are installed and utilized. Please see Section 8.7.2 for more information.

Topic	Summary of Comment	PGE Response
	140 ports each, bringing the overall total number of ports to 420. • PGE should also add the option to install DCFC within [our] proposed public port target of 140. • PGE should consider rate solutions that allow MF chargers to take service under comparable rates as residential customers.	
Charger Reliability	Any enforcement of charger reliability standards should attach to the person who received the utility funds. For small businesses, PGE could require that site host/funding recipient has a service level agreement with charger provider to transfer MX responsibility.	Given the significant challenges of charger reliability and monitoring (including basic requirements for enforcement such as a common formula for calculating uptime), PGE does not propose to enforce charger uptime for customer-owned chargers. Instead, PGE will continue to rely on requirements that customers keep chargers operational or risk forfeiting the utility-provided incentives. PGE also reserves the right to remove any vendor from the qualified product list, at any time and for any reason.
Charger Reliability	Can PGE require/incentivize private suppliers to provide a consistent customer experience at different charging stations (including its own)?	As part of listing on the qualified product list, vendors must demonstrate a satisfactory customer experience. PGE reserves the right to remove a vendor from the qualified product list if they fail to meet customer experience requirements.
Charger Reliability	Appreciate uptime reporting requirement proposals but concerned about placing the enforcement on the customer rather than the charging provider.	As part of listing on the qualified product list, vendors must provide charging session data to ensure that chargers incentivized through utility programs demonstrate satisfactory performance. PGE reserves the right to remove a vendor from the qualified product list if they fail to meet this requirement.
Charger Reliability	We encourage PGE to require 97 percent or greater uptime for customer owned chargers for a minimum of five years and add "internet service provider outages" to the list of eligible	PGE will provide annual reporting on reliability of EVSE, with a target uptime of 97 percent.

Topic	Summary of Comment	PGE Response
	uptime exclusions. Publish standardized reliability data.	
Charger Reliability	Ultimate responsibility for meeting charger reliability requirements should rest with owner and operator for reporting and compliance.	As part of listing on qualified product list, vendors must demonstrate satisfactory customer experience. PGE reserves the right to remove a vendor from the qualified product list if they fail to meet customer experience requirements.
Charger Reliability	Support reliability requirements for utility owned and supported public charging stations.	This TE Plan reflects this feedback. See Sections 8.7.1, C.1.1.7, and C.2.1.7 for details.
Charger Reliability	Enforcement mechanisms to ensure compliance with the uptime standard for non-utility owned chargers are not necessary at this time. Encourage PGE to consider additional tools that can increase compliance with any reliability standard, such as requiring service level agreements between site hosts and charging providers to ensure the charging provider adequately services the charger.	PGE will first look to the development of a national formula for calculating uptime in a standardized way. Applying enforcement mechanisms for uptime without an agreed-upon calculation method would be premature at this point in the EV charging market.
Cost to Charge at Customer-Owned Chargers	Utility should take a role in setting rates for utility assisted public charging. PGE should consider Puget Sound Energy's recently filed TE tariffs, Schedule 552 and Schedule 555, which ensure site hosts, who make EV charging available for a cost, set the price per kWh no more than the average Electric Charges per kWh of their Electric Service from the Company.	PGE recognizes that there are many non-energy charges that owners of EVSE incur (e.g., data and software fees, maintenance costs, and demand charges), and the complexity of applying these across per-kWh charges for EV drivers. These costs and complexities can already create a deterrent to third-party installation of EVSE for public use. PGE also acknowledges that customers have different use cases and business models, which may impact the prices they set for EV charging. For these reasons, PGE does not expect to take a role in setting rates for program-enabled ports, except to offer advice to charger

Topic	Summary of Comment	PGE Response
		owners as we are able, and let the competitive market prevail. We will continue to monitor industry practices in this area.
Cost to Charge at Customer-Owned Chargers	Support PGE's approach to let site host set price to charge for the EVSE they own	See above.
Cost to Charge	Regarding [another party's] comments on bringing Schedule 50 into alignment with competitive market pricing…[The other party] mistakes the purpose of public-utility-owned infrastructure. PGE owns 22 DCFC ports and does not plan to add more. Given TEINA estimated need of 4,411 public DCFC ports statewide, [Not] concerned about potentially below-market rates at 22 PGE-owned DCFC ports across seven sites in the company's service territory.	Thank you for your comments.
Cost to Charge	Provide the price ($/kWh) to charge at the program-enabled ports of customers by use case	The price to charge at program enabled ports of customers will be gathered via survey responses and included in future evaluation and annual TE reports.
DCFC Incentives	Develop a public DCFC incentive program to equitably support fast charging • TEINA identifies need, which PGE doesn't propose to meet • EVgo agrees PGE should not own, but it should incentivize DCFC. • Business EV Charging Rebates are inadequate. Restore $350/kW offering and remove $25,000 per port cap. Include additional incentive for disadvantaged communities	Thank you for your comment. PGE will continue to monitor the market to determine our utility role for DCFC public infrastructure investment. Currently, PGE is exploring changes to Schedule 38 to support public charging beyond 200 kw without incurring variable monthly demand charges

Topic	Summary of Comment	PGE Response
	• Support at least 200 ports, 10 pct of expected 2025 need	
DCFC Incentives	Create a new DCFC incentive program support infrastructure in line with near term demand	Thank you for your comment. PGE will continue to monitor the market to determine our utility role for DCFC public infrastructure investment. Currently, PGE is exploring changes to Schedule 38 to support public charging beyond 200 kw without incurring variable monthly demand charges.
Effective Load Carrying Capability (ELCC)	Use observed charging data from 2022 to derive an ELCC	PGE is still waiting for final evaluation results from its third-party evaluator for the Residential Smart EV Charging program. When those results are final PGE will incorporate into future forecasting efforts.
Emissions	Present the net reduction of PM2.5, S0x and N0x	An assessment of how much electric vehicles contribute to reductions of these pollutants is best answered by the Oregon of Departmental Quality or the U.S.E.P.A. these agencies have developed methodologies and are experts in tracking pollutants and quantifying of reductions.
Emissions	Provide the Company's average emission per kWh of total hydrocarbons, carbon monoxide, N0x, PM2.5, PM10, S0x, volatile organic compounds, benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, naphthalene, mercury, nickel, arsenic, and chromium	Reporting of these items can be found in other relevant planning proceedings or compliance filings. PGE's Transportation Electrification Plan is not the proper forum to report these items.
Energy Efficiency	Provide a more detailed outline of how EE can be utilized to manage load, ensuring TE doesn't wildly balloon energy usage	Thank you for your comment and PGE is continuing to explore additional managed charging solutions to support the EV load growth and the grid.
Energy Efficiency	[Support] request for an additional narrative on how EE can complement TE investments.	See above. Additionally, PGE supports energy efficiency. Oregon is a top ten state for energy efficiency investments. PGE's policy is to support all cost-effective energy efficiency. Electric Vehicles reduce total energy costs and are much more efficient than internal

Topic	Summary of Comment	PGE Response
		combustion engines. Strong investment by the utility and customers in energy efficiency will lessen customers' total energy bills.
Energy Partner	Clarify if any nonresidential commercial EVSE participate in Energy Partner	PGE is not aware of any nonresidential commercial EVSE participating in Energy Partner. PGE is developing a fleet managed charging program in the next year.
EV Adoption	Continue to consider ongoing pandemic impacts on EV adoption	PGE updated our econometric LDV adoption model in Q1 2023 to re-calibrate with actual sales data from 2020-2022, covering the worst years of the pandemic and supply chain disruptions. We will continue to monitor sales and market data for indications of continued impacts from the COVID-19 pandemic and update as necessary in future forecast iterations
EVSE and Infrastructure Requirements	Location, equipment standardization, and user experience need to be well coordinated across utilities, governments, and private actors.	This TE Plan reflects this feedback. See Sections 2.8, 3.8.1, 4.8, 7.1.2, A.1.2, A.2.2, A.4.1.1, C.1.1.8, C.1.2, and C.2.2 for details.
EVSE and Infrastructure Requirements	Utility ownership appropriate in circumstances that support, not compete with private market. PGE's proposed Muni program should allow customers to choose from multiple vendors using rolling RFP. Public Charging – Municipal Charging Collaboration Program may have a disproportionately negative influence on the competitive charging market in Oregon.	PGE will support a competitive private charging market through an open RFP process for the Public Charging – Municipal Charging Collaboration program.
EVSE and Infrastructure Requirements	Please ensure there are clear explanation materials on equipment (payment etc.). PGE should also ensure that there are no requirements to use chargers that require membership or subscription.	PGE-owned chargers will have clear instructions on how to use equipment, including multiple-modes of payment.

Topic	Summary of Comment	PGE Response
EVSE and Infrastructure Requirements	PGE should consider ADA needs for EVSE accessibility and make clear to stakeholders what it will require and on what basis.	PGE proposes to look to the recommendations of the U.S. Access Board with respect to accessible EV charging and to recommend these standards to customers as well.
EVSE and Infrastructure Requirements	50 kW is appropriate for DCFC depending on circumstances. PGE should allow lower charger power levels depending on site needs, even for PGE-owned chargers.	PGE does not require a minimum power level for customer owned DCFC (including public DCFC). As a provider of EV charging, PGE will apply an internal minimum of 150 kW for public DCFC, starting with this TE Plan.
EVSE and Infrastructure Requirements	PGE's plan feels light on DCFC ports needed. Anticipate more EVs adopting 800v battery technologies.	PGE's plan focuses more heavily on L2 than DCFC charging because the former is more affordable for the utility, the site host, and the EV driver; has less impact on the grid; and is slated to receive less support from the private market and state/federal funding than DCFC. Meanwhile, we plan to track charging deployments through our TE Plan Reports and adjust our portfolio accordingly. This approach is supported by the Division 87 TE Plan process.
EVSE and Infrastructure Requirements	Open Charge Point Interface (OCPI) version 2.1.1 should be required for all publicly available chargers.	PGE is considering implementing additional requirements for publicly available chargers, including OCPI.
Fleet Program	The Fleet Partner Program is successfully supporting the market, and PGE should begin to consider strategies to avoid bottlenecks with charger energization. Such strategies may include providing the following information to potential program participants online to improve program applications and the process of applying for a line extension, service upgrade, and make-ready installation: • Contact information for a single point of contact at PGE for EVSE projects (with EVSE expertise);	Fleet Partner adheres to the following strategies: • Single point of contact for Fleet Partner projects (with EVSE expertise) via email inbox available on website and application • Checklist of items needed for desktop review is provided during initial kickoff meeting with program applicants • Application does not require additional documents as part of full application, it is meant to be simple and easy to apply • The website provides detailed program requirements, and the steps and requirements at each phase

Topic	Summary of Comment	PGE Response
	• Checklist of all items that must be submitted as part of an initial "desktop review," or a preliminary review that confirms a project is feasible before a full application is submitted; • Checklist of all items that must be submitted as part of full application; • Detailed make-ready program requirements, information on eligible costs, and application instructions; and • Average charger energization timelines, as measured from submission of full application to site energization	• The website provides estimated timeline for both the planning and design phase as well as the build and construction phase
Fleet Program	Explain how Fleet Partner's 13.2 MW load capacity in 2028 was derived and, if "load capacity" is intended to mean something other than coincident peak, what the company means by that term.	The "load capacity" is not meant to mean coincident peak. The load capacity is the potential connected load – the sum of the nameplate capacity for all chargers that could be installed at the site using the make-ready infrastructure. This number was derived by calculating the average total connected load per site for phase 1 Fleet Partner customers, then multiplying by the expected number of new sites in phase 2 of Fleet Partner.
Forecasts	Identify what drives the differences between the Company's use of TEINA and AdopDER in forecasted infrastructure need and why AdopDER's forecast of workplace charging begins to converge with TEINA in 2030.	Both TEINA and AdopDER are analytical tools aimed at understanding potential charging requirements to support TE growth, and we do not here present an analysis of what might be driving the differences in forecasted infrastructure need. For purposes of the 2023 TE Plan, PGE's proposed spending is significantly less than the identified charging infrastructure need estimated using both AdopDER and following the TEINA methodology. As per the Guidance adopted under OPUC Order No. 22-314, utilities are to leverage TEINA methodology to act as an upper guardrail on TE investment.

Topic	Summary of Comment	PGE Response
Forecasts	Identify what settings the Company used in TEINA's inputs sheet	PGE used the default input settings from ODOT's publicly-available Excel user interface tool.
Forecasts	Make the latest EV portion of AdopDER available to UM 2033 parties	PGE is exploring an external interface for AdopDER in 2024.
Forecasts	Present a comparison of the existing ports for each census tract in the Company's service territory with the forecasted ports from TEINA, by use case	Per Staff's guidance memo in Order 22-314, PGE includes in this TE Plan a discussion of the performance areas listed in Division 87 rules, including how the various utility program and infrastructure investments plan to target underserved areas. Reporting on metrics, including how the utilities' program and infrastructure investments are tracking compared to a baseline, will be reported on in the TE Plan report.
HB 2027	Clarify the scope of HB 2027 (LD ZEV standard) Staff also seeks clarification in the Plan's discussion of HB 2027. This bill moved the deadline for SB 1044's state fleet light duty vehicle zero emission standard up from 2029 to 2025. PGE characterizes that standard as 100 percent. Staff's reading of the bill is that the standard remains 25 percent, with only the deadline changing. This is important because ratepayer funding for the electrification of the state fleet of light duty vehicles may not be reasonable if it has already been fully mandated. Staff recommends that, in Reply Comments, PGE clarify the scope of HB 2027.	Sections 5 House Bill 2027 (2021) moves the deadline by which a state agency must purchase or lease zero emission vehicles for all new state light duty vehicle purchases and leases forward from 2029 to 2025. Before the passage of House Bill 2027, Chapter 565, Oregon Laws 2019 (SB 1044) required that 25 percent of a state agency's new light duty vehicle purchases or leases be zero emission vehicles, transitioning to 100 percent in 2029. HB 2027 simply moves the change from 25 percent to 100 percent forward to 2025. Both bills are clear that state agencies must meet this requirement unless the agency finds that it is not feasible to purchase or lease a zero emission vehicle. Legislative history is clear that availability of funds is an element of feasibility. This means that the rationale for enrollment in PGE's Fleet Partner program is not different for the State of Oregon than for other Fleet Partner enrollees..
Heavy Duty Fleets	Put forth a modeling change to better reflect the economics of HD fleet operators	See Page 292 of Appendix E

Topic	Summary of Comment	PGE Response
Home Charging	Use vehicle-based data to provide the average observed percentage of charging that occurred at home in 2022	According to our analysis of vehicle-based data from the EVPulse enrolled customers, those customers met 82 percent of their charging needs with home charging and 18 percent away from home.
Load Forecast	Explain how the load forecast in Table 47 was derived	The Load Forecast in Table 47 refers to the load impact from demand response event calls. This multiplies the number of participants by a forecasted average demand reduction of 0.45 kw per participant, which was based on research of other utility EV DR pilot programs. When the evaluation is complete PGE will revise the load impact of the program.
Load Shapes	Present the average observed load shape of residential charging in 2022 from the Company's vehicle-based data and residential EVSE data.	PGE appreciates Staff's discussion about the importance of EVSE data from PGE's pilot programs. At the time of filing the draft TE Plan, our Residential Smart EV Charging pilot evaluation was just getting underway and therefore we did not include any findings from this ongoing effort, including consolidated load shape data. PGE plans to leverage pilot evaluation findings in future model updates and will share the evaluation memo with Staff and stakeholders following the associated pilot evaluation timeline. Notwithstanding that, certain draft data have been made available since filing the draft TE Plan. Figure 24 (Appendix E) shows the average observed load shape from our residential Smart Charging pilot evaluation for both EVSE (Group A) and vehicle-based data (Group B).
Load Shapes	[Support] Staff's recommendation that PGE present the average observed load shape of residential charging in 2022 from PGE's vehicle-based and residential EVSE data and provide the average observed pct of charging that occurred at home in 2022. In addition [request] the company present the average observed load from EV charging	Thank you for your comment. See above reply and charging data in Figure 24 (Appendix E). For the request to present observed load from EV charging compared to total load from other electric household uses, PGE notes that the Res Smart Charging EV evaluation is still underway, once final, we will evaluate how res EV charging profile compares to whole home electric (non-EV) use and incorporate into future program and tariff design discussions with Stakeholders.

Topic	Summary of Comment	PGE Response
	compared to the total load from other electric household appliances and equipment based on real-world charging data. Likewise, [support] Staff's recommendations for PGE to provide load-shape data for its utility-owned infrastructure.	
Load Shapes	Provide the 2022 load shape for each Electric Avenue, Oregon Electric Byways and pole charging site	Please see UM1938's 2023 evaluation which was filed in May 2023 for the electric avenue charging load shapes.
Managed Charging	Include robust demand-side management including rate design and DLC.	This TE Plan reflects this feedback. See Sections A.1 and A.2 details.
Medium/Heavy EV Charging	PGE should consider applying to DEQ's new Medium and Heavy-duty infrastructure pilot program for additional funding for charging	PGE is open to considering state and federal grant opportunities and applicant partners.
Medium/Heavy EV Charging	Retail rate to charge at utility supported heavy duty charging sites should not be set lower than market price for this charging class	PGE appreciates this feedback and will consider it in our program design.
Metrics	Report on metrics in Order No. 22-314 and consider additional equity metrics so stakeholders can track progress to meet equity commitments	Thank you for your comment. PGE will include data on required Division 87 metrics in future annual reports.
Micromobility	[Request] more information on how PGE plans to ensure that CFP funds support safe micromobility products.	Addressed in Section 4.1.1, excerpted below: *The first step in approaching micromobility will be to perform a market assessment and develop a strategy. As in all PGE programs, safety is a foundational value. The market assessment and strategy will include evaluation of risks and safety concerns."*

Topic	Summary of Comment	PGE Response
Multi-family Program	PGE proposes to decrease ports targeted to MF housing. Should increase dramatically. Increase incentives and add incentives for charging hardware and software in new construction. Prioritize education and outreach to underserved MF communities, using methods laid out by Forth Mobility.	Thank you for your comments. PGE will be using the learnings from the make-ready solution to determine future rates and tariffs to support the on-going growth in business, workplace, multi-family, and public charging infrastructure in the future.
Multi-family Program	Concerned about captive customers and lack of Commission ratemaking oversight. Propose removing MF from the Business and MF Program and instead work with stakeholders to develop a new proposal: • Create a new proposal modeled after Pac's utility-ownership pilot. • Transfer resources from the Business & MF program to the Muni Program and Electric Avenue Program to cover all MF sites. • A mixture of the two above.	Appendix J summarizes changes related to these comments. See Appendix C for detail on the updated proposals for Business and Multi-family Make-ready Solutions and also Public Charging – Municipal Charging Collaboration and Electric Avenue.
Multi-family Program	[Support] company initiative to invest in behind-the-meter infrastructure but requires more info before it can make any recommendations. [Share] CUB's concern that MF residents may become semi-captive and subject to higher prices than residential customers without regulatory oversight. [Recognize] need for fees to include maintenance costs that will likely result in rates higher than single-family residential unless subsidized in some way. Before	Appendix J summarizes changes related to these comments. See Appendix C for detail on the updated proposals for Business and Multi-family Make-ready Solutions and also Public Charging – Municipal Charging Collaboration and Electric Avenue.

Topic	Summary of Comment	PGE Response
	amending the proposed program, [seek] to understand the real-world price-to-charge data set by PGE's current customers. As Staff points out, PGE does not provide this info for customer-owned, program-enabled ports by use case. [Support] Staff's recommendation that PGE provide the price/kWh to charge at program-enabled ports by use case. It may be advantageous for the Commission and PGE to consider what T&C it includes in PGE's 10 year contract so that if the Commission sought to intercede in rates the contract would not be a barrier to such change.	
Multiport Charging Sites	Identify the site with the highest utilization of nameplate capacity in 2022 from multiport charging sites in PGE's service territory that are separately metered from other commercial loads.	Thank you for your comments. PGE is closely tracking customer program supported charger utilization and knows when the load is separately metered from other commercial loads. For non-customer program chargers, it is not always clear if the meter is serving only chargers or equipment beyond charging infrastructure.
Multiport Charging Sites	List the number of multiport charging sites in PGE's service territory that are separately metered from other commercial load that utilized at least 75 pct of nameplate capacity for at least one hour in 2022	See above
MWa and MW	Show the functional relationship between MWa and MW from observed charging data	The residential smart charging evaluation is still underway, and PGE will evaluate the relationship between MWa and MW from observed charging data once it is complete. This comment relates to the system impacts performance metric, and we will report on this performance metric in the TE Plan Report.
Noncoincident Peak	Confirm whether non-coincident peak is a metric the Company uses in DSP	In our draft TE Plan, PGE shared the residential charging load shape, aggregated to the overall system level depicting the hourly average aggregate demand across the service area. PGE does not assume that the non-coincident peak and coincident peak of EV charging

Topic	Summary of Comment	PGE Response
		are the same. Rather, our AdopDER model utilizes average charging shapes for a variety of use cases (e.g., residential, public, fleet, and workplace) and then associates the load impacts depending on where the EV adoption and EVSE adoption occur. Section 3.5 and Appendix M of our DSP Part II describe the EV MW output at the Distribution Substation level. Therefore, the EV load shape will differ based on the relative mix of vehicle and charging types on a given distribution feeder. PGE also responds that distribution system planning does incorporate consideration of non-coincident peak, in the sense that each individual feeder and substation transformer is planned to the expected peak, which may or may not coincide with the overall system peak at the bulk power system level.
Payment Methods	National EV Infrastructure Formula program's proposed standards require contactless card reader as a minimum, PGE should consider using NEVI standards for payment method.	PGE proposes to require that all public PGE-owned and customer-owned charging adhere to the payment methods requirements that are being established in the State of Washington. The present draft of those requirements stipulates that public L2 and DCFC chargers installed after January 1, 2024 contain an EMV chip reader.
Payment Methods	PGE should align payment standards for public chargers with federal guidelines for the National Electric Vehicle Infrastructure Program (NEVI) and not require EMV chip readers. No separate standard for PGE's pole-mounted chargers.	Thank you for your comments. PGE will continue to evaluate market trends and align with standards across the west coast.
Payment Methods	Align EV charger payment, connector and minimum charging capacity requirements with NEVI standards.	Thank you for your comments. PGE will continue to evaluate market trends and align with standards across the west coast.
Payment Methods	Align EV charger payment and connector requirements with NEVI	See above

Topic	Summary of Comment	PGE Response
Cost to Charge at PGE-Owned Chargers	Schedule 50 or similar undercuts private market providers. Below market rates will not promote public charging development, so PGE should ensure utility-owned stations are priced consistently with private market.	PGE's Schedule 50 pricing tariff was set through a public process and is designed to meet the EV charging needs of customers who lack access to charging at home, with rates designed to approximate home charging rates.
Cost to Charge at PGE-Owned Chargers	Will equitable pricing include lower rates for PGE customers who are in PGE's low-income program?	Due to software integration limitations, PGE does not currently have the ability to offer lower retail EV charging rates to customers enrolled in our Income-Qualified Bill Discount program. However, we are working to understand what it would take to offer something like this in the future.
Cost to Charge at PGE-Owned Chargers	Provide price parity so residential customers charging at public stations don't pay more than residential customers charging at home.	This TE Plan reflects this feedback through use of Schedule 50 for utility-owned chargers. See Section C.1.1.5 for details.
Cost to Charge	What peak pricing does PGE offer for Transportation Electrification? Is PGE considering revising these rates?	Pricing at PGE's public chargers is detailed in PGE Schedule 50 Retail Electric Vehicle (EV) Charging.[323] PGE is exploring revised pricing in Schedule 50. Customers charging at their residence may enroll in PGE's Time-of-Use pricing, detailed in PGE Schedule 7 Residential Service.[324]
Cost to charge	Reform Schedule 50 to reflect competitive market pricing: • Per kWh is good • Approximating the cost of home charging is inadequate -- target market rates	Thank you for your comment. PGE will look to create equitable L2 charging rates to residential rates and evaluate DCFC charging rates in the market while also considering additional options to support low-income customers equitable charging opportunities.

[323] PGE Schedule 50, retrieved from https://assets.ctfassets.net/416ywc1laqmd/2hNjMQ203TEcCmZttyKCTt/60e36b07499f89b45856a4576d4107ec/Sched_050.pdf.
[324] PGE Schedule 7, retrieved from https://assets.ctfassets.net/416ywc1laqmd/6RgTNk5RU1bldl0LdPpIY9/39c0b84c532cd899ccccccjgijernbrctunikrtltteeegtndeduetvgvjnjf2715adf7e32bbca/Sched_007.pdf.

Topic	Summary of Comment	PGE Response
	• Use Xcel's rate in CO as a model	
Cost to charge	Update Schedule 50 to align with competitive market Support Staff's recommendation that PGE provide the marginal cost of existing charging stations under Schedule 50 and the percentage of marginal costs recovered under Schedule 50; also agree with Staff recommendation for analysis of Schedule 50 pricing and provision of an updated Schedule 50 proposal for Commission review.	See above
Cost to charge	Introduce a commercial EV rate in line with peer utilities. [We] support[] Schedule 38, but needs to apply to larger sites. Need a new rate open to all commercial customers.	PGE is in the process of researching, investigating, and planning for the development of a new commercial EV charging rate.
Cost to charge	Establish a widely available commercial EV rate for non-residential EV charging infrastructure.	PGE is in the process of researching, investigating, and planning for the development of a new commercial EV charging rate.
Cost to charge	Ensure cost parity for charging infrastructure and equitable rate protections for customers (e.g., MF)	Appendix J summarizes changes related to these comments. See Appendix C for detail on the updated proposals for Business and Multi-family Make-ready Solutions and also Public Charging – Municipal Charging Collaboration and Electric Avenue.
Outcomes	Provide a clearer explanation of intended TEP outcomes so stakeholders can assess success and needed improvements	Thank you for your comment. Section 3.6 provides a synopsis of programs and outcomes for this plan. Table 30 includes the number of ports by use-case which is supported by the portfolio of activities. Program outcomes are listed in their respective sections in Appendix A, Appendix B, and Appendix C.

Topic	Summary of Comment	PGE Response
Outreach and Engagement	Continue to make engagement a priority and be clear how that engagement will be "an embedded value" long term.	Thank you for your comment.
Outreach and Engagement	Provide details about how Company communications about myriad programs and incentives will be conveyed clearly to customers.	Thank you for your comment. PGE has created multiple methods to communicate about various programs, including web pages for different customer types (e.g., business or residential customers). PGE will continue to evaluate the effectiveness of our communication for the programs, including incentives.
Outreach and Engagement	Be specific about how BIPOC and underserved communities will be able to provide input directly and over long term	See Section 8.3 for discussion of PGE's long-term engagement activities to glean input from underserved communities, including BIPOC community members.
Peak Hours	Identify which hours were selected as peak hours in response to OPUC IR 32	The methodology to derive MW peak impacts from AdopDER described in response to OPUC IR 32 identifies 2-4 hour time windows (including hour of day, day of week, month of year) where the loss of load probability is high. Our MW summaries indicate the EV load impact during these events. Table 86 (Appendix E) shows the peak hours identified using this method for 2026.
Peak hours	Explain how peak hours are defined for the performance areas. This definition should show why the hour ending at 6 p.m. is included in PGE's assessment of peak hours and the hour ending at 10 p.m. is not.	PGE used the currently approved Time of Day tariff for defining the peak period in this performance metric, which defines the peak as 5 PM to 9 PM. This was done because a significant amount of EV charging may occur from customers enrolled on this rate through the Residential Smart EV Charging program or the Electric Avenues, which also mirror this peak definition
Planning Process	Continue to align with other planning processes, especially DSP	Thank you for your comment.
Pole/Public Charging	PGE should follow the draft rule in Washington that requires an EMV chip card reader. Contactless is that it is not fully accessible, CARB Technical Review found 43	PGE proposes to require that all public PGE-owned and customer-owned charging adhere to the State of Washington's payment

Topic	Summary of Comment	PGE Response
	percent of low-income drivers don't have contactless card or smart phone. Veteran benefits and SSI benefits are paid through direct express Mastercard debit cards, which is EMV only.	methods requirements[325]. Washington requires that public L2 and DCFC chargers installed after January 1, 2024 contain an Euro Mastercard Visa (EMV) chip reader. The sole exception is for pole chargers, where EMV chip readers pose National Electric Code (NEC) and National Electric Safety Code (NESC) violations around climbing space. As a result, PGE will continue to utilize payment through a charging vendor app for pole chargers.
Pole/Public Charging	Muni program: Engage community members/neighborhood delegates from the beginning in site selection and project design to address community needs.	PGE is leveraging Geographic Information System (a/k/a GIS) mapping to identify utility poles within underserved communities which are strong candidates for charger placement. We will also work directly with municipalities to conduct thorough outreach within the communities where chargers are proposed.
Pole/Public Charging	Where affordable housing has no parking, work with developers to site pole chargers?	With the Public Charging – Municipal Charging Collaborations pilot, PGE will examine the possibility of partnering with municipalities with high rates of affordable housing lacking dedicated parking to install pole or curbside chargers in those neighborhoods.
Pole/Public Charging	Make languages other than English available at utility owned and supported public charging stations.	PGE plans to do so for utility-owned chargers.
Pole/Public Charging	How will PGE address situations where charger access is blocked by cars that are not actively charging?	PGE is exploring options to address this issue by modifying Schedule 50.
Pole/Public Charging	For the proposed Public Charging – Municipal Charging Collaboration program, who will own the chargers?	PGE will own, operate, and maintain pole chargers installed as part of the Public Charging – Municipal Charging Collaboration. We are

[325] Washington State Standards can be found here: https://cms.agr.wa.gov/WSDAKentico/Documents/AdminRegs/Rule%20Making/WAC16-662_EVSE_CR103_121622.pdf.

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		exploring partnerships for pedestal charging to shift ownership and maintenance and manage costs.
Program Design	PGE needs to explain how the utility considered customer cost sharing in program design, and the extent of utility assistance.	PGE has added customer cost sharing where appropriate, such as in the proposed Business Make-ready Solutions offering.
Program Design	The north star for PGE's EVSE and program requirements should be the driver need, regardless of ownership. The focus needs to be on moving the market.	PGE appreciates and agrees with the value for a broader perspective on the transition to electric transportation.
Program Design	Multi-family options should be mix and match so customer can choose level of utility assistance. East coast utility multi-family incentives weren't effective until utility full own/operate offering was available.	This TE Plan reflects this feedback
Program Design	Consider use case where public charging is the only meaningful option for low-income EV ownership. Locate and operate charging accessible to these neighborhoods neighborhood parks, store parking lots, other sites of necessary or likely trips. Focus on DCFC, Level 2 okay for overnight residency.	This TE Plan reflects this feedback
Program Design	Rebates should be agnostic of power levels allow site host to choose. Suggest rebates in tiered structure for DCFC from 50 kW to 350 kW.	This TE Plan reflects this feedback for customer owned chargers.
Program Design	Supportive of DCFC rebates, especially if paired with make-ready rebate. Hope DCFC rebates for public charging complement NEVI funds.	PGE expects that some DCFC rebates will be available for NEVI sites that otherwise meet PGE criteria.

Topic	Summary of Comment	PGE Response
Program Design	Support public charging stations for MHD that are not necessarily tied to a fleet.	This TE Plan reflects this feedback
Program Design	Do PGE's proposed programs include Direct Current Fast Charging (DCFC)?	Fleet Partner focuses on make-ready sites for both L2 and DCFC charging. The Public Charging – Municipal Charging Collaboration will not include DCFC charging. PGE is reassessing our role in the evolving EV market with a focus on planning, serving, and managing the load. We see third parties supporting the DCFC market and will participate in grant proposals supporting the build of third-party DCFC installations. The transition to an electric future in transportation will require engagement by all market participants. In that context, our public charging goal in our TE portfolio is to ensure we deliver the most impact to underserved communities with pole-charging and curbside make-ready, which serve needs least likely to be met by other market actors.
Program-enabled ports	Provide the number of program-enabled ports by use case as a percentage of total public ports	For Urban/Rural LDV public charging use cases, the number of planned PGE program-enabled ports under this 2023-2025 TE Plan as a percentage of total public port infrastructure need in 2025 under the TEINA methodology are 17 percent for Workplace L2 and 14 percent for Public L2. For Corridor DCFC, the number is 5 percent.
Program-enabled ports	Provide the number of program-enabled ports of participants in utility programs, broken down by program and underserved community status.	PGE has forecasted the number of ports for each program and what percentage of the ports or spend is forecasted to be spent on underserved communities. The information is listed in the appendix.
Rate Impact	Manage TE rate impact but not rigidly. Consider long term value and how tools like HB 2475 (differential rates) can mitigate rate impact on specific populations	Thank you for your comment and PGE will continue to determine the right rates and tariffs to support the various use cases of charging.

Topic	Summary of Comment	PGE Response
Rate Impacts	Explain what drives the relative difference in rate impact among rate schedules.	Costs are allocated on a marginal cost to serve basis and rates are developed primarily based on a cost to serve basis. Demand for service such as voltage and the infrastructure needed to serve customer load are among the main drivers associated with the difference in rate impact when developing rate schedules.
Reliability and Usage	[Support] PGE's action on the need to replace EA chargers and explore whether they can be replaced as part of the CFP public charging infrastructure project.	Thank you for your comment and support.
Reliability and Usage	[Support] PGE's commitment to a 97 pct uptime target for PGE-owned and customer-owned chargers, consistent with NEVI standard. [Would] like more detail as to how the company intends to enforce the 97 pct uptime requirement on customer-owned chargers – i.e., will this requirement be in the terms and conditions of PGE's contractual agreements with customers who own their chargers?	Thank you for your comment. PGE will include in the terms and conditions that the customer must keep the chargers operational for the life of the program which funded the chargers.
Reliability and Usage	PGE does not provide uptime for utility-owned and supported ports by use case as required by OAR 860-087-0020(3)(c)(A). [Support] Staff's recommendation for the company to provide uptime during 2022. A narrative explaining the current situation would be helpful. [Look] forward to supporting reasonable methods and funding to help the company improve uptime for public charging infrastructure.	A number of publications have recently detailed the challenges faced by drivers who rely on public charging infrastructure. PGE has observed and corroborated findings on charging infrastructure reliability issues with peer utilities and others and has developed a reliability strategy in response Section 4.6.5.3 describes charger reliability challenges faced by PGE and the broader charging industry. Section 4.7.2.1 details uptime for PGE-owned chargers. Section 8.7.1 describes PGE's "procure, operate, replace" charger reliability strategy.

Topic	Summary of Comment	PGE Response
Reliability and Usage	Provide the uptime during calendar year 2022 at utility-owned and supported ports by use case	See above
Residential Smart Charging	Expand the scope of the Res Smart Charging Pilot to include vehicle telematics brands beyond Tesla. Insufficient and inequitable to rely on L2 EVSEs as the primary channel for eligibility and enrollment. Consider an enhanced user interface in order to increase customer participation in Smart Charge events. One like, say, EV.Energy's. Other utilities using EV.Energy's app have demonstrated much higher participation rates. Set aside budget for enhanced managed charging functionality including renewable generation alignment and bi-directional charging. Potential to greatly increase program value, carbon reductions, etc.	Thank you for your comment. PGE will continue to utilize the Smart Grid Testbed and Clean Fuels Emerging Technology funding to further explore additional venues of managed charging through telematics and EVSE.
Residential Smart Charging	Support extension of pilot and elimination of enrollment cap. Agree SGTB EV Charging Study will provide important direction for future full-scale program.	Thank you for your comment and support of proposed residential smart charging pilot changes.
Schedule 50	Provide the marginal cost of the Company's existing charging stations that bill customers at the Schedule 50 rate, and the percentage of marginal cost recovered under Schedule 50.	Thank you for your interest. PGE will explore including this information when we file a future Schedule 50 tariff update.
Schedule 50	Explain how the expansion of Company-owned infrastructure is expected to alter the	PGE will be revising Schedule 50 in the near future, with the goal of moving from a fixed subscription charge and a $/session charge to a

Topic	Summary of Comment	PGE Response
	percentage of marginal cost that Schedule 50 recovers	variable $/kwh charge. Our intention is to create equitable L2 charging rates and balance equity and mid-range market rates in DCFC charging, which may result in increased tariff revenue to recover more of the marginal cost. The goal of expanding pole charging with lower cost assets is to lower charging costs ($/kwh) compared to other public charging options
Schedule 50	Estimate what the revenue-maximizing price of Schedule 50 is expected to be; and, after performing this analysis, provide a fresh proposal for Schedule 50's rate.	PGE is still evaluating future Schedule 50 changes. The principles by which PGE plans to create the rate are included in Section 7.2.2.2.
TE Plan Scope/Cost	Be prepared for EV uptake/fleet penetration to move faster than projected, especially later in the decade.	PGE will continue to monitor the pace of EV adoption in our service area.
TE Plan Scope/Cost	PGE must consider not only affordability relating to charging itself but also the base rates impacts on all PGE ratepayers.	This TE Plan reflects this feedback. See Section 9.7 for detail.
TE Plan Scope/Cost	It is regrettable to take too small or short term a view of transportation of the scope of TE investments by PGE.	PGE appreciates the need to enable transportation electrification to meet the GHG reduction goals of the State of Oregon and many of the municipalities we serve.
TE Plan Scope/Cost	Advocates on climate want you to lean into deploying EV charging. Please use new thinking to get beyond historical judgements of what's cost-effective.	PGE appreciates the need to enable transportation electrification to meet the GHG reduction goals of the State of Oregon and many of the municipalities we serve.
TE Plan Scope/Cost	PGE needs to demonstrate how its TE Plan compares in cost and scope to other utilities active in supporting transportation electrification.	PGE has presented this information in workshops and has made slides and recordings publicly available.

Topic	Summary of Comment	PGE Response
TE Plan Scope/Cost	How much of the PGE's previously approved transportation electrification budget has been spent?	The TE plan shows what will be spent in Heavy-Duty charging during 2023-2025 for the current identified site in 2023-2025. The TE Plan will contain the spend through 2022 in each program. The spend for Heavy-Duty charging through the end of 2022 is approximately $2.3M.
TE Plan Scope/Cost	Is it premature for PGE to pivot from accelerating to supporting transportation electrification?	In the three years since PGE's last TE Plan, the TE market has rapidly matured, with accelerated EV adoption, automaker investment, and state/federal investment and policy action. In the United States, electric car sales increased 55 percent in 2022 over 2021, a particularly stark increase given the 8 percent drop in total car sales nationally over the same period[326]. The transition to electric vehicles (EVs) is underway in Oregon, with the state surpassing 62,000 registered EVs in 2023[327] and more than seven percent of new vehicles registered in Oregon in 2021 being EVs, the fourth-highest percentage nationally. Given this momentum, PGE is bringing forward a TE plan with sharper focus on the right role for the utility to play in transportation electrification and with consideration of customer price pressures across utility activities. Even as we work to right-size our TE portfolio, we will continue to work with our customers, communities, and industry partners on grant applications and partnerships to advance the significant investment required to achieve a reliable, equitable transition to electric vehicles.
TE Plan Scope/Cost	What portion of Clean Fuels Program (CFP) funds support PGE's transportation electrification programs?	PGE proposes to spend 10 percent of CFP funds to support transportation electrification programs in 2024-2025. PGE has not allocated CFP spending beyond 2025 since that extends beyond the budget period of the 2023 TE Plan. Note that the CFP budget is a

[326] International Energy Agency (2023). *Global EV Outlook*, retrieved from https://www.iea.org/reports/global-ev-outlook-2023.
[327] State of Oregon. *Oregon Electric Vehicle Dashboard*. Retrieved from https://www.oregon.gov/energy/Data-and-Reports/Pages/Oregon-Electric-Vehicle-Dashboard.aspx.

Topic	Summary of Comment	PGE Response
		forecast, which will be updated annually with the actual figures as we sell credits for the prior year.
TE Plan Structure/ Organization	Appreciate hyperlinked table of contents and organization generally, supportive of current portfolio size and appreciate responsiveness to prior feedback	Thank you for your support.
Technical Standards	Review stakeholder recommendations and incorporate them.	This table reflects PGE's review of stakeholder comments.
Telematics and User Interfaces	[Do] not believe the Commission should modify PGE's TEP based on ev.energy's specific recommendations on telematics and user interfaces. Instead the Commission should accept PGE's draft TEP. [Do support] PGE's proposed expansions and extensions of its Residential Smart Charging Pilot.	Thank you for your comment and support of proposed residential smart charging pilot changes.
Transit	Provide the annual service hours, number of routes, and number of routes serving underserved communities, to the extent this information is provided to PGE, for transit agencies that have participated in a utility EV program during the portfolio period	The UM1938 pilot, which included transit agencies, was approved prior to the underserved communities definition and this information was not a requirement of evaluating the pilot.
Underserved Communities	There is limited knowledge about EVs and charging, but there is overall interest in acquiring an EV.	Some products will add more targeted education and outreach for underserved communities relating to their products. PGE's long-term engagement strategy with underserved communities will also continue to address increasing education and outreach. More specific details on the engagement with underserved communities can be found each program can be found in the program details.

Topic	Summary of Comment	PGE Response
Underserved Communities	Most do not have an understanding of financial assistance available for EVs, and many also feel that these resources do not go far enough. Costs associated with EVs and their use are consistently cited as concerns	Some products will add more targeted education and outreach to underserved communities relating to their products, and long-term engagement strategy will also continue to address increasing education and outreach. More specific details on engagement with underserved communities can be found in Section 5.1.3 and Section 8.3, as well as in the program details found in Appendix A, Appendix B, and Appendix C.
Underserved Communities	Access to charging stations was a common concern for many reasons including the connection with gentrification and potential displacement and conflict, as well as less parking spaces for non-EVs	PGE will help municipalities participating in the Public Charging – Municipal Charging Collaboration to effectively communicate with underserved communities and gather input from the same.
Underserved Communities	The majority of people would be more likely to drive EVs with greater public access to charging	PGE's portfolio is designed to address this gap.
Underserved Communities	[Request] that PGE provide additional details on mapping and, if appropriate, provide the service territory maps of underserved communities and composite maps at the census block level.	The dataset used for underserved maps rolls up into tract level in public maps, but block group datasets were used where data was available at that level. Some block levels include a single identifiable customer which is why the public maps are aggregated at the census tract level. The category data used is available as follows: • **Residents of rental housing:** Census Block • **Residents of multifamily housing:** Average of premise types within census block • **Communities of color:** Census Block • **Communities experiencing lower incomes:** Census Block • **Tribal Communities:** Census Tract • **Rural communities:** Census Tract • **Other communities adversely harmed by environmental and health hazards:** Census Tract

Topic	Summary of Comment	PGE Response
Underserved Communities	Clarify the difference in accounting for the 45 percent benefit to underserved communities on Page 22 compared to the 58% underserved portfolio view of spend.	PGE incorrectly stated the 45 percent benefit in the draft TE Plan's page 22 (page 23 in this filing). The overall portfolio spend on underserved communities is 58 percent and the plan has been updated accordingly.
Underserved Communities	Provide the percentage of program-enabled ports by use case located within and/or providing direct benefits and services to underserved communities	In each program, PGE has forecasted the number of program ports which will be located in underserved communities.
Unique Users	Provide the 2022 distribution of unique users at Company-owned sites	PGE has looked at total subscriptions for Electric Avenues during evaluations but has not included the request of the third party evaluator to look across all company-owned sites for unique users. PGE will explore the ability to include this information or a version of it in our next annual report.
Utility Ownership	PGE should find market partner(s) to assume ownership of PGE-owned chargers and revise Schedule 50 without undercutting the private market, among other actions, to ensure the Municipal Charging Collaboration Pilot does not impede the competitive market for charging services. • The Commission should require PGE to find a market partner to take ownership of all 240 PGE-owned chargers no later than 2025, including all pole-mounted chargers. • Any updates to Schedule 50 should be required to consider the market average rate for charging services.	Thank you for your comments. PGE will bid the curbside charging for non-utility ownership in the next year. PGE will continue to evaluate market trends, equitable transition to EV ownership, availability of charging in underserved communities, and learnings from the curbside RFP to determine PGE's right role in the market for supporting an equitable transition to EV ownership in underserved communities.

Topic	Summary of Comment	PGE Response
	• The Business and MF Make Ready program should be sized adequately to address customer need.	
Miscellany	• Focus on customer net benefits • Use CBA and Evidence-Based Policy, not CA SPM • Cost Effectiveness Analysis and cost tests should be subsidiary to and consistent with CBA • All CBA studies, models and evidence should be provided to stakeholders • Utility regulation needs to be modernized • Assumptions about natural monopolies need to be modernized • America needs to embrace CO2 as a net benefit	Thank you for your comment.